JANUARY 13, 2016 CITY COUNCIL AGENDA
CERTIFICATION

This certification is given pursuant to Chapter XI, Section 9 of the City Charter for the City Council Agenda dated January 13, 2016. We hereby certify, as to those contracts, agreements, or other obligations on this Agenda authorized by the City Council for which expenditures of money by the City are required, that all of the money required for those contracts, agreements, and other obligations is in the City treasury to the credit of the fund or funds from which the money is to be drawn, as required and permitted by the City Charter, and that the money is not appropriated for any other purpose.

A.C. Gonzalez
City Manager

12-18-15
Date

Jeanne Chipperfield
Chief Financial Officer

12/18/2015
Date

RECEIVED
2015 DEC 18 PM 4:02
CITY SECRETARY
DALLAS, TEXAS

COUNCIL AGENDA

January 13, 2016
Date

(For General Information and Rules of Courtesy, Please See Opposite Side.)
(La Información General Y Reglas De Cortesía Que Deben Observarse
Durante Las Asambleas Del Consejo Municipal Aparecen En El Lado Opuesto, Favor De Leerlas.)

General Information

The Dallas City Council regularly meets on Wednesdays beginning at 9:00 a.m. in the Council Chambers, 6th floor, City Hall, 1500 Marilla. Council agenda meetings are broadcast live on WRR-FM radio (101.1 FM) and on Time Warner City Cable Channel 16. Briefing meetings are held the first and third Wednesdays of each month. Council agenda (voting) meetings are held on the second and fourth Wednesdays. Anyone wishing to speak at a meeting should sign up with the City Secretary's Office by calling (214) 670-3738 by 5:00 p.m. of the last regular business day preceding the meeting. Citizens can find out the name of their representative and their voting district by calling the City Secretary's Office.

Sign interpreters are available upon request with a 48-hour advance notice by calling (214) 670-5208 V/TDD. The City of Dallas is committed to compliance with the Americans with Disabilities Act. ***The Council agenda is available in alternative formats upon request***.

If you have any questions about this agenda or comments or complaints about city services, call 311.

Rules of Courtesy

City Council meetings bring together citizens of many varied interests and ideas. To insure fairness and orderly meetings, the Council has adopted rules of courtesy which apply to all members of the Council, administrative staff, news media, citizens and visitors. These procedures provide:

- That no one shall delay or interrupt the proceedings, or refuse to obey the orders of the presiding officer.
- All persons should refrain from private conversation, eating, drinking and smoking while in the Council Chamber.
- Posters or placards must remain outside the Council Chamber.
- No cellular phones or audible beepers allowed in Council Chamber while City Council is in session.

"Citizens and other visitors attending City Council meetings shall observe the same rules of propriety, decorum and good conduct applicable to members of the City Council. Any person making personal, impertinent, profane or slanderous remarks or who becomes boisterous while addressing the City Council or while attending the City Council meeting shall be removed from the room if the sergeant-at-arms is so directed by the presiding officer, and the person shall be barred from further audience before the City Council during that session of the City Council. If the presiding officer fails to act, any member of the City Council may move to require enforcement of the rules, and the affirmative vote of a majority of the City Council shall require the presiding officer to act." Section 3.3(c) of the City Council Rules of Procedure.

Información General

El Ayuntamiento de la Ciudad de Dallas se reúne regularmente los miércoles en la Cámara del Ayuntamiento en el sexto piso de la Alcaldía, 1500 Marilla, a las 9 de la mañana. Las reuniones informativas se llevan a cabo el primer y tercer miércoles del mes. Estas audiencias se transmiten en vivo por la estación de radio WRR-FM 101.1 y por cablevisión en la estación *Time Warner City Cable* Canal 16. El Ayuntamiento Municipal se reúne el segundo y cuarto miércoles del mes para tratar asuntos presentados de manera oficial en la agenda para su aprobación. Toda persona que desee hablar durante la asamblea del Ayuntamiento, debe inscribirse llamando a la Secretaría Municipal al teléfono (214) 670-3738, antes de las 5:00 pm del último día hábil anterior a la reunión. Para enterarse del nombre de su representante en el Ayuntamiento Municipal y el distrito donde usted puede votar, favor de llamar a la Secretaría Municipal.

Intérpretes para personas con impedimentos auditivos están disponibles si lo solicita con 48 horas de anticipación llamando al (214) 670-5208 (aparato auditivo V/TDD). La Ciudad de Dallas está comprometida a cumplir con el decreto que protege a las personas con impedimentos, *Americans with Disabilties Act*. ***La agenda del Ayuntamiento está disponible en formatos alternos si lo solicita***.

Si tiene preguntas sobre esta agenda, o si desea hacer comentarios o presentar quejas con respecto a servicios de la Ciudad, llame al 311.

Reglas de Cortesía

Las asambleas del Ayuntamiento Municipal reúnen a ciudadanos de diversos intereses e ideologías. Para asegurar la imparcialidad y el orden durante las asambleas, el Ayuntamiento ha adoptado ciertas reglas de cortesía que aplican a todos los miembros del Ayuntamiento, al personal administrativo, personal de los medios de comunicación, a los ciudadanos, y a visitantes. Estos reglamentos establecen lo siguiente:

- Ninguna persona retrasará o interrumpirá los procedimientos, o se negará a obedecer las órdenes del oficial que preside la asamblea.
- Todas las personas deben de abstenerse de entablar conversaciones, comer, beber y fumar dentro de la cámara del Ayuntamiento.
- Anuncios y pancartas deben permanecer fuera de la cámara del Ayuntamiento.
- No se permite usar teléfonos celulares o enlaces electrónicos (*pagers*) audibles en la cámara del Ayuntamiento durante audiencias del Ayuntamiento Municipal.

"Los ciudadanos y visitantes presentes durante las asambleas del Ayuntamiento Municipal deben de obedecer las mismas reglas de comportamiento, decoro y buena conducta que se aplican a los miembros del Ayuntamiento Municipal. Cualquier persona que haga comentarios impertinentes, utilice vocabulario obsceno o difamatorio, o que al dirigirse al Ayuntamiento lo haga en forma escandalosa, o si causa disturbio durante la asamblea del Ayuntamiento Municipal, será expulsada de la cámara si el oficial que esté presidiendo la asamblea así lo ordena. Además, se le prohibirá continuar participando en la audiencia ante el Ayuntamiento Municipal. Si el oficial que preside la asamblea no toma acción, cualquier otro miembro del Ayuntamiento Municipal puede tomar medidas para hacer cumplir las reglas establecidas, y el voto afirmativo de la mayoría del Ayuntamiento Municipal precisará al oficial que esté presidiendo la sesión a tomar acción." Según la sección 3.3(c) de las reglas de procedimientos del Ayuntamiento.

AGENDA
CITY COUNCIL MEETING
WEDNESDAY, JANUARY 13, 2016
ORDER OF BUSINESS

Agenda items for which individuals have registered to speak will be considered no earlier than the time indicated below:

9:00 a.m.	**INVOCATION AND PLEDGE OF ALLEGIANCE**	
	OPEN MICROPHONE	
	MINUTES	Item 1
	CONSENT AGENDA	Items 2 - 37
	ITEMS FOR INDIVIDUAL CONSIDERATION	
No earlier than 9:15 a.m.		Items 38 - 44
	PUBLIC HEARINGS AND RELATED ACTIONS	
1:00 p.m.		Items 45 - 61

NOTE: A revised order of business may be posted prior to the date of the council meeting if necessary.

AGENDA

CITY COUNCIL MEETING

JANUARY 13, 2016

CITY OF DALLAS

1500 MARILLA

COUNCIL CHAMBERS, CITY HALL

DALLAS, TEXAS 75201

9:00 A. M.

Invocation and Pledge of Allegiance (Council Chambers)

Agenda Item/Open Microphone Speakers

VOTING AGENDA

1. Approval of Minutes of the December 9, 2015 City Council Meeting

CONSENT AGENDA

Aviation

2. Authorize a twenty-four month professional services contract with M S Benbow and Associates for specialty consulting on aviation projects for the Dallas Airport Systems and Dallas Love Field for the period January 2016 through January 2018 - Not to exceed $989,750 - Financing: Aviation Current Funds (subject to annual appropriations)

Business Development & Procurement Services

3. Authorize a construction services contract to demolish and replace the existing leachate storage tank at the McCommas Bluff Landfill - Texas Aquastore, Inc., lowest responsible bidder of two - Not to exceed $172,094 - Financing: Sanitation Current Funds (subject to appropriations)

CONSENT AGENDA (Continued)

Business Development & Procurement Services (Continued)

4. Authorize an acquisition contract for the purchase, design and installation of five computerized control units at Lake Fork Pump Station and two display units at Iron Bridge Pump Station - WHECO Electric, Inc., most advantageous proposer of four - Not to exceed $178,606 - Financing: Water Utilities Capital Construction Funds (subject to appropriations)

5. Authorize a three-year service contract for parts and labor for machine shop equipment - Jamet Incorporated, only bidder - Not to exceed $214,965 - Financing: Water Utilities Current Funds (subject to annual appropriations)

6. Authorize a three-year service contract for vent and hood maintenance and cleaning services at Love Field - Hood Specialists, lowest responsible bidder of two - Not to exceed $230,163 - Financing: Aviation Current Funds (subject to annual appropriations)

7. Authorize a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes - Royal Arc Welding Company, lowest responsible bidder of two - Not to exceed $428,645 - Financing: Current Funds ($79,235), Water Utilities Current Funds ($300,180), Stormwater Drainage Management Current Funds ($48,570) and Sanitation Current Funds ($660) (subject to annual appropriations)

8. Authorize a three-year service contract for citywide locksmith services - Joe East Enterprises, Inc. dba A-1 Locksmith, Inc., lowest responsible bidder of three - Not to exceed $702,745 - Financing: Current Funds ($450,829), Aviation Current Funds ($150,743), Water Utilities Current Funds ($100,022) and Stormwater Drainage Management Current Funds ($1,151) (subject to annual appropriations)

9. Authorize a three-year Interlocal Agreement, with two one-year renewal options, for Initial Emergency Medical Technician Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue - Dallas County Community College District, by and through Brookhaven College, most advantageous proposer of two - Not to exceed $1,657,800 - Financing: Current Funds (subject to annual appropriations)

10. Authorize a three-year master agreement for the purchase of plastic sewer couplings and lateral cleanouts - Beeco, Inc. in the amount of $149,437, Fortiline, Inc. in the amount of $14,716, Ferguson Enterprises in the amount of $4,484 and HD Supply Waterworks, LTD in the amount of $1,132, lowest responsible bidders of five - Total not to exceed $169,769 - Financing: Water Utilities Current Funds

11. Authorize a three-year master agreement for the purchase of aluminum sign blanks to be used by Street Services - Vulcan, Inc., lowest responsible bidder of five - Not to exceed $1,596,317 - Financing: Current Funds

CONSENT AGENDA (Continued)

Business Development & Procurement Services (Continued)

12. Authorize the purchase of a telescoping passenger stairway for Love Field - Boyer Ford Trucks, Inc. through the General Services Administration - Not to exceed $80,955 - Financing: Aviation Current Funds

13. Authorize the sale of one trackloader and one loader through a public auction on December 2, 2015 to Nighthawk Construction in the amount of $27,500 and Roy Hufstutler in the amount of $21,100, highest bidders of sixteen - Revenue: $48,600

14. Authorize **(1)** the rejection of bids received for various valves and valve parts for water and wastewater treatment plants; and **(2)** the re-advertisement for new bids - Financing: No cost consideration to the City

Convention and Event Services

15. Authorize an appointment to the Board of Directors of the Dallas Convention Center Hotel Development Corporation - Financing: No cost consideration to the City

Housing/Community Services

16. Authorize **(1)** the acceptance of a donation in the amount of $440,000 from TXU Energy to provide temporary financial assistance through the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center to individuals and families who are experiencing a temporary financial crisis; and **(2)** an increase in appropriations in an amount not to exceed $440,000 in the Energy Emergency Assistance Fund - Not to exceed $440,000, from $1,547,979 to $1,987,979 - Financing: Private Funds

17. Authorize the Single Family Housing Development Program Statement - Financing: No cost consideration to the City

Library

18. Authorize the acceptance of a grant from the Texas State Library and Archives Commission (FAIN No. LS-00-13-0044-13, CFDA No. 45.310) in the amount of $38,823 for partial reimbursement of interlibrary loan services' direct costs of $50,982 for the period September 1, 2014 through August 31, 2015 - Not to exceed $38,823 - Financing: Texas State Library and Archives Commission Grant Funds

Office of Cultural Affairs

19. Authorize a contract with artist Christopher Blay for a new public art commission to be located near the Coombs Creek walking trail near the intersection of Kessler Parkway and North Clinton Avenue - Not to exceed $65,000 - Financing: 2006 Bond Funds

CONSENT AGENDA (Continued)

Office of Emergency Management

20. Authorize **(1)** acceptance of additional grant funds from the U.S. Department of Homeland Security under the Homeland Security Grant Program - 2014 Urban Area Security Initiative to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters in an amount not to exceed $95,800; and **(2)** execution of the grant agreement - Not to exceed $95,800, from $5,818,875 to $5,914,675 - Financing: U.S. Department of Homeland Security Grant Funds

21. Authorize **(1)** acceptance of the 2015 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters for the period September 1, 2015 through May 31, 2018; and **(2)** execution of the grant agreement - Not to exceed $5,898,375 - Financing: U.S. Department of Homeland Security Grant Funds

22. Authorize approval of the 2015 Dallas County Hazard Mitigation Action Plan, which identifies strategies to mitigate natural hazards in the City of Dallas and Dallas County - Financing: No cost consideration to the City

Office of Financial Services

23. Authorize Supplemental Agreement No. 5 to the professional services contract with Diversified Utility Consultants, Inc., increasing the contract for expert consulting services and testimony in matters related to Atmos Energy Mid-Tex Division's "Dallas Annual Rate Review" filing - Not to exceed $80,000, from $350,000 to $430,000 - Financing: Current Funds (to be fully reimbursed by Atmos Energy)

Park & Recreation

24. Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail located between the Mockingbird Pedestrian Bridge to Bath House at White Rock Lake - Not to exceed $148,820, from $1,171,690 to $1,320,510 - Financing: 2006 Bond Funds ($147,818) and 2003 Bond Funds ($1,002)

25. Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail located from Stevens Park tennis courts to Hampton Road - Not to exceed $84,954, from $1,131,842 to $1,216,796 - Financing: 2006 Bond Funds

CONSENT AGENDA (Continued)

Park & Recreation (Continued)

26. Authorize a public hearing to be held on February 10, 2016 to receive comments for the proposed use of a portion of the Bachman Creek Greenbelt located at 3900 Shorecrest Drive, totaling approximately 42,323 square feet, for driveway access and parking by QuikTrip Corporation that will benefit the park by providing parking, trail access, driveway, landscaping and other amenities to be constructed and maintained by QuikTrip Corporation for the benefit of the public - Financing: No cost consideration to the City

Public Works Department

27. Authorize a professional services contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project for Lonsdale Avenue from Sarah Lee Drive to Lake June Road and two bridge repair projects along Second Avenue over White Rock Creek (list attached) - Not to exceed $186,047 - Financing: 2012 Bond Funds ($153,217) and Water Utilities Capital Improvement Funds ($32,830)

28. Authorize the rejection of bids for a thirty-six month sidewalk and barrier free ramp installation paving services contract; and, the re-advertisement for new bids - Financing: No cost consideration to the City

Sustainable Development and Construction

29. Authorize acquisition from Gerardo Rodriguez and Consuelo Rodriguez of approximately 5,772 square feet of land improved with a single family residence located near the intersection of McGowan and Childers Streets for the Cadillac Heights future location of city service and maintenance facilities - Not to exceed $46,000 ($42,000, plus closing costs and title expenses not to exceed $4,000) - Financing: 2006 Bond Funds

30. Authorize the quitclaim of 14 properties acquired by the taxing authorities from the Tax Foreclosure Sheriff's Sale to the highest bidders; and authorize the execution of release of liens for any non-tax liens that may have been filed by the City and were included in the foreclosure judgment (list attached) - Revenue: $19,678

31. An ordinance abandoning a portion of Hobbs Avenue to Southern Foods Group, LLC, the abutting owner, containing approximately 25,965 square feet of land, located near the intersection of Haskell and Hobbs Avenues, authorizing the quitclaim and providing for the dedication of approximately 4,469 square feet of land needed for street right-of-way - Revenue: $35,910, plus the $20 ordinance publication fee

32. An ordinance abandoning three fire lane easements to Wal-Mart Real Estate Business Trust, the abutting owner, containing a total of approximately 76,544 square feet of land, located near the intersection of Harvest Hill and Midway Roads - Revenue: $5,400, plus the $20 ordinance publication fee

CONSENT AGENDA (Continued)

Trinity Watershed Management

33. Authorize **(1)** a Local Transportation Project Advanced Funding Agreement with the Texas Department of Transportation for the design and construction of the Trinity Skyline Trail from Sylvan Avenue to the City of Irving's Campion Trail; **(2)** the receipt and deposit of Transportation Alternatives Program Funds from the Texas Department of Transportation in an amount not to exceed $2,989,994; **(3)** an increase in appropriations in the amount of $2,989,994 in the TXDOT Transportation Advance Management System Fund; and **(4)** payment to the Texas Department of Transportation in the amount of $180,000 - Not to exceed $3,169,994 - Financing: Stormwater Drainage Management Capital Construction Funds ($180,000) and TXDOT Transportation Advance Management System Funds ($2,989,994)

34. Ratify the emergency rental of pumps and pumping equipment for pumping operations to relieve flooding at Loop 12 and Eagle Ford Sump - Moir Watershed Services, L.L.C. - Not to exceed $125,600 - Financing: Stormwater Drainage Management Current Funds

Water Utilities

35. Authorize a contract for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 Dallas Water Utilities facilities to Assured Mechanical Solutions LLC, lowest responsible bidder of two (list attached) - Not to exceed $3,822,500 - Financing: Water Utilities Capital Construction Funds

36. Authorize an increase in the contract with AUI Contractors, LLC for additional construction services associated with the major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant - Not to exceed $195,126, from $8,212,864 to $8,407,990 - Financing: Water Utilities Capital Improvement Funds

37. Authorize Supplemental Agreement No. 3 to the engineering services contract with HDR Engineering, Inc. for additional construction administration services associated with process improvements at the Central Wastewater Treatment Plant - Not to exceed $149,806, from $4,370,475 to $4,520,281 - Financing: Water Utilities Capital Improvement Funds

ITEMS FOR INDIVIDUAL CONSIDERATION

City Secretary's Office

38. Consideration of appointments to boards and commissions and the evaluation and duties of board and commission members (List of nominees is available in the City Secretary's Office)

ITEMS FOR INDIVIDUAL CONSIDERATION (Continued)

DESIGNATED PUBLIC SUBSIDY MATTERS

Economic Development

39. Authorize a New Markets Tax Credit transaction between the Dallas Development Fund and its subsidiaries, JPMorgan Chase Bank, N.A., and its subsidiaries, and The Family Place, and its affiliates for the construction of improvements related to The Family Place facility - Financing: No cost consideration to the City

40. Authorize **(1)** a Chapter 380 economic development grant agreement with City Wide Community Development Corporation for costs associated with development of a commercial office/retail building of approximately 8,400 square feet to be located at 3111 - 3115 South Lancaster Road in Dallas, Texas that will address a shortage of business rental space in the area and continue redevelopment in the Lancaster Corridor; and **(2)** third amendment to grant agreement between City Wide Community Development Corporation and the City of Dallas to extend the completion deadline from September 12, 2016 to March 31, 2017 - Not to exceed $825,000 - Financing: 2012 Bond Funds

41. Authorize a Chapter 380 economic development grant agreement with 3662 W Camp Wisdom LLC and/or its affiliates or parent ("Developer") in an amount not to exceed $2,400,000 in consideration of the Developer's causing a minimum investment of $15,000,000 at Southwest Center Mall - Not to exceed $2,400,000 - Financing: Public/Private Partnership Funds

Neighborhood Empowerment Zone and Business Personal Property Tax Abatement Authorization

Note: Item Nos. 42 and 43 must be considered collectively.

42. * Authorize a resolution designating the approximately 70.7 acres of property located at 3420 Duncanville Road, 3548 Duncanville Road and 3433 Morse Drive, in Dallas Texas, as City of Dallas Neighborhood Empowerment Zone No. 4 (“NEZ No.4”), pursuant to Chapter 378 of the Local Government Code to promote an increase in economic development in the zone, establishing the boundaries of the Neighborhood Empowerment Zone and providing for an effective date - Financing: No cost consideration to the City

43. * Authorize a 75 percent business personal property tax abatement agreement for 8 years with Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. in consideration of a warehouse consolidation that will generate new taxable investment and job creation to be located at 3548 Duncanville Road, Dallas, Texas furthering the City of Dallas’ economic development goals pursuant to the City’s Public/Private Partnership Program Guidelines and Criteria - Revenue: First year revenue estimated at $125,528; eight-year revenue estimated at $746,889 (Estimated revenue foregone for eight-year business personal property tax abatement estimated at $2,240,665)

ITEMS FOR INDIVIDUAL CONSIDERATION (Continued)

DESIGNATED PUBLIC SUBSIDY MATTERS (Continued)

Planning and Urban Design

44. Authorize a professional services contract with MIG, Inc. for the preparation of an update to the City's Downtown Dallas 360 Plan adopted by City Council on April 13, 2011 - Not to exceed $250,000 - Financing: Downtown Connection TIF District Funds

PUBLIC HEARINGS AND RELATED ACTIONS

Sustainable Development and Construction

ZONING CASES - CONSENT

45. A public hearing to receive comments regarding an application for and an ordinance granting the renewal of Specific Use Permit No. 1803 for an open-enrollment charter school on property zoned a CA-1(A) Central Area District in an area bounded by McKinney Avenue, Laws Street, Munger Avenue and North Lamar Street
Recommendation of Staff and CPC: Approval for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a revised traffic management plan and conditions
Z145-181(OTH)

46. A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for R-7.5(A) Single Family District and private school uses on property zoned an R-7.5(A) Single Family District on the northeast corner of Westlake Avenue and Hillside Drive
Recommendation of Staff and CPC: Approval, subject to a development plan, landscape plan, traffic management plan and conditions
Z145-235(AF)

47. A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an open-enrollment charter school on property zoned an RR Regional Retail District, north of West Camp Wisdom Road and west of Interstate 35E Freeway
Recommendation of Staff and CPC: Approval for a five-year period with eligibility for automatic renewals for additional ten-year periods, subject to a site plan, traffic management plan and conditions
Z145-269(AF)

48. A public hearing to receive comments regarding an application for and an ordinance granting an amendment to Planned Development Subdistrict No. 96 within Planned Development District No. 193, the Oak Lawn Special Purpose District, on the west line of Harry Hines Boulevard and the east line of the Houston Street Extension
Recommendation of Staff and CPC: Approval, subject to revised conditions
Z145-306(RB)

PUBLIC HEARINGS AND RELATED ACTIONS (Continued)

Sustainable Development and Construction (Continued)

ZONING CASES - CONSENT (Continued)

49. A public hearing to receive comments regarding an application for and an ordinance granting an MF-2(A) Multifamily Subdistrict on property zoned Tract 1, RS-C Regional Service Commercial Subdistrict within Planned Development District No. 595, the South Dallas/Fair Park Special Purpose District on the southeast line of Sanger Avenue, between Riggs Street and South Ervay Street
Recommendation of Staff and CPC: Approval
Z145-332(WE)

ZONING CASES - INDIVIDUAL

50. A public hearing to receive comments regarding an application for and an ordinance granting a D-1 Liquor Control Overlay and an ordinance granting a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store 3,500 square feet or less on property zoned an RR Regional Retail District with a D Liquor Control Overlay on the southwest corner of Jim Miller Road and Samuell Boulevard
Recommendation of Staff: Approval of a D-1 Liquor Control Overlay and approval of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions
Recommendation of CPC: Approval of a D-1 Liquor Control Overlay and approval of a Specific Use Permit for a one-year period, subject to a site plan and conditions
Z134-181(OTH)

51. A public hearing to receive comments regarding an application for and an ordinance granting a new subdistrict and an ordinance granting a Specific Use Permit for a winery and tasting room on property zoned Center Core Area, Subdistrict E-F within Planned Development District No. 281, the Lakewood Special Purpose District on the southeast corner of Prospect Avenue and Kidwell Street
Recommendation of Staff: Approval of a new subdistrict, subject to conditions; and approval of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions
Recommendation of CPC: Approval of a new subdistrict, subject to conditions; and approval of a Specific Use Permit for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions
Z145-308(SM)

52. A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a utility or government installation other than listed on property zoned an LI Light Industrial District on the east line of Guard Drive, north of Lake June Road
Recommendation of Staff and CPC: Approval for a permanent period, subject to a site plan and conditions
Z145-322(SM)

PUBLIC HEARINGS AND RELATED ACTIONS (Continued)

Sustainable Development and Construction (Continued)

ZONING CASES UNDER ADVISEMENT - INDIVIDUAL

53. A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an animal shelter or clinic with outside runs on property zoned an IR Industrial Research District along the north line of West Commerce Street, west of Chappell Street
Recommendation of Staff and CPC: Approval for a three-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions
Z145-348(AF)
Note: This item was considered by the City Council at a public hearing on December 9, 2015, and was deferred until January 13, 2016

DESIGNATED ZONING CASES - INDIVIDUAL

54. A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development Subdistrict for GR General Retail Subdistrict and an outdoor dining area uses on property zoned a GR General Retail Subdistrict within Planned Development District No. 193, the Oak Lawn Special Purpose District on the southwest line of Fairmount Street, west of Cedar Springs Road
Recommendation of Staff: Denial
Recommendation of CPC: Approval, subject to a development plan and conditions
Z134-353(WE)

55. A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for A(A) Agricultural District and camp recreation center uses and an ordinance repealing Specific Use Permit No. 928 for a community welfare or health center on property zoned an A(A) Agricultural District, generally on the west line of Whispering Cedars Drive and on the east and west lines of Cedar Ridge Drive, north of West Red Bird Lane and Ranchero Lane
Recommendation of Staff and CPC: Approval, subject to a development/landscape plan and conditions
Z145-240(SM)

56. A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for multifamily uses on property zoned an MF-2(A) Multifamily District on the southwest line of Coronado Avenue, east of East Grand Avenue
Recommendation of Staff and CPC: Approval, subject to a development plan and conditions
Z145-273(WE)

PUBLIC HEARINGS AND RELATED ACTIONS (Continued)

Sustainable Development and Construction (Continued)

DESIGNATED ZONING CASES - INDIVIDUAL (Continued)

57. A public hearing to receive comments regarding an application for and an ordinance granting a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District on the north corner of North Hall Street and Roseland Avenue
Recommendation of Staff and CPC: Approval, subject to a height map overlay
Z145-340(WE)

58. A public hearing to receive comments regarding an application for and an ordinance granting a CR Community Retail District and a resolution accepting deed restrictions volunteered by the applicant on property zoned an R-7.5(A) Single Family District on the southwest corner of East Illinois Avenue and Seevers Avenue
Recommendation of Staff: Denial
Recommendation of CPC: Approval, with deed restrictions volunteered by the applicant
Z145-347(WE)

59. A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower on property zoned an MF-3(A) Multifamily District on the north line of Belmont Avenue, west of Greenville Avenue
Recommendation of Staff: Denial
Recommendation of CPC: Approval for a three-year period, subject to a site plan and conditions
Z145-363(SM)

DEVELOPMENT CODE AMENDMENTS - INDIVIDUAL

60. A public hearing to receive comments regarding consideration of and an ordinance granting amendments to Chapter 51 and Chapter 51A of the Dallas Development Code, Section 51-4.212, “Utility and Public Service Uses,” Section 51A-4.408, “Maximum Building Height,” and Section 51A-4.704, “Nonconforming Uses and Structures” to amend regulations pertaining to tower/antenna for cellular communication; and Section 51A-13.304(k)(5) to add a configuration provision for utilities on an open space development type
Recommendation of Staff and CPC: Approval
DCA145-005

PUBLIC HEARINGS AND RELATED ACTIONS (Continued)

MISCELLANEOUS HEARINGS

Police

61. A public hearing to receive comments on the renewal of the Dallas juvenile curfew ordinance, which provides daytime and nighttime curfew hours for minors, and, at the close of the hearing, consideration of an ordinance amending Chapter 31 of the Dallas City Code to reinstate and continue in effect the Dallas juvenile curfew ordinance - Financing: No cost consideration to the City

Professional Services Contract
Agenda Item # 27

Project	**Council District**	**Amount**
Street Petition Improvement		
Lonsdale Avenue from Sarah Lee Drive to Lake June Road	5	$140,810.00
Bridge Repair		
Second Avenue over White Rock Creek (Bridge No. 8)	5, 7	$ 17,772.00
Second Avenue over White Rock Creek (Bridge No. 10)	5, 7	$ 27,465.00

Tax Foreclosed and Seizure Warrant Property Resales

Agenda Item # 30

Parcel No.	Address	Vac/ Imp	Council District	Zoning	Parcel Size	Struck off Amount	# Bids Rec'd	Min Bid Amount	Highest Bid Amount	DCAD	Highest Bidder
1	2903 Britton	V	4	R -7.5(A)	.1763	$1,785.00	5	$1,500.00	$3,999.50	$8,000.00	Kantering, LLC
2	2633 Carpenter	V	7	R-5(A)	.1733	$4,646.00	2	$250.00	$500.00	$6,000.00	Gaythell Smith
3	2641 Carpenter	V	7	Pd-595	.1672	$6,000.00	4	$250.00	$500.00	$6,000.00	Gaythell Smith
4	2611 Dathe	V	7	R-5(A)	.1439	$3,521.00	2	$250.00	$600.00	$3,900.00	Jeffrey Grant
5	2610 Dathe	V	7	R-5(A)	.1721	$3,900.00	3	$250.00	$600.00	$3,900.00	Jeffrey Grant
6	4328 Frank	V	7	R-5(A)	.1423	$18,941.00	2	$250.00	$1,003.00	$5,000.00	Temesgen Wukaye
7	1910 Grand	V	7	PD-595	.2036	$13,310.00	7	$1,000.00	$3,999.00	$31,060.00	Wealthgates Investment Company
8	2927 Southland	V	7	PD-595	.1320	$14,947.00	2	$250.00	$400.00	$6,000.00	Jeffrey Grant
9	2522 Southland	V	7	PD-595	.2041	$16,015.00	2	$1,000.00	$1,650.00	$6,000.00	County Land & Water LLC Series 2299EFH
10	2631 Southland	V	7	PD-595	.1499	$6,000.00	2	$1,000.00	$1,150.00	$6,000.00	County Land & Water LLC Series 2299EFH
11	2646 Southland	V	7	PD-595	.1158	$1,805.00	2	$1,000.00	$3,150.00	$6,000.00	County Land & Water LLC Series 2299EFH
12	4748 Stokes	V	7	R-5(A)	.1421	$2,000.00	2	$250.00	$277.00	$2,000.00	Sabrina Sutton
13	2701 Warren	V	7	R-5(A)	.0757	$3,900.00	3	$250.00	$350.00	$6,000.00	Jeffrey Grant
14	3730 Wendelkin	V	7	PD-595	.1721	$37,040.00	2	$1,000.00	$1,500.00	$6,750.00	Quentin McClellan

HVACR Maintenance and Minor Repairs
Agenda Item # 35

Council District	Facility Name
1	Sunset Pump Station
2	Cadiz Pump Station
3	Camp Wisdom Pump Station Red Bird Booster Pump Station Sorcey Pump Station
4	Cedar Crest Pump Station Central Wastewater Treatment Plant
5	Lake June Pump Station
6	Bachman Water Treatment Plant Irving Jamison Pump Station Lone Star Pump Station Walnut Hill Pump Station
7	Jim Miller Pump Station
8	Alta Mesa Pump Station Southcliff Pump Station Southside Wastewater Treatment Plant
9	Lake Ray Hubbard White Rock Pump Station
10	Abrams Pump Station Doran Pump Station Whispering Hills Pump Station
11	Cosa Crest Pump Station Meandering Way Booster Pump Station Walcrest Pump Station
12	Parkway Pump Station
14	Greenville Pump Station
Outside City Limits	Beltwood Pump Station Cypress Waters Pump Station Eastside Water Treatment Plant Elm Fork Water Treatment Plant Interim Raw Water Facility Iron Bridge - Interconnect Facility Lake Fork Pump Station

A closed executive session may be held if the discussion of any of the above agenda items concerns one of the following:

1. Contemplated or pending litigation, or matters where legal advice is requested of the City Attorney. Section 551.071 of the Texas Open Meetings Act.

2. The purchase, exchange, lease or value of real property, if the deliberation in an open meeting would have a detrimental effect on the position of the City in negotiations with a third person. Section 551.072 of the Texas Open Meetings Act.

3. A contract for a prospective gift or donation to the City, if the deliberation in an open meeting would have a detrimental effect on the position of the City in negotiations with a third person. Section 551.073 of the Texas Open Meetings Act.

4. Personnel matters involving the appointment, employment, evaluation, reassignment, duties, discipline or dismissal of a public officer or employee or to hear a complaint against an officer or employee. Section 551.074 of the Texas Open Meetings Act.

5. The deployment, or specific occasions for implementation of security personnel or devices. Section 551.076 of the Texas Open Meetings Act.

6. Deliberations regarding Economic Development negotiations. Section 551.087 of the Texas Open Meetings Act.

AGENDA DATE January 13, 2016

ITEM #	OK	IND DEF	DISTRICT	TYPE	DEPT.	DOLLARS	LOCAL	MWBE	DESCRIPTION
1			All	V	NA	NA	NA	NA	Approval of Minutes of the December 9, 2015 City Council Meeting
2			2	C	AVI	$989,750.00	NA	NA	Authorize a twenty-four month professional services contract with M S Benbow and Associates for specialty consulting on aviation projects for the Dallas Airport Systems and Dallas Love Field for the period January 2016 through January 2018 - Not to exceed $989,750 - Financing: Aviation Current Funds (subject to annual appropriations)
3			8	C	PBD, SAN	$172,094.00	0.00%	0.00%	Authorize a construction services contract to demolish and replace the existing leachate storage tank at the McCommas Bluff Landfill - Texas Aquastore, Inc., lowest responsible bidder of two - Not to exceed $172,094 - Financing: Sanitation Current Funds (subject to appropriations)
4			Outside	C	PBD, WTR	$178,606.00	45.66%	45.66%	Authorize an acquisition contract for the purchase, design and installation of five computerized control units at Lake Fork Pump Station and two display units at Iron Bridge Pump Station - WHECO Electric, Inc., most advantageous proposer of four - Not to exceed $178,606 - Financing: Water Utilities Capital Construction Funds (subject to appropriations)
5			All	C	PBD, WTR	$214,965.00	0.00%	0.00%	Authorize a three-year service contract for parts and labor for machine shop equipment - Jamet Incorporated, only bidder - Not to exceed $214,965 - Financing: Water Utilities Current Funds (subject to annual appropriations)
6			2	C	PBD, AVI	$230,162.50	0.00%	0.00%	Authorize a three-year service contract for vent and hood maintenance and cleaning services at Love Field - Hood Specialists, lowest responsible bidder of two - Not to exceed $230,163 - Financing: Aviation Current Funds (subject to annual appropriations)
7			All	C	PBD, WTR, EBS, FIR, PKR, SAN, TWM	$428,645.00	0.00%	0.00%	Authorize a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes - Royal Arc Welding Company, lowest responsible bidder of two - Not to exceed $428,645 - Financing: Current Funds ($79,235), Water Utilities Current Funds ($300,180), Stormwater Drainage Management Current Funds ($48,570) and Sanitation Current Funds ($660) (subject to annual appropriations)
8			All	C	PBD, AVI, TWM, WTR	$702,744.50	96.12%	3.88%	Authorize a three-year service contract for citywide locksmith services - Joe East Enterprises, Inc. dba A-1 Locksmith, Inc., lowest responsible bidder of three - Not to exceed $702,745 - Financing: Current Funds ($450,829), Aviation Current Funds ($150,743), Water Utilities Current Funds ($100,022) and Stormwater Drainage Management Current Funds ($1,151) (subject to annual appropriations)
9			All	C	PBD, FIR	$1,657,800.00	100.00%	0.00%	Authorize a three-year Interlocal Agreement, with two one-year renewal options, for Initial Emergency Medical Technician Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue - Dallas County Community College District, by and through Brookhaven College, most advantageous proposer of two - Not to exceed $1,657,800 - Financing: Current Funds (subject to annual appropriations)
10			All	C	PBD, WTR	$169,768.08	97.36%	0.00%	Authorize a three-year master agreement for the purchase of plastic sewer couplings and lateral cleanouts - Beeco, Inc. in the amount of $149,437, Fortiline, Inc. in the amount of $14,716, Ferguson Enterprises in the amount of $4,484 and HD Supply Waterworks, LTD in the amount of $1,132, lowest responsible bidders of five - Total not to exceed $169,769 - Financing: Water Utilities Current Funds
11			All	C	PBD, STS	$1,596,316.55	0.00%	0.00%	Authorize a three-year master agreement for the purchase of aluminum sign blanks to be used by Street Services - Vulcan, Inc., lowest responsible bidder of five - Not to exceed $1,596,317 - Financing: Current Funds
12			2	C	PBD, AVI	$80,955.00	NA	NA	Authorize the purchase of a telescoping passenger stairway for Love Field - Boyer Ford Trucks, Inc. through the General Services Administration - Not to exceed $80,955 - Financing: Aviation Current Funds
13			N/A	C	PBD, EBS	REV $48,600	NA	NA	Authorize the sale of one trackloader and one loader through a public auction on December 2, 2015 to Nighthawk Construction in the amount of $27,500 and Roy Hufstutler in the amount of $21,100, highest bidders of sixteen - Revenue: $48,600
14			All	C	PBD, WTR	NC	NA	NA	Authorize (1) the rejection of bids received for various valves and valve parts for water and wastewater treatment plants; and (2) the re-advertisement for new bids - Financing: No cost consideration to the City
15			2	C	CES	NC	NA	NA	Authorize an appointment to the Board of Directors of the Dallas Convention Center Hotel Development Corporation - Financing: No cost consideration to the City
16			All	C	HOU	GT	NA	NA	Authorize (1) the acceptance of a donation in the amount of $440,000 from TXU Energy to provide temporary financial assistance through the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center to individuals and families who are experiencing a temporary financial crisis; and (2) an increase in appropriations in an amount not to exceed $440,000 in the Energy Emergency Assistance Fund - Not to exceed $440,000, from $1,547,979 to $1,987,979 - Financing: Private Funds

AGENDA DATE January 13, 2016

ITEM #	OK	IND DEF	DISTRICT	TYPE	DEPT.	DOLLARS	LOCAL	MWBE	DESCRIPTION
17			All	C	HOU	NC	NA	NA	Authorize the Single Family Housing Development Program Statement - Financing: No cost consideration to the City
18			All	C	LIB	GT	NA	NA	Authorize the acceptance of a grant from the Texas State Library and Archives Commission (FAIN No. LS-00-13-0044-13, CFDA No. 45.310) in the amount of $38,823 for partial reimbursement of interlibrary loan services' direct costs of $50,982 for the period September 1, 2014 through August 31, 2015 - Not to exceed $38,823 - Financing: Texas State Library and Archives Commission Grant Funds
19			1	C	OCA, PKR	$65,000.00	NA	NA	Authorize a contract with artist Christopher Blay for a new public art commission to be located near the Coombs Creek walking trail near the intersection of Kessler Parkway and North Clinton Avenue - Not to exceed $65,000 - Financing: 2006 Bond Funds
20			All	C	OEM	GT	NA	NA	Authorize (1) acceptance of additional grant funds from the U.S. Department of Homeland Security under the Homeland Security Grant Program - 2014 Urban Area Security Initiative to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters in an amount not to exceed $95,800; and (2) execution of the grant agreement - Not to exceed $95,800, from $5,818,875 to $5,914,675 - Financing: U.S. Department of Homeland Security Grant Funds
21			All	C	OEM	GT	NA	NA	Authorize (1) acceptance of the 2015 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters for the period September 1, 2015 through May 31, 2018; and (2) execution of the grant agreement - Not to exceed $5,898,375 - Financing: U.S. Department of Homeland Security Grant Funds
22			All	C	OEM	NC	NA	NA	Authorize approval of the 2015 Dallas County Hazard Mitigation Action Plan, which identifies strategies to mitigate natural hazards in the City of Dallas and Dallas County - Financing: No cost consideration to the City
23			N/A	C	OFS	$80,000.00	NA	NA	Authorize Supplemental Agreement No. 5 to the professional services contract with Diversified Utility Consultants, Inc., increasing the contract for expert consulting services and testimony in matters related to Atmos Energy Mid-Tex Division's "Dallas Annual Rate Review" filing - Not to exceed $80,000, from $350,000 to $430,000 - Financing: Current Funds (to be fully reimbursed by Atmos Energy)
24			9	C	PKR	$148,819.86	98.26%	49.21%	Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail located between the Mockingbird Pedestrian Bridge to Bath House at White Rock Lake - Not to exceed $148,820, from $1,171,690 to $1,320,510 - Financing: 2006 Bond Funds ($147,818) and 2003 Bond Funds ($1,002)
25			1	C	PKR	$84,953.54	86.63%	58.16%	Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail located from Stevens Park tennis courts to Hampton Road - Not to exceed $84,954, from $1,131,842 to $1,216,796 - Financing: 2006 Bond Funds
26			13	C	PKR	NC	NA	NA	Authorize a public hearing to be held on February 10, 2016 to receive comments for the proposed use of a portion of the Bachman Creek Greenbelt located at 3900 Shorecrest Drive, totaling approximately 42,323 square feet, for driveway access and parking by QuikTrip Corporation that will benefit the park by providing parking, trail access, driveway, landscaping and other amenities to be constructed and maintained by QuikTrip Corporation for the benefit of the public - Financing: No cost consideration to the City
27			5, 7	C	PBW, WTR	$186,047.00	100.00%	34.10%	Authorize a professional services contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project for Lonsdale Avenue from Sarah Lee Drive to Lake June Road and two bridge repair projects along Second Avenue over White Rock Creek - Not to exceed $186,047 - Financing: 2012 Bond Funds ($153,217) and Water Utilities Capital Improvement Funds ($32,830)
28			All	C	PBW	NC	NA	NA	Authorize the rejection of bids for a thirty-six month sidewalk and barrier free ramp installation paving services contract; and, the re-advertisement for new bids - Financing: No cost consideration to the City
29			4	C	DEV, PBW	$46,000.00	NA	NA	Authorize acquisition from Gerardo Rodriguez and Consuelo Rodriguez of approximately 5,772 square feet of land improved with a single family residence located near the intersection of McGowan and Childers Streets for the Cadillac Heights future location of city service and maintenance facilities - Not to exceed $46,000 ($42,000, plus closing costs and title expenses not to exceed $4,000) - Financing: 2006 Bond Funds

AGENDA DATE January 13, 2016

ITEM #	OK	IND DEF	DISTRICT	TYPE	DEPT.	DOLLARS	LOCAL	MWBE	DESCRIPTION
30			4, 7	C	DEV	REV $19,678.50	NA	NA	Authorize the quitclaim of 14 properties acquired by the taxing authorities from the Tax Foreclosure Sheriff's Sale to the highest bidders; and authorize the execution of release of liens for any non-tax liens that may have been filed by the City and were included in the foreclosure judgment - Revenue: $19,678
31			2	C	DEV	REV $35,909.15	NA	NA	An ordinance abandoning a portion of Hobbs Avenue to Southern Foods Group, LLC, the abutting owner, containing approximately 25,965 square feet of land, located near the intersection of Haskell and Hobbs Avenues, authorizing the quitclaim and providing for the dedication of approximately 4,469 square feet of land needed for street right-of-way - Revenue: $35,910, plus the $20 ordinance publication fee
32			13	C	DEV	REV $5,400	NA	NA	An ordinance abandoning three fire lane easements to Wal-Mart Real Estate Business Trust, the abutting owner, containing a total of approximately 76,544 square feet of land, located near the intersection of Harvest Hill and Midway Roads - Revenue: $5,400, plus the $20 ordinance publication fee
33			6	C	TWM	$3,169,994.00	NA	NA	Authorize (1) a Local Transportation Project Advanced Funding Agreement with the Texas Department of Transportation for the design and construction of the Trinity Skyline Trail from Sylvan Avenue to the City of Irving's Campion Trail; (2) the receipt and deposit of Transportation Alternatives Program Funds from the Texas Department of Transportation in an amount not to exceed $2,989,994; (3) an increase in appropriations in the amount of $2,989,994 in the TXDOT Transportation Advance Management System Fund; and (4) payment to the Texas Department of Transportation in the amount of $180,000 - Not to exceed $3,169,994 - Financing: Stormwater Drainage Management Capital Construction Funds ($180,000) and TXDOT Transportation Advance Management System Funds ($2,989,994)
34			All	C	TWM	$125,600.00	NA	NA	Ratify the emergency rental of pumps and pumping equipment for pumping operations to relieve flooding at Loop 12 and Eagle Ford Sump - Moir Watershed Services, L.L.C. - Not to exceed $125,600 - Financing: Stormwater Drainage Management Current Funds
35			1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, Outside	C	WTR	$3,822,500.00	90.00%	100.00%	Authorize a contract for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 Dallas Water Utilities facilities to Assured Mechanical Solutions LLC, lowest responsible bidder of two - Not to exceed $3,822,500 - Financing: Water Utilities Capital Construction Funds
36			8	C	WTR	$195,126.00	26.49%	19.49%	Authorize an increase in the contract with AUI Contractors, LLC for additional construction services associated with the major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant - Not to exceed $195,126, from $8,212,864 to $8,407,990 - Financing: Water Utilities Capital Improvement Funds
37			4	C	WTR	$149,806.00	100.00%	35.45%	Authorize Supplemental Agreement No. 3 to the engineering services contract with HDR Engineering, Inc. for additional construction administration services associated with process improvements at the Central Wastewater Treatment Plant - Not to exceed $149,806, from $4,370,475 to $4,520,281 - Financing: Water Utilities Capital Improvement Funds
38			N/A	I	SEC	NC	N/A	N/A	Consideration of appointments to boards and commissions and the evaluation and duties of board and commission members (List of nominees is available in the City Secretary's Office)
39			2	I	ECO	NC	NA	NA	Authorize a New Markets Tax Credit transaction between the Dallas Development Fund and its subsidiaries, JPMorgan Chase Bank, N.A., and its subsidiaries, and The Family Place, and its affiliates for the construction of improvements related to The Family Place facility - Financing: No cost consideration to the City
40			4	I	ECO	$825,000.00	NA	NA	Authorize (1) a Chapter 380 economic development grant agreement with City Wide Community Development Corporation for costs associated with development of a commercial office/retail building of approximately 8,400 square feet to be located at 3111 - 3115 South Lancaster Road in Dallas, Texas that will address a shortage of business rental space in the area and continue redevelopment in the Lancaster Corridor; and (2) third amendment to grant agreement between City Wide Community Development Corporation and the City of Dallas to extend the completion deadline from September 12, 2016 to March 31, 2017 - Not to exceed $825,000 - Financing: 2012 Bond Funds

AGENDA DATE January 13, 2016

ITEM #	OK	IND DEF	DISTRICT	TYPE	DEPT.	DOLLARS	LOCAL	MWBE	DESCRIPTION
41			8	I	ECO	$2,400,000.00	NA	NA	Authorize a Chapter 380 economic development grant agreement with 3662 W Camp Wisdom LLC and/or its affiliates or parent ("Developer") in an amount not to exceed $2,400,000 in consideration of the Developer's causing a minimum investment of $15,000,000 at Southwest Center Mall - Not to exceed $2,400,000 - Financing: Public/Private Partnership Funds
42			3	I	ECO	NC	NA	NA	Neighborhood Empowerment Zone and Business Personal Property Tax Abatement Authorization: Authorize a resolution designating the approximately 70.7 acres of property located at 3420 Duncanville Road, 3548 Duncanville Road and 3433 Morse Drive, in Dallas Texas, as City of Dallas Neighborhood Empowerment Zone No. 4 ("NEZ No.4"), pursuant to Chapter 378 of the Local Government Code to promote an increase in economic development in the zone, establishing the boundaries of the Neighborhood Empowerment Zone and providing for an effective date - Financing: No cost consideration to the City
43			3	I	ECO	NC	NA	NA	Neighborhood Empowerment Zone and Business Personal Property Tax Abatement Authorization: Authorize a 75 percent business personal property tax abatement agreement for 8 years with Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. in consideration of a warehouse consolidation that will generate new taxable investment and job creation to be located at 3548 Duncanville Road, Dallas, Texas furthering the City of Dallas' economic development goals pursuant to the City's Public/Private Partnership Program Guidelines and Criteria - Revenue: First year revenue estimated at $125,528; eight-year revenue estimated at $746,889 (Estimated revenue foregone for eight-year business personal property tax abatement estimated at $2,240,665)
44			2, 14	I	PNV	$250,000.00	NA	NA	Authorize a professional services contract with MIG, Inc. for the preparation of an update to the City's Downtown Dallas 360 Plan adopted by City Council on April 13, 2011 - Not to exceed $250,000 - Financing: Downtown Connection TIF District Funds
45			14	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting the renewal of Specific Use Permit No. 1803 for an open-enrollment charter school on property zoned a CA-1(A) Central Area District in an area bounded by McKinney Avenue, Laws Street, Munger Avenue and North Lamar Street
46			9	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for R-7.5(A) Single Family District and private school uses on property zoned an R-7.5(A) Single Family District on the northeast corner of Westlake Avenue and Hillside Drive
47			3	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an open-enrollment charter school on property zoned an RR Regional Retail District, north of West Camp Wisdom Road and west of Interstate 35E Freeway
48			2	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting an amendment to Planned Development Subdistrict No. 96 within Planned Development District No. 193, the Oak Lawn Special Purpose District, on the west line of Harry Hines Boulevard and the east line of the Houston Street Extension
49			7	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting an MF-2(A) Multifamily Subdistrict on property zoned Tract 1, RS-C Regional Service Commercial Subdistrict within Planned Development District No. 595, the South Dallas/Fair Park Special Purpose District on the southeast line of Sanger Avenue, between Riggs Street and South Ervay Street
50			7	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a D-1 Liquor Control Overlay and an ordinance granting a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store 3,500 square feet or less on property zoned an RR Regional Retail District with a D Liquor Control Overlay on the southwest corner of Jim Miller Road and Samuell Boulevard
51			14	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a new subdistrict and an ordinance granting a Specific Use Permit for a winery and tasting room on property zoned Center Core Area, Subdistrict E-F within Planned Development District No. 281, the Lakewood Special Purpose District on the southeast corner of Prospect Avenue and Kidwell Street
52			5	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a utility or government installation other than listed on property zoned an LI Light Industrial District on the east line of Guard Drive, north of Lake June Road

AGENDA DATE January 13, 2016

ITEM #	OK	IND DEF	DISTRICT	TYPE	DEPT.	DOLLARS	LOCAL	MWBE	DESCRIPTION
53			6	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an animal shelter or clinic with outside runs on property zoned an IR Industrial Research District along the north line of West Commerce Street, west of Chappell Street
54			14	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development Subdistrict for GR General Retail Subdistrict and an outdoor dining area uses on property zoned a GR General Retail Subdistrict within Planned Development District No. 193, the Oak Lawn Special Purpose District on the southwest line of Fairmount Street, west of Cedar Springs Road
55			3	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for A(A) Agricultural District and camp recreation center uses and an ordinance repealing Specific Use Permit No. 928 for a community welfare or health center on property zoned an A(A) Agricultural District, generally on the west line of Whispering Cedars Drive and on the east and west lines of Cedar Ridge Drive, north of West Red Bird Lane and Ranchero Lane
56			2	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for multifamily uses on property zoned an MF-2(A) Multifamily District on the southwest line of Coronado Avenue, east of East Grand Avenue
57			14	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District on the north corner of North Hall Street and Roseland Avenue
58			4	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a CR Community Retail District and a resolution accepting deed restrictions volunteered by the applicant on property zoned an R-7.5(A) Single Family District on the southwest corner of East Illinois Avenue and Seevers Avenue
59			14	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower on property zoned an MF-3(A) Multifamily District on the north line of Belmont Avenue, west of Greenville Avenue
60			All	PH	DEV	NC	NA	NA	A public hearing to receive comments regarding consideration of and an ordinance granting amendments to Chapter 51 and Chapter 51A of the Dallas Development Code, Section 51-4.212, "Utility and Public Service Uses," Section 51A-4.408, "Maximum Building Height," and Section 51A-4.704, "Nonconforming Uses and Structures" to amend regulations pertaining to tower/antenna for cellular communication; and Section 51A-13.304(k)(5) to add a configuration provision for utilities on an open space development type
61			All	PH	POL	NC	NA	NA	A public hearing to receive comments on the renewal of the Dallas juvenile curfew ordinance, which provides daytime and nighttime curfew hours for minors, and, at the close of the hearing, consideration of an ordinance amending Chapter 31 of the Dallas City Code to reinstate and continue in effect the Dallas juvenile curfew ordinance - Financing: No cost consideration to the City

TOTAL $17,970,653.03

AGENDA ITEM # 2

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Aviation

CMO: Ryan S. Evans, 671-9837

MAPSCO: 34E

SUBJECT

Authorize a twenty-four month professional services contract with M S Benbow and Associates for specialty consulting on aviation projects for the Dallas Airport Systems and Dallas Love Field for the period January 2016 through January 2018 - Not to exceed $989,750 - Financing: Aviation Current Funds (subject to annual appropriations)

BACKGROUND

The City of Dallas has an Interlocal Agreement with DFW Airport whereas the City of Dallas and DFW Airport agree to allow each other to purchase goods and services under contracts that each has competed and negotiated according to agreed upon standards. DFW Airport has an existing contract with M S Benbow and Associates that the Aviation Department will utilize to purchase services under this contract. This action awards a consultant contract to M S Benbow and Associates for radio frequency system analysis, antenna location and positioning, frequency coordination, conceptual system design support for the Dallas Love Field's other radio frequency that relate to the Commercial Distributed Antenna system and Public Safety Distributed Antenna System, Wi-Fi operation and maintenance.

The scope of work includes planning, programming, design review, project management support, bid plan support, cost review and evaluation, on-going tenant planning, construction observation and reporting, usage trends review and reporting, and construction management coordination and liaison.

PRIOR ACTION / REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Transportation & Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

$989,750.00 - Aviation Current Funds (subject to annual appropriations)

OWNER

M S Benbow and Associates

Leo L Holzenthal, Jr., P.E., President

January 13, 2016

WHEREAS, it is now desirable to authorize a twenty-four month professional services contract with M S Benbow and Associates for specialty consulting and professional services on aviation projects for the Dallas Airport Systems and Dallas Love Field projects.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to enter into a twenty-four month professional services contract, in an amount not to exceed $ 989,750.00 with M S Benbow and Associates for specialty consulting and professional services related to integrating aviation services on projects for Dallas Airport Systems and Dallas Love Field projects, subject to annual appropriations, after it has been approved as to form by the City Attorney.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds, (subject to annual appropriations) in accordance with the terms of the contract from:

Aviation Current Funds
Fund 0130 Dept. AVI, Unit 7754, Act. AV26
Obj. 3070, Service Contract No. MASC MSBA7754
Vendor No. VS0000061603 in an amount not to exceed $989,750.00

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 3

KEY FOCUS AREA:	Clean, Healthy Environment
AGENDA DATE:	January 13, 2016
COUNCIL DISTRICT(S):	8
DEPARTMENT:	Business Development & Procurement Services Sanitation Services
CMO:	Jeanne Chipperfield, 670-7804 Joey Zapata, 670-3009
MAPSCO:	67P

SUBJECT

Authorize a construction services contract to demolish and replace the existing leachate storage tank at the McCommas Bluff Landfill - Texas Aquastore, Inc., lowest responsible bidder of two - Not to exceed $172,094 - Financing: Sanitation Current Funds (subject to appropriations)

BACKGROUND

This contract will allow for the demolition and replacement of the existing leachate storage tank at the McCommas Bluff Landfill. Sanitation Services (SAN) collects leachate which is a liquid biproduct of the decomposition of waste, at the McCommas Bluff Landfill. The leachate liquid waste is pumped and stored in a leachate tank with a capacity of 159,122 gallons, the leachate is then discharged to the sanitary sewer . Recent inspections revealed corrosion on the roof and deterioration of the side panels of the tank. The leachate tank has served its purpose for 20 years, which is its life expectancy from the manufacturer. The existing leachate tank must be demolished and replaced to continue to support the landfill operation.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 35 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council - Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$172,094.00 - Sanitation Current Funds (subject to appropriations)

M/WBE INFORMATION

5 - Vendors contacted
5 - No response
0 - Response (Bid)
0 - Response (No Bid)
0 - Successful

35 M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the good faith requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Texas Aquastore, Inc.

White Male	15	White Female	1
Black Male	3	Black Female	0
Hispanic Male	1	Hispanic Female	0
Other Male	0	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BH1603 and were opened on November 13, 2015. This contract is being awarded in its entirety to the lowest responsive and responsible bidder.

*Denotes successful bidder

Bidders	Address	Amount of Bid
*Texas Aquastore, Inc.	1422 W. Houston St. Sherman, TX 75092	$172,094.00

BID INFORMATION (Continued)

Bidders	Address	Amount of Bid
Shearer & Associates, Inc.	19300 NE 112th Ave. Suite 100 Battle Ground, WA 98604	$244,700.00

OWNER

Texas Aquastore, Inc.

Matt Whelchel, President
John Viale, Vice President
Marcelo Sicuro, Secretary
Nick Hartofilis, Treasurer

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a construction services contract to demolish and replace the existing leachate storage tank at the McCommas Bluff Landfill - Texas Aquastore, Inc., lowest responsible bidder of two - Not to exceed $172,094 - Financing: Sanitation Current Funds (subject to appropriations)

Texas Aquastore, Inc. is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use their own workforce.
PROJECT CATEGORY: Construction

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$0.00	0.00%
Total non-local contracts	$172,094.00	100.00%
TOTAL CONTRACT	$172,094.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute a construction services contract with Texas Aquastore, Inc. (VS89848) to demolish and replace the existing leachate storage tank at McCommas Bluff Landfill, in an amount not to exceed $172,094.00, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Texas Aquastore, Inc. shall be based only on the amount of the services directed to be performed by the City and properly performed by Texas Aquastore, Inc. under the contract.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds from the following appropriation in an amount not to exceed $172,094.00 (subject to appropriations):

FUND	DEPT	UNIT	OBJ	AMOUNT	FY	ENCUMBRANCE
0440	SAN	3591	4720	$172,094.00	2016	CTAquastore Texas Inc.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 4

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): Outside City Limits

DEPARTMENT: Business Development & Procurement Services
Water Utilities

CMO: Jeanne Chipperfield, 670-7804
Mark McDaniel, 670-3256

MAPSCO: 50 A-N

SUBJECT

Authorize an acquisition contract for the purchase, design and installation of five computerized control units at Lake Fork Pump Station and two display units at Iron Bridge Pump Station - WHECO Electric, Inc., most advantageous proposer of four - Not to exceed $178,606 - Financing: Water Utilities Capital Construction Funds (subject to appropriations)

BACKGROUND

This acquisition contract will provide for the purchase, design and installation of five computerize control units at Lake Fork Pump Station (LFPS) and two display units at Iron Bridge Pump Station.

The computerized control units provide automation of water pumps operation at LFPS. These pumps are capable of proving up to 360 million gallons per day (MGD) of water to the Eastside Water Treatment Plant (EWTP).

Additionally this contract will provide replacement of two non-functional display screens at the Iron Bridge Pump Station. These screens allow for remote monitoring of water being transferred to EWTP. EWTP provides up to 440 MGD of treated water for the City and their customers.

A five member committee from the following departments reviewed and evaluated the proposals:

- Trinity Watershed Management (1)
- Water Utilities (2)
- Communication and Information Services (1)
- Business Development and Procurement Services (1)*

*Business Development and Procurement Services only evaluated the cost.

BACKGROUND (Continued)

The successful proposer was selected by the committee on the basis of demonstrated competence and qualifications under the following criteria:

- Cost 85%
- Capability and expertise 15%

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 628 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLink Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council – Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$178,606.00 - Water Utilities Capital Construction Funds (subject to appropriations)

M/WBE INFORMATION

96 - Vendors contacted
96 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

628 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the good faith requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

WHECO Electric, Inc.

White Male	13	White Female	5
Black Male	0	Black Female	0
Hispanic Male	0	Hispanic Female	1
Other Male	0	Other Female	0

PROPOSAL INFORMATION

The following proposals were received from solicitation number BUZ1525 and were opened on July 30, 2015. This acquisition contract is being awarded in its entirety to the most advantageous proposer.

*Denotes successful proposer

Proposers	Address	Score	Amount
*WHECO Electric, Inc.	8501 Jacksboro Hwy. Fort Worth, TX 76135	99%	$178,606.00
M. C. Dean Incorporated	22980 Indian Creek Dr. Dulles, VA 20166	95%	$180,762.00
CDM Smith, Inc.	8140 Walnut Hill Ln. Suite 1000 Dallas, TX 75231	79%	$223,357.00
Team One Integration, LLC	P.O. Box 117370 Carrollton, TX 75011	77%	$212,432.62

OWNER

WHECO Electric, Inc.

Kent Meyerhoeffer, President
Debora Meyerhoeffer, Vice President

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize an acquisition contract for the purchase, design and installation of five computerized control units at Lake Fork Pump Station and two display units at Iron Bridge Pump Station - WHECO Electric, Inc., most advantageous proposer of four - Not to exceed $178,606 - Financing: Water Utilities Capital Construction Funds (subject to appropriations)

WHECO Electric, Inc. is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractor.

PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$81,549.00	45.66%
Total non-local contracts	$97,057.00	54.34%
TOTAL CONTRACT	$178,606.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

Local	Certification	Amount	Percent
Signature Automation LLC	HMDB68986N0616	$81,549.00	100.00%
Total Minority - Local		$81,549.00	100.00%

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$81,549.00	100.00%	$81,549.00	45.66%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$81,549.00	100.00%	$81,549.00	45.66%

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute an acquisition contract with WHECO Electric, Inc. (VS0000075924) for the purchase, design and installation of five computerize control units at Lake Fork Pump Station and two display units at Iron Bridge Pump Station in an amount not to exceed $178,606.00, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to WHECO Electric, Inc. shall be based only on the amount of the services directed to be performed by the City and properly performed by WHECO Electric, Inc. under the contract.

Section 2. That the Chief Financial Officer is authorized to disburse funds in an amount not to exceed $178,606.00 (subject to appropriations):

FUND	DEPT	UNIT	OBJ	AMOUNT	FY	ENCUMBRANCE
0102	DWU	CW50	4735	$ 178,606.00	2016	CTDWU7A1297EA

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 5

KEY FOCUS AREA:	E-Gov
AGENDA DATE:	January 13, 2016
COUNCIL DISTRICT(S):	All
DEPARTMENT:	Business Development & Procurement Services Water Utilities
CMO:	Jeanne Chipperfield, 670-7804 Mark McDaniel, 670-3256
MAPSCO:	N/A

SUBJECT

Authorize a three-year service contract for parts and labor for machine shop equipment - Jamet Incorporated, only bidder – Not to exceed $214,965 – Financing: Water Utilities Current Funds (subject to annual appropriations)

BACKGROUND

This action does not encumber funds; the purpose of a service contract is to establish firm pricing for goods and services, for a specific term, which are ordered on an as needed basis.

This service contract will provide parts and labor for machine shop equipment. Water Utilities machine shops provide parts relative to valves, velocity pumps and light construction equipment on an emergency basis. Equipment maintained through this contract includes:

- Press and shear
- Mill machine
- Welder and wire feeder
- Lathe

DWU operates and maintains twenty-two high service pump stations throughout its 4,926 mile potable water system.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 597 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet and vendor contact information obtained from user departments to contact additional vendors by phone.

BACKGROUND (Continued)

Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council - Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$214,965.00 - Water Utilities Current Funds (subject to annual appropriations)

M/WBE INFORMATION

74 - Vendors contacted
74 - No response
0 - Response (Bid)
0 - Response (No Bid)
0 - Successful

597 M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the good faith requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Jamet Incorporated

White Male	6	White Female	2
Black Male	0	Black Female	0
Hispanic Male	3	Hispanic Female	0
Other Male	1	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BX1515 and were opened on June 18, 2015. This service contract is being awarded in its entirety to the only bidder.

*Denotes successful bidder

Bidder	Address	Amount
*Jamet Incorporated	8616 County Road 528 Burleson, TX 76028	$214,965.00

Note: A single bid review process has been conducted and no exceptions have been found.

OWNER

Jamet Incorporated

Donald James Fisher, President

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year service contract for parts and labor for machine shop equipment - Jamet Incorporated, only bidder – Not to exceed $214,965 – Financing: Water Utilities Current Funds (subject to annual appropriations)

Jamet Incorporated is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use their own workforce.
PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$0.00	0.00%
Total non-local contracts	$214,965.00	100.00%
TOTAL CONTRACT	$214,965.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute a service contract with Jamet Incorporated (VS87193) for parts and labor for machine shop equipment for a term of three years in an amount not to exceed $214,965.00 upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Jamet Incorporated shall be based only on the amount of the services directed to be performed by the City and properly performed by Jamet Incorporated under the contract.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $214,965.00 (subject to annual appropriations) from Service Contract number BX1515.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 6

KEY FOCUS AREA: Clean, Healthy Environment

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Business Development & Procurement Services
Aviation

CMO: Jeanne Chipperfield, 670-7804
Ryan S. Evans, 671-9837

MAPSCO: 34 K

SUBJECT

Authorize a three-year service contract for vent and hood maintenance and cleaning services at Love Field – Hood Specialists, lowest responsible bidder of two - Not to exceed $230,163 - Financing: Aviation Current Funds (subject to annual appropriations)

BACKGROUND

This action does not encumber funds; the purpose of a service contract is to establish firm pricing for services, for a specific term, which are ordered on an as needed basis.

This service contract will provide vent and hood maintenance and cleaning services at Love Field. The services will include maintenance, filter replacement, quarterly inspections, and repairs as needed. Proper maintenance and inspection ensures that the cooking/kitchen vents are in proper working condition and safe to operate. In addition, standard practice maintenance requires that the vents be cleaned and degreased quarterly to eliminate the possibility of fires, cooking flare-ups, and cooking odors from spreading through the terminal. This service is charged back to tenants to ensure the safety of all visitors and personnel at Love Field.

Dallas Love Field does not have the staffing or proper equipment to complete these specialized services. This contract will allow services to proceed efficiently and safely without delays but with Aviation oversight and quality control.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 328 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone.

BACKGROUND (Continued)

Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council - Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$230,162.50 - Aviation Current Funds (subject to annual appropriations)

M/WBE INFORMATION

47 - Vendors contacted
47 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

328 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Hood Specialists

White Male	8	White Female	2
Black Male	2	Black Female	0
Hispanic Male	17	Hispanic Female	1
Other Male	1	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BQ1509 and were opened on August 13, 2015. This contract is being awarded in its entirety to the lowest responsive and responsible bidder.

BID INFORMATION (Continued)

*Denotes successful bidder

Bidders	Address	Amount
*Hood Specialists	2300 Cold Springs Rd. Fort Worth, TX 76106	$230,162.50
Zhu Elite Enterprises, Inc. dba Hoodz of North Dallas	5435 N. Garland Ave. Ste. 140 #153 Garland, TX 75040	$407,536.00

OWNER

Hood Specialists

Michael Hinderliter, President

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year service contract for vent and hood maintenance and cleaning services at Love Field – Hood Specialists, lowest responsible bidder of two - Not to exceed $230,163 - Financing: Aviation Current Funds (subject to annual appropriations)

Hood Specialists is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and propose to use their own workforce.
PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$0.00	0.00%
Total non-local contracts	$230,162.50	100.00%
TOTAL CONTRACT	$230,162.50	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute a service contract with Hood Specialists (VS86040) for vent and hood maintenance and cleaning services at Love Field for a term of three years in an amount not to exceed $230,162.50, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Hood Specialists shall be based only on the amount of the services directed to be performed by the City and properly performed by Hood Specialists under the contract.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $230,162.50 (subject to annual appropriations) from Service Contract number BQ1509.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 7

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Business Development & Procurement Services
Water Utilities
Equipment & Building Services
Fire
Park & Recreation
Sanitation Services
Trinity Watershed Management

CMO: Jeanne Chipperfield, 670-7804
Mark McDaniel, 670-3256
Jill A. Jordan, P.E., 670-5299
Eric Campbell, 670-3255
Willis Winters, 670-4071
Joey Zapata, 670-3009

MAPSCO: N/A

SUBJECT

Authorize a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes - Royal Arc Welding Company, lowest responsible bidder of two - Not to exceed $428,645 - Financing: Current Funds ($79,235), Water Utilities Current Funds ($300,180), Stormwater Drainage Management Current Funds ($48,570) and Sanitation Current Funds ($660) (subject to annual appropriations)

BACKGROUND

This action does not encumber funds; the purpose of a service contract is to establish firm pricing for services, for a specific term, which are ordered on an as needed basis.

This service contract will provide periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes. These cranes are installed at various locations throughout the City.

Periodic inspections and maintenance services are required for these cranes in order to remain in full compliance with all applicable American National Standards Institute (ANSI) and Occupational Safety and Health Administration (OSHA) standards, rules and regulations. The frequency of service required on each crane varies due to the age, usage and working conditions at the specific location.

BACKGROUND (Continued)

These services will also help City staff to identify potential safety hazards in operation and placement of cranes. Work service log books and written reports are maintained by City staff for each inspection and repair as proof of compliance and protects City property from future liability.

Crane inspection requires specialized equipment designed for the inspection and testing of overhead and gantry cranes which will be provided on site by the vendor. Equipment will be verified by City staff in compliance with bid specifications.

This solicitation was structured in a manner which required bidders to submit a response using unit pricing. This bid resulted in a 2.37% increase over comparable unit prices for services and a percentage markup from manufacturer catalog of 10% compared to a markup of 15% for the purchase of parts for the bid awarded in 2012.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 334 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council - Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On March 28, 2012, City Council authorized a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes by Resolution No. 12-0856.

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$ 79,235.00 - Current Funds (subject to annual appropriations)
$ 300,180.00 - Water Utilities Current Funds (subject to annual appropriations)
$ 48,570.00 - Stormwater Drainage Management Current Funds (subject to annual appropriations)
$ 660.00 - Sanitation Current Funds (subject to annual appropriations)

M/WBE INFORMATION

33 - Vendors contacted
32 - No response
1 - Response (Bid)
0 - Response (No bid)
0 - Successful

334 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Royal Arc Welding Company

White Male	44	White Female	22
Black Male	3	Black Female	1
Hispanic Male	1	Hispanic Female	2
Other Male	1	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BQ1520 and were opened on August 27, 2015. This service contract is being awarded in its entirety to the lowest responsive and responsible bidder.

*Denotes successful bidder

Bidders	**Address**	**Amount**
*Royal Arc Welding Company	23851 Vreeland Road Flat Rock, MI 48134	$428,645.00
C & C Professional Services, Inc. dba Sherwood Lifting	918 Stanley Drive Ste. A Euless, TX 76040	$456,285.00

OWNER

Royal Arc Welding Company

Rob Siemens, President
Joe Rosen, Vice President
Kristy Stapula, Secretary

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes - Royal Arc Welding Company, lowest responsible bidder of two - Not to exceed $428,645 - Financing: Current Funds ($79,235), Water Utilities Current Funds ($300,180), Stormwater Drainage Management Current Funds ($48,570) and Sanitation Current Funds ($660) (subject to annual appropriations)

Royal Arc Welding Company is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and propose to use their own workforce.
PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$0.00	0.00%
Total non-local contracts	$428,645.00	100.00%
TOTAL CONTRACT	$428,645.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

WHEREAS, on March 28, 2012, City Council authorized a three-year service contract for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes by Resolution No. 12-0856; and,

WHEREAS, on August 28, 2015, Administrative Action No. 15-6539 authorized extension of the service contract for ninety days from September 28, 2015 to December 28, 2015;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute a service contract with Royal Arc Welding Company (VS0000068113) for periodic inspections, repairs, parts and preventive maintenance for overhead and gantry cranes for a term of three years in an amount not to exceed $428,645.00, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Royal Arc Welding Company shall be based only on the amount of the services directed to be performed by the City and properly performed by Royal Arc Welding Company under the contract.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $428,645.00 (subject to annual appropriations) from Service Contract number BQ1520.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 8

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Business Development & Procurement Services
Aviation
Trinity Watershed Management
Water Utilities

CMO: Jeanne Chipperfield, 670-7804
Ryan S. Evans, 671-9837
Mark McDaniel, 670-3256

MAPSCO: N/A

SUBJECT

Authorize a three-year service contract for citywide locksmith services - Joe East Enterprises, Inc. dba A-1 Locksmith, Inc., lowest responsible bidder of three - Not to exceed $702,745 - Financing: Current Funds ($450,829), Aviation Current Funds ($150,743), Water Utilities Current Funds ($100,022) and Stormwater Drainage Management Current Funds ($1,151) (subject to annual appropriations)

BACKGROUND

This action does not encumber funds; the purpose of a service contract is to establish firm pricing for services, for a specific term, which are ordered on an as needed basis.

This service contract provides citywide locksmith services. Services covered under this contract include, but are not limited to:

- Repair and installation of security devices such as magnetic card readers, electronic locks, panic hardware and intrusion alarms
- Key grinding
- Repair and maintenance of safes

This contract also provides the City with the ability to purchase duplicate keys, locks and lock parts as well as safes and safe parts.

BACKGROUND (Continued)

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 431 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the Business Development and Procurement Services' ResourceLINK Team (RLT) to 24 chambers of commerce, the DFW Minority Business Council and the Women's Business Council – Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$450,828.75 - Current Funds (subject to annual appropriations)
$150,743.00 - Aviation Current Funds (subject to annual appropriations)
$100,021.75 - Water Utilities Current Funds (subject to annual appropriations)
$ 1,151.00 - Stormwater Drainage Management Current Funds (subject to annual appropriations)

M/WBE INFORMATION

407 - Vendors contacted
407 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

431 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Joe East Enterprises, Inc. dba A-1 Locksmith, Inc.

White Male	58	White Female	14
Black Male	1	Black Female	0
Hispanic Male	3	Hispanic Female	4
Other Male	2	Other Female	1

BID INFORMATION

The following bids were received from solicitation number BE1501 and were opened on July 30, 2015. This service contract is being awarded in its entirety to the lowest responsive and responsible bidder.

*Denotes successful bidder

Bidders	**Address**	**Amount**
*Joe East Enterprises, Inc. dba A-1 Locksmith, Inc.	2508 Highlander Way Suite 230 Carrollton, TX 75006	$ 702,744.50
Key Express, Inc.	2623 Commerce Street Dallas, TX 75226	$1,178,362.00
A&L DFW Homes, Inc.	1114 Fairlawn Drive Duncanville, TX 75116	Non-Responsive**

****A&L DFW Homes, Inc. was deemed non-responsive due to not meeting specifications.

OWNER

Joe East Enterprises, Inc. dba A-1 Locksmith, Inc.

Joe East, President
Beth East, Secretary
Michael Schneider, Chief Executive Officer

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year service contract for citywide locksmith services - Joe East Enterprises, Inc. dba A-1 Locksmith, Inc., lowest responsible bidder of three - Not to exceed $702,745 - Financing: Current Funds ($450,829), Aviation Current Funds ($150,743), Water Utilities Current Funds ($100,022) and Stormwater Drainage Management Current Funds ($1,151) (subject to annual appropriations)

Joe East Enterprises, Inc. dba A-1 Locksmith, Inc. is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractor.

PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$675,444.50	96.12%
Total non-local contracts	$27,300.00	3.88%
TOTAL CONTRACT	$702,744.50	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

Non-local	Certification	Amount	Percent
Ricochet Fuel Distributors, Inc.	WFWB63913Y0117	$27,300.00	100.00%
Total Minority - Non-local		$27,300.00	100.00%

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$27,300.00	3.88%
Total	$0.00	0.00%	$27,300.00	3.88%

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute a service contract with Joe East Enterprises, Inc. dba A-1 Locksmith, Inc. (268354) for citywide locksmith services for a term of three years in an amount not to exceed $702,744.50, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Joe East Enterprises, Inc. dba A-1 Locksmith, Inc. shall be based only on the amount of the services directed to be performed by the City and properly performed Joe East Enterprises, Inc. dba A-1 Locksmith, Inc. under the contract.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $702,744.50 (subject to annual appropriations) from Service Contract number BE1501.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 9

KEY FOCUS AREA:	Public Safety
AGENDA DATE:	January 13, 2016
COUNCIL DISTRICT(S):	All
DEPARTMENT:	Business Development & Procurement Services Fire
CMO:	Jeanne Chipperfield, 670-7804 Eric Campbell, 670-3255
MAPSCO:	N/A

SUBJECT

Authorize a three-year Interlocal Agreement, with two one-year renewal options, for Initial Emergency Medical Technician Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue - Dallas County Community College District, by and through Brookhaven College, most advantageous proposer of two - Not to exceed $1,657,800 - Financing: Current Funds (subject to annual appropriations)

BACKGROUND

This Interlocal Agreement will provide for Initial Emergency Medical Technician (EMT) Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue at Brookhaven College. This agreement will provide for payment of tuition for initial EMT basic, paramedic training and continuing education (CE) for existing paramedics and paramedic EMT certification renewals. Initial EMT and paramedic emergency medical services training courses are mandatory so that personnel are able to staff front-line rescues and fire apparatus.

EMT basic training consists of 231 hours of training at a total cost of approximately $31.00 for each student, which does not include textbooks, registration and other related fees. Paramedic training consists of approximately 976 hours of training at a total cost of approximately $661.00 per student, which does not include textbooks, parking and other related fees. CE training consists of 24 hours of hands-on training for each paramedic at a total cost of approximately $408.00 per student.

BACKGROUND (Continued)

A six member committee from the following departments reviewed and evaluated the proposals:

- Business Development & Procurement Services (1)*
- Fire-Rescue (2)
- Police (1)
- Planning and Urban Design (1)
- Public Works (1)

*Business Development and Procurement Services only evaluated cost and the Business Inclusion and Development Plan.

The successful proposer was selected by the committee on the basis of demonstrated competence and qualifications under the following criteria:

- Overall approach/methodology 30%
- Cost 30%
- Capability and expertise of the proposer 25%
- Business Inclusion and Development Plan 15%

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 1,278 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the Business Development and Procurement Services' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council – Southwest, to ensure maximum vendor outreach.

PRIOR ACTION / REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On August 24, 2011, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2011-12, by Resolution No. 11-2173.

On August 24, 2011, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-Basic personnel for the period September 1, 2011 through August 31, 2012, by Resolution No. 11-2175.

On August 22, 2012, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2012-13, by Resolution No. 12-2086.

PRIOR ACTION / REVIEW (COUNCIL, BOARDS, COMMISSIONS) (Continued)

On August 22, 2012, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period September 1, 2012 through August 31, 2013, by Resolution No. 12-2087.

On August 28, 2013, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period September 1, 2013 through August 31, 2014, by Resolution No. 13-1436.

On September 11, 2013, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2013-14, by Resolution No. 13-1557.

On September 24, 2014, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period October 1, 2014 through September 30, 2015, by Resolution No. 14-1643.

On September 24, 2014, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2014-15, by Resolution No. 14-1644.

Information about this item will be provided to the Public Safety Committee on January 11, 2016.

FISCAL INFORMATION

$1,657,800.00 - Current Funds (subject to annual appropriations)

M/WBE INFORMATION

206 - Vendors contacted
206 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

1,278 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the good faith requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Dallas County Community College District (DCCCD), by and through Brookhaven College

White Male	1,708	White Female	2,125
Black Male	739	Black Female	1,468
Hispanic Male	647	Hispanic Female	908
Other Male	173	Other Female	493

PROPOSAL INFORMATION

The following proposals were received from solicitation number BVZ1514 and were opened on September 18, 2015. This agreement is being awarded in its entirety to the most advantageous proposer.

*Denotes successful proposer

Proposers	Address	Score	Amount of Proposal
*Dallas County Community College District (DCCCD), by and through Brookhaven College	4343 Interstate Hwy. 30 Mesquite, TX 75150	86.20% 85.20%	Group A - $ 311,400.00 Group B - $1,346,400.00
The University of Texas Southwestern Medical Center, Department of Emergency Services	5323 Harry Hines Blvd. Dallas, TX 75390	58.00%	Group A - No Bid Group B - $2,805,484.00

OWNER

Dallas County Community College District (DCCCD), by and through Brookhaven College

Thom D. Chesney, President
Donald Stephen Smith, Vice President

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year Interlocal Agreement, with two one-year renewal options, for Initial Emergency Medical Technician Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue - Dallas County Community College District, by and through Brookhaven College, most advantageous proposer of two - Not to exceed $1,657,800 - Financing: Current Funds (subject to annual appropriations)

Dallas County Community College District (DCCCD), by and through Brookhaven College is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use their own workforce.
PROJECT CATEGORY: Other Services

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$1,657,800.00	100.00%
Total non-local contracts	$0.00	0.00%
TOTAL CONTRACT	$1,657,800.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

WHEREAS, on August 24, 2011, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2011-12, by Resolution No. 11-2173; and,

WHEREAS, on August 24, 2011, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-Basic personnel for the period September 1, 2011 through August 31, 2012, by Resolution No. 11-2175; and,

WHEREAS, on August 22, 2012, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2012-13, by Resolution No. 12-2086; and,

WHEREAS, on August 22, 2012, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period September 1, 2012 through August 31, 2013, by Resolution No. 12-2087; and,

WHEREAS, on August 28, 2013, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period September 1, 2013 through August 31, 2014, by Resolution No. 13-1436; and,

WHEREAS, on September 11, 2013, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2013-14, by Resolution No. 13-1557; and,

WHEREAS, on September 24, 2014, City Council authorized a contract renewal for in-service training, re-training, and evaluation of City of Dallas paramedic and emergency medical technician-basic personnel for the period October 1, 2014 through September 30, 2015, by Resolution No. 14-1643; and,

WHEREAS, on September 24, 2014, City Council authorized payment for training of emergency medical technicians and paramedics for FY 2014-15, by Resolution No. 14-1644;

NOW, THEREFORE,

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is authorized to execute an Interlocal Agreement with Dallas County Community College District (DCCCD), by and through Brookhaven College (VS0000065958) for Initial Emergency Medical Technician Basic Training, Paramedic Training and Continuing Education services for Fire-Rescue for a term of three years with two one-year renewal options in an amount not to exceed $1,657,800.00, upon approval as to form by the City Attorney. If the service was bid or proposed on an as needed, unit price basis for performance of specified tasks, payment to Dallas County Community College District (DCCCD), by and through Brookhaven College shall be based only on the amount of services directed to be performed by the City and properly performed by Dallas County Community College District under the agreement.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $1,657,800.00 (subject to annual appropriations) from Interlocal Agreement Service Contract number BVZ1514.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 10

KEY FOCUS AREA:	E-Gov
AGENDA DATE:	January 13, 2016
COUNCIL DISTRICT(S):	All
DEPARTMENT:	Business Development & Procurement Services Water Utilities
CMO:	Jeanne Chipperfield, 670-7804 Mark McDaniel, 670-3256
MAPSCO:	N/A

SUBJECT

Authorize a three-year master agreement for the purchase of plastic sewer couplings and lateral cleanouts – Beeco, Inc. in the amount of $149,437, Fortiline, Inc. in the amount of $14,716, Ferguson Enterprises in the amount of $4,484 and HD Supply Waterworks, LTD in the amount of $1,132, lowest responsible bidders of five - Total not to exceed $169,769 - Financing: Water Utilities Current Funds

BACKGROUND

This action does not encumber funds; the purpose of a master agreement is to establish firm pricing for goods for a specific term, which are ordered on an as needed basis.

This master agreement will provide a range of plastic sewer couplings and lateral cleanouts for replacement purposes. The lateral cleanouts provide easy access to the City's main sewer and wastewater pipelines and are inspected during routine maintenance and repair jobs. Couplings are used to make pipe connections throughout the main sewer and wastewater pipelines.

City crews complete approximately 4,000 sewer repairs each year and maintain approximately 4,200 miles of wastewater mainline.

This solicitation was structured in a manner which required bidders to submit a response using unit pricing. This bid resulted in a 11.49% increase over comparable unit prices for the bid awarded in 2013.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 153 email bid notifications to vendors registered under respective commodities.

BACKGROUND (Continued)

To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the BDPS' ResourceLINK Team (RLT) to 25 chambers of commerce, the DFW Minority Business Council and the Women's Business Council – Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On February 13, 2013, City Council authorized a three-year master agreement for plastic sewer couplings and lateral cleanouts by Resolution No. 13-0296.

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$169,768.08 - Water Utilities Current Funds

M/WBE INFORMATION

31 - Vendors contacted
31 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

153 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardees have fulfilled the good faith requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Beeco, Inc.

White Male	2	White Female	0
Black Male	0	Black Female	0
Hispanic Male	1	Hispanic Female	0
Other Male	0	Other Female	0

ETHNIC COMPOSITION (Continued)

Fortiline, Inc.

White Male	9	White Female	1
Black Male	2	Black Female	0
Hispanic Male	2	Hispanic Female	0
Other Male	3	Other Female	0

Ferguson Enterprises

White Male	3	White Female	0
Black Male	0	Black Female	0
Hispanic Male	0	Hispanic Female	0
Other Male	0	Other Female	0

HD Supply Waterworks, LTD

White Male	9	White Female	2
Black Male	1	Black Female	0
Hispanic Male	4	Hispanic Female	1
Other Male	1	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BM1531 and were opened on August 27, 2015. This master agreement is being awarded to the lowest responsive and responsible bidders by line. Information related to this solicitation is available upon request.

*Denotes successful bidders

Bidders	**Address**	**Amount**
*Beeco, Inc.	14015 N Stemmons Fwy. Suite B Farmers Branch, TX 75234	Multiple Lines
*Fortiline, Inc.	11200 Seagoville Rd. Balch Springs, TX 75180	Multiple Lines
*Ferguson Enterprises	7982 Highway 69 N. Tyler, TX 75706	Multiple Lines
*HD Supply Waterworks, LTD	4333 Irving Blvd. Dallas, TX 75247	Multiple Lines

BID INFORMATION (Continued)

Bidders	Address	Amount
Mike Harms Associates, Inc.	901 W. Interstate 20 Weatherford, TX 76087	Multiple Lines

OWNERS

Beeco, Inc.

Bruce Coughennower, President
Jim Coughenneower, Vice President

Fortiline, Inc.

Tim Tysinger, President
James Cagle, Vice President
Jason Painter, Secretary

Ferguson Enterprises

Frank Roach, President
Kevin Murphy, Vice President
Dave Kelter, Treasurer

HD Supply Waterworks, LTD

Jerry L. Webb, President
Donald W. Clayton, Vice President
Judy Barrow, Secretary
Mark R. Witkowski, Treasurer

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year master agreement for the purchase of plastic sewer couplings and lateral cleanouts – Beeco, Inc. in the amount of $149,437, Fortiline, Inc. in the amount of $14,716, Ferguson Enterprises in the amount of $4,484 and HD Supply Waterworks, LTD in the amount of $1,132, lowest responsible bidders of five - Total not to exceed $169,769 - Financing: Water Utilities Current Funds

Beeco, Inc., Fortiline, Inc. and HD Supply Waterworks, LTD are a local, non-minority firms, have signed the "Business Inclusion & Development" documentation, and propose to use their own workforces. Ferguson Enterprises is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use their own workforce.

PROJECT CATEGORY: Goods

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$165,284.56	97.36%
Total non-local contracts	$4,483.52	2.64%
TOTAL CONTRACT	$169,768.08	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

WHEREAS, on February 13, 2013, City Council authorized a three-year master agreement for plastic sewer couplings and lateral cleanouts by Resolution No. 13-0296;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That a master agreement for the purchase of plastic sewer couplings and lateral cleanouts is authorized with Beeco, Inc. (VS0000008428) in the amount of $149,437.20, Fortiline, Inc. (VS0000073028) in the amount of $14,716.00, Ferguson Enterprises (VS87464) in the amount of $4,483.52 and HD Supply Waterworks, LTD (VS0000038746) in the amount of $1,131.36, for a term of three years in a total amount not to exceed $169,768.08.

Section 2. That the Purchasing Agent is authorized, upon appropriate request and documented need by a user department, to issue a purchase order for plastic sewer couplings and lateral cleanouts. If a written contract is required or requested for any or all purchases of plastic sewer couplings and lateral cleanouts under the master agreement instead of individual purchase orders, the City Manager is authorized to execute the contract upon approval as to form by the City Attorney.

Section 3. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $169,768.08 from Master Agreement number BM1531.

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 11

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Business Development & Procurement Services
Street Services

CMO: Jeanne Chipperfield, 670-7804
Jill A. Jordan, P.E., 670-5299

MAPSCO: N/A

SUBJECT

Authorize a three-year master agreement for the purchase of aluminum sign blanks to be used by Street Services - Vulcan, Inc., lowest responsible bidder of five - Not to exceed $1,596,317 - Financing: Current Funds

BACKGROUND

This action does not encumber funds; the purpose of a master agreement is to establish firm pricing for goods, for a specific term, which are ordered on an as needed basis.

This master agreement will provide aluminum sign blanks to be used by Street Services. Aluminum sign blanks are used in the production of traffic control signs, street name signs, and signs used by City departments and other agencies. The Street Services' Sign Fabrication Division produces approximately 25,000 signs annually for City use. Additionally, a small number of signs are produced for other agencies with cost recovery.

Aluminum sign blanks are used in the production of:

- Traffic control signs such as stop signs, speed limit signs, yield, and no turn signs
- Warning signs such as pedestrian crossing, school crossing, dip, and curve
- Street name signs and overhead street name signs found at intersections with signal lights
- Signs used by other City departments such as Park & Recreation and Equipment & Building Services

BACKGROUND (Continued)

This solicitation was structured in a manner which required bidders to submit a response using unit pricing. This bid resulted in a 17.9% decrease over comparable unit prices for the bid awarded in 2008.

As part of the solicitation process and in an effort to increase competition, Business Development and Procurement Services (BDPS) used its procurement system to send out 185 email bid notifications to vendors registered under respective commodities. To further increase competition, BDPS uses historical solicitation information, the internet, and vendor contact information obtained from user departments to contact additional vendors by phone. Additionally, in an effort to secure more bids, notifications were sent by the Business Development and Procurement Services' ResourceLINK Team (RLT) to 24 chambers of commerce, the DFW Minority Business Council and the Women's Business Council – Southwest, to ensure maximum vendor outreach.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On October 8, 2008, City Council authorized a twenty-four-month master agreement for aluminum sign blanks by Resolution No. 08-2746.

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$1,596,316.55 - Current Funds

M/WBE INFORMATION

33 - Vendors contacted
33 - No response
0 - Response (Bid)
0 - Response (No bid)
0 - Successful

185 - M/WBE and Non-M/WBE vendors were contacted

The recommended awardee has fulfilled the requirements set forth in the Business Inclusion and Development (BID) Plan adopted by Council Resolution No. 08-2826 as amended.

ETHNIC COMPOSITION

Vulcan, Inc.

White Male	94	White Female	19
Black Male	44	Black Female	8
Hispanic Male	0	Hispanic Female	0
Other Male	11	Other Female	0

BID INFORMATION

The following bids were received from solicitation number BQ1528 and were opened on October 2, 2015. This master agreement is being awarded in its entirety to the lowest responsive and responsible bidder.

*Denotes successful bidder

Bidders	Address	Amount of Bid
*Vulcan, Inc.	410 E. Berry Ave. Foley, AL 36535	$1,596,316.55
Mandel Metals, Inc.	11400 W. Addison Ave. Franklin Park, IL 60131	$1,605,030.10
Osburn Associates, Inc.	11931 State Route 93 N. Logan, OH 43138	$1,679,516.10
Custom Products Corporation	1120 Flowood Dr. Jackson, MS 39232	$1,858,945.70
Custom Products Corporation (Alternate Bid)	1120 Flowood Dr. Jackson, MS 39232	$1,962,802.90

OWNER

Vulcan, Inc.

Thomas M. Lee, President
Robert T. Hamlin, Vice President
James E. Steward, Jr., Vice President
David M. Mullins, Treasurer

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a three-year master agreement for the purchase of aluminum sign blanks to be used by Street Services - Vulcan, Inc., lowest responsible bidder of five - Not to exceed $1,596,317 - Financing: Current Funds

Vulcan, Inc. is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and propose to use their own workforce.
PROJECT CATEGORY: Goods

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$0.00	0.00%
Total non-local contracts	$1,596,316.55	100.00%
TOTAL CONTRACT	$1,596,316.55	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

None

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$0.00	0.00%	$0.00	0.00%

January 13, 2016

WHEREAS, on October 8, 2008, City Council authorized a twenty-four month master agreement for aluminum sign blanks by Resolution No. 08-2746; and,

WHEREAS, on October 24, 2014, Administrative Action No. 14-6865 authorized extension of the master agreement for twelve months from October 8, 2014 to October 8, 2015;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That a master agreement for the purchase of aluminum sign blanks to be used by Street Services is authorized with Vulcan, Inc. (VS0000019813) for a term of three years in an amount not to exceed $1,596,316.55.

Section 2. That the Purchasing Agent is authorized, upon appropriate request and documented need by a user department, to issue a purchase order for aluminum sign blanks. If a written contract is required or requested for any or all purchases of aluminum sign blanks under the master agreement instead of individual purchase orders, the City Manager is authorized to execute the contract upon approval as to form by the City Attorney.

Section 3. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $1,596,316.55 from Master Agreement number BQ1528.

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 12

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Business Development & Procurement Services
Aviation

CMO: Jeanne Chipperfield, 670-7804
Ryan S. Evans, 671-9837

MAPSCO: 34 K

SUBJECT

Authorize the purchase of a telescoping passenger stairway for Love Field – Boyer Ford Trucks, Inc. through the General Services Administration - Not to exceed $80,955 – Financing: Aviation Current Funds

BACKGROUND

This action will allow for the purchase of a telescoping passenger stairway for Love Field and will be utilized to safely and efficiently deplane passengers, on the airport apron, when flights experience delays.

With the greater than expected growth the airport has experienced since the Wright Amendment expired, it has become apparent that a modification is needed to the approach taken with irregular aircraft operations. Presently, dependence is placed upon the random access of unused gates when these planes arrive or depart. The procurement of this telescoping stairway will allow for unloading of passengers for irregular aircraft operations.

On August 23, 2011 the U. S. Department of Transportation (DOT) Office of Aviation Enforcement and Proceedings issued DOT 199-09 stating, in part:

- Requires all carriers that must adopt apron delay contingency plans to file data with the Department regarding lengthy apron delays
- Requires U.S. air carriers to not permit a domestic flight to remain on the apron at a U.S. airport for more than three hours without allowing passengers to deplane subject to safety, security, and Air Traffic Control exceptions
- Requires foreign air carriers to not permit an international flight to remain on the apron at a U.S. airport for more than four hours without allowing passengers to deplane subject to safety, security, and Air Traffic Control exceptions

BACKGROUND (Continued)

Failure to meet the required procedure may subject the airline and/or airport to result in a $27,500 fine for each passenger on board.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$80,955.00 - Aviation Current Funds

ETHNIC COMPOSITION

Boyer Ford Trucks, Inc.

White Male	182	White Female	22
Black Male	3	Black Female	1
Hispanic Male	3	Hispanic Female	0
Other Male	9	Other Female	1

OWNER

Boyer Ford Trucks, Inc.

Thomas Roller, President
Michael Wise, Treasurer

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the purchase of a telescoping passenger stairway for Love Field is authorized with Boyer Ford Trucks, Inc. (VC14717) through the General Services Administration in an amount not to exceed $80,955.00.

Section 2. That the Purchasing Agent is authorized, upon appropriate requisition, to issue a purchase order for a telescoping passenger stairway for Love Field. If a formal contract is required for this purchase instead of a purchase order, the City Manager is authorized to execute the contract upon approval as to form by the City Attorney.

Section 3. That the Chief Financial Officer is hereby authorized to disburse funds from the following appropriation in an amount not to exceed $80,955.00:

Fund	Dept	Unit	Object	Amount	Encumbrance
0130	AVI	7710	4890	$80,955.00	PO AVI122702

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 13

KEY FOCUS AREA:	Economic Vibrancy
AGENDA DATE:	January 13, 2016
COUNCIL DISTRICT(S):	N/A
DEPARTMENT:	Business Development & Procurement Services Equipment & Building Services
CMO:	Jeanne Chipperfield, 670-7804 Jill A. Jordan, P.E., 670-5299
MAPSCO:	N/A

SUBJECT

Authorize the sale of one trackloader and one loader through a public auction on December 2, 2015 to Nighthawk Construction in the amount of $27,500 and Roy Hufstutler in the amount of $21,100, highest bidders of sixteen - Revenue: $48,600

BACKGROUND

This action seeks approval to sell one 1995 Caterpillar 963B trackloader (Equipment #281465) and one 1999 Samsung SL 150-2 loader (Equipment #999019), which were publicly auctioned on December 2, 2015. Equipment & Building Services originally purchased this equipment for the use of various repair needs. The vehicles have reached their useful life, met their de-fleet criteria, and are no longer cost effective for the City to maintain. The 1999 Samsung SL 150-2 loader (3-1/4 C/Y rubber tire loader) was replaced in July 2014 with a 2014 John Deere 524K (3-1/4 C/Y rubber tire loader).

The City used its current contract auctioneer, Lone Star Auctioneers, Inc., to auction this equipment and will pay the auctioneer 7.98% commission based upon gross sales per this auction.

Dallas City Code 2-37.4 requires that when the highest bid for property is more than $20,000.00, the sale to the highest bidder must be confirmed by City Council.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$48,600.00 - Revenue

BID INFORMATION

The following bids were received at public auction on December 2, 2015.

*Denotes successful bidders

Bidders	Address	Amount of Bid
*Nighthawk Construction (Equipment #281465)	212 Quarry Springs Dr. San Marcos, TX 78666	$27,500.00
*Roy Hufstutler (Equipment #999019)	1001 N. Houston Comanche, TX 76442	$21,100.00

OWNERS

Nighthawk Construction

Christopher Martin, Owner

Roy Hufstutler

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager or designee is hereby authorized to sell one trackloader (Equipment #281465) and one loader (Equipment #999019) through a public auction on December 2, 2015, to the highest bidders, Nighthawk Construction in the amount of $27,500.00 and Roy Hufstutler in the amount of 21,100.00, for a total amount of $48,600.00.

Section 2. That the Chief Financial Officer is hereby authorized to receive and deposit funds received from the proceeds of the sale to:

FUND	DEPT	UNIT	REVENUE SOURCE	AMOUNT
0196	EBS	1701	8414	$41,310.00
0199	POM	1232	8420	$ 7,290.00

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 14

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Business Development & Procurement Services
Water Utilities

CMO: Jeanne Chipperfield, 670-7804
Mark McDaniel, 670-3256

MAPSCO: N/A

SUBJECT

Authorize **(1)** the rejection of bids received for various valves and valve parts for water and wastewater treatment plants; and **(2)** the re-advertisement for new bids - Financing: No cost consideration to the City

BACKGROUND

This action will authorize the rejection of bids received for solicitation BM1504 for a three-year service contract for various valves and valve parts for water and wastewater treatment plants. After additional research, Water Utilities has determined better pricing can be obtained through rebidding. Therefore, it would be more advantageous to the City to reject the bids and re-advertise for new bids.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

No cost consideration to the City.

January 13, 2016

WHEREAS, on March 4, 2015, six bids were received for various valves and valve parts for water and wastewater treatment plants; and,

WHEREAS, it has been determined that it is in the best interest of the City of Dallas to reject the six bids that were received for various valves and valve parts for water and wastewater treatment plants;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the six bids received for various valves and valve parts for water and wastewater treatment plants are hereby rejected and authorization to solicit new bids is granted.

Section 2. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 15

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Convention and Event Services

CMO: Ryan S. Evans, 671-9837

MAPSCO: N/A

SUBJECT

Authorize an appointment to the Board of Directors of the Dallas Convention Center Hotel Development Corporation - Financing: No cost consideration to the City

BACKGROUND

Effective April 14, 2010, Al (Alberto) Rojas was appointed to serve as Secretary of the Dallas Convention Center Hotel Development Corporation. Mr. Rojas is no longer an employee of the City of Dallas.

The City Manager recommends Juanita Ortiz to replace Mr. Rojas on the Dallas Convention Center Hotel Development Corporation.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On February 10, 2010, by Resolution No. 10-0454, City Council replaced Shelia Robinson with Jo M. (Jody) Puckett to serve as a board member of the Dallas Convention Center Hotel Development Corporation.

On April 14, 2010, by Resolution No. 10-0918, City Council replaced Frank Poe with Al (Alberto) Rojas to serve as Secretary of the Dallas Convention Center Hotel Development Corporation.

On October 10, 2011, by Resolution No. 11-2719, City Council replaced Ryan Evans with Forest Turner to serve as President and replaced Jody Puckett with Sheila Robinson to serve as Board Member of the Dallas Convention Center Hotel Development Corporation.

On August 28, 2013, by Resolution No. 13-1422, City Council replaced Forest Turner with Jose (Joey) Zapata to serve as President of the Dallas Convention Center Hotel Development Corporation.

FISCAL INFORMATION

No cost consideration to the City.

January 13, 2016

WHEREAS, the articles of incorporation, upon the recommendation of the City Manager, authorize the City Council to approve changes to the Board of Directors of the Dallas Convention Center Hotel Development Corporation.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That Juanita Ortiz replaces Al (Alberto) Rojas as Secretary of the Dallas Convention Center Hotel Development Corporation.

Section 2. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 16

KEY FOCUS AREA: Clean, Healthy Environment

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Housing/Community Services

CMO: Alan Sims, Chief of Neighborhood Plus, 670-1611

MAPSCO: N/A

SUBJECT

Authorize **(1)** the acceptance of a donation in the amount of $440,000 from TXU Energy to provide temporary financial assistance through the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center to individuals and families who are experiencing a temporary financial crisis; and **(2)** an increase in appropriations in an amount not to exceed $440,000 in the Energy Emergency Assistance Fund - Not to exceed $440,000, from $1,547,979 to $1,987,979 - Financing: Private Funds

BACKGROUND

TXU Energy and the City of Dallas, Housing/Community Services Department recognize the need for providing charitable energy assistance to persons in financial distress to help reduce energy related costs essential to their health and welfare. TXU Energy developed the TXU Energy Aid Program as a supplement to government and community aid programs designed to assist individuals in financial distress to reduce energy related costs.

In March 2010, TXU Energy entered into an Energy Aid Agreement with the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center to provide charitable assistance to individuals that are TXU Energy customers needing energy efficiency assistance services. Energy Aid will be delivered as a component of the emergency financial assistance services available through the Social Services Programs at the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center.

TXU Energy provides grant funds, or in certain cases, products in lieu of grant funds to both Centers. The TXU Energy Aid Program is funded by voluntary contributions from TXU Energy. Through this program, the average assistance per client for utility bill payments will be $700-$900 with approximately 628 persons served.

BACKGROUND (Continued)

To participate in the program, the client must be a current TXU Energy customer and have a TXU Energy bill that is past due. There are no income limits or age restrictions to receive assistance.

PRIOR ACTION/REVIEW/(COUNCIL, BOARDS, COMMISSIONS)

On January 22, 2014, the City Council accepted a donation from TXU Energy to provide temporary financial assistance to individuals and families who are experiencing a temporary financial crisis, by Resolution No. 14-0245.

Information about this item will be provided to the Housing Committee on January 4, 2016.

FISCAL INFORMATION

$440,000 - Private Funds

WHEREAS, there is a need to provide temporary financial assistance to families in need of utility assistance; and

WHEREAS, the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center have developed a partnerships with TXU Energy to provide financial assistance through the TXU Energy Aid Program;

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That following approval as to form by the City Attorney, the City Manager is hereby authorized to **(1)** accept a donation in the amount of $440,000 from TXU Energy to provide temporary financial assistance through the Martin Luther King, Jr. Community Center and the West Dallas Multipurpose Center to individuals and families who are experiencing a temporary financial crisis; and **(2)** increase appropriations in an amount not to exceed $440,000, from $1,547,979 to $1,987,979 in the Energy Emergency Assistance Fund.

Section 2. That the Chief Financial Officer is hereby authorized to receive and deposit funds in Fund 0312, Dept. HOU, Unit 0418, Revenue Code 8411, in an amount not to exceed $220,000.

Section 3. That the City Manager is hereby authorized to increase appropriations in Fund 0312, Dept. HOU, Unit 0418, in an amount not to exceed $220,000.

Section 4. That the Chief Financial Officer is hereby authorized to disburse funds from Fund 0312, Dept. HOU, Unit 0418, Object Code 2140, in an amount not to exceed $220,000.

Section 5. That the Chief Financial Officer is hereby authorized to receive and deposit funds in Fund 0312, Dept. HOU, Unit 1435, Revenue Code 8411, in an amount not to exceed $220,000.

Section 6. That the City Manager is hereby authorized to increase appropriations in Fund 0312, Dept. HOU, Unit 1435, in an amount not to exceed $220,000.

Section 7. That the Chief Financial Officer is hereby authorized to disburse funds from Fund 0312, Dept. HOU, Unit 1435, Object Code 2140, in an amount not to exceed $220,000.

Section 8. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 17

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Housing/Community Services

CMO: Alan Sims, Chief of Neighborhood Plus, 670-1611

MAPSCO: N/A

SUBJECT

Authorize the Single Family Housing Development Program Statement - Financing: No cost consideration to the City

BACKGROUND

The City Council seeks to preserve and increase the supply of affordable housing for residents in the city of Dallas. Several initiatives in the Neighborhood Plus Plan are aimed at preserving and increasing the supply of affordable housing opportunities for the city of Dallas residents. The Single Family Housing Development Program is derived from these initiatives to address the shortage in affordable housing in Dallas.

This council action will authorize approval of the Single Family Housing Development Program Statement as described in Exhibit A.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On October 20, 2015, City Council was briefed on the Housing Plus Update.

On November 2, 2015, the Housing Committee was briefed on the Single Family Housing Development Program.

FISCAL INFORMATION

No cost consideration to the City

January 13, 2016

WHEREAS, City Council seeks to preserve and increase the supply of affordable housing for residents in the city of Dallas; and

WHEREAS, on October 20, 2015, City Council was briefed on the Housing Plus Update; and

WHEREAS, on November 2, 2015, the Housing Committee was briefed on the Single Family Housing Development Program; and

WHEREAS, the City now desires to implement policies and procedures to facilitate single family housing development.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the City Manager, or his designee, be authorized to implement policies and procedures to facilitate the proposed Single Family Housing Development Program Statement.

SECTION 2. That following approval as to form by the City Attorney, the City Manager is authorized to execute the necessary supplemental agreements and such other instruments as may be necessary to carry out the program in accordance with the Single Family Housing Development Program Statement (Exhibit A attached).

SECTION 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

EXHIBIT A

SINGLE FAMILY HOUSING DEVELOPMENT
PROGRAM STATEMENT

City of Dallas Single Family Housing Development Program
The purpose of this program is to provide assistance to projects where such assistance is necessary and appropriate to incentivize private investment in the development of ownership opportunities in the city of Dallas. The funding and projects are approved by the City Council prior to private investment occurring.

Purpose
Single Family Housing Development Program is designed to provide City of Dallas economic support for housing development projects for the following purposes:

- Provide housing choices in all areas of Dallas
- Encourage redevelopment in disadvantaged areas
- Partner with the housing development community to increase ownership opportunities
- Leverage resources with the private sector to maximize housing development
- Increase the property tax base

Description
This program will provide gap financial support for the following residential and ownership types:

- New Construction
- Rehabilitation
- Townhomes
- Infill or Scattered Sites
- Subdivisions
- Infrastructure (City may fund up to 30% of public infrastructure)

Types of Funding
The types of funding available for FY15-16 include:

- Community Development Block Grant Funds
- HOME Investment Partnership Funds
- Neighborhood Stabilization Program Funds
- General Obligation Bond Funds

Other sources that may be available include:

- Land Bank or City owned property
- Tax Increment Financing District Funds
- Section 108 Loan Funds

EXHIBIT A

SINGLE FAMILY HOUSING DEVELOPMENT
PROGRAM STATEMENT

Staff will determine the best source of funds or combination of funds to maximize housing choices within each proposed development, and to foster areas of opportunity and otherwise comply with federal fair housing obligations. Financial support may be structured as a grant or loan depending upon the project financing needs.

Notice of Funding Availability
Solicitation for projects will be conducted by posting an annual Notice of Funding Availability (NOFA) on the City of Dallas website at dallascityhall.com. A list of respondents will also be posted to the website following the closing date of the NOFA.

Criteria for Proposals

- First-come-first-served basis
- Quality of proposed project
- Project design and special accommodations for expected occupants
- Project compatible with existing or anticipated development of area
- Existing or proposed public transit availability
- Financial capacity of applicant to complete the project
- Private interim financing within 120 days of City commitment
- Any other factor relevant to the best interest of the City (includes consideration for housing choices for varying income households)
- The City of Dallas is particularly interested in projects that connect affordable housing to transportation, education, jobs, and healthcare. Applicants should provide some narrative regarding how the project achieves those goals.
- Project helps the City meet its goal of affirmatively furthering fair housing. This means that the project helps the City overcome patterns of segregation, foster inclusive communities, create areas of opportunity, address significant disparities in housing needs and in access to opportunity, replace segregated living patterns with truly integrated and balanced living patterns, and/or transform racially and ethnically concentrated areas of poverty into areas of opportunity
- Project does not actually or predictably result in a disparate impact on protected classes under the Fair Housing Act, and does not create, increase, reinforce, or perpetuate segregated housing patterns in the City of Dallas, unless the City Council is satisfied that the project is necessary to achieve a substantial, legitimate, nondiscriminatory interest of the City that could not be accomplished in a manner that has a less discriminatory effect.

AGENDA ITEM # 18

KEY FOCUS AREA: Culture, Arts and Recreation and Educational Enhancements

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Library

CMO: Joey Zapata, 670-1204

MAPSCO: N/A

SUBJECT

Authorize the acceptance of a grant from the Texas State Library and Archives Commission (FAIN No. LS-00-13-0044-13, CFDA No. 45.310) in the amount of $38,823 for partial reimbursement of interlibrary loan services' direct costs of $50,982 for the period September 1, 2014 through August 31, 2015 - Not to exceed $38,823 - Financing: Texas State Library and Archives Commission Grant Funds

BACKGROUND

The Interlibrary Loan (ILL) is a service that allows customers to request materials owned by another library system. Prior to August 31, 2012, when the Texas State Legislature eliminated funding for interlibrary loan services, the Dallas Public Library served as a TexNet Center and received funding for the interlibrary loan service. Since then, the Dallas Public Library has absorbed the cost and continued to provide the service in order to maintain accreditation by the Texas State Library and Archives Commission.

The Texas State Library Commission is providing reimbursement payments to Texas public libraries who made interlibrary loan lends in State Fiscal Year 2015. The Dallas Public Library completed 6,092 lends using the Navigator ILL system in State Fiscal Year 2015, and will receive a total payment of $38,823.03.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On January 28, 2015, the City Council accepted grant funds from the Texas State Library and Archives Commission for partial reimbursement of Interlibrary Loan Service's direct costs (FAIN No. LS-00-12-0044-13, CFDA No. 45.310) in the amount of $21,902.50 that occurred during the period September 1, 2013 to August 31, 2014, by Resolution No. 15-0170.

Information about this item was provided to the Arts, Culture and Libraries Committee on December 7, 2015.

FISCAL INFORMATION

$38,823.03 - Texas State Library and Archives Commission Grant Funds

January 13, 2016

WHEREAS, the Dallas Public Library provides Interlibrary Loan (ILL) service to its customers, allowing them to request materials owned by another library system; and

WHEREAS, the Dallas Public Library completed 6,092 lends using the Navigator ILL system in State Fiscal Year 2015; and

WHEREAS, the Texas State Library Commission is providing reimbursement payments to Texas public libraries who made interlibrary loan lends in State Fiscal Year 2015; and

WHEREAS, it is recommended that the City Manager be authorized to accept the grant award in an amount not to exceed $38,823.03 for the period September 1, 2014 through August 31, 2015.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to accept the grant funds from the Texas State Library and Archives Commission for partial reimbursement of Interlibrary Loan Service's direct costs (FAIN No. LS-00-13-0044-13, CFDA No. 45.310) in the amount of $38,823.03 for the period September 1, 2014 to August 31, 2015; and execute the grant agreement.

Section 2. That the Chief Financial Officer is hereby authorized to deposit grant funds into Fund F483, Department LIB, Unit 1824, Revenue Source 6506 in an amount not to exceed $38,823.03.

Section 3. That the City Manager is hereby authorized to establish appropriations in accordance with the grant agreement in Interlibrary Loan FY15 Fund F483, Department LIB, Unit 1824, various object codes in an amount not to exceed $38,823.03 per attached Schedule.

Section 4. That the Chief Financial Officer is hereby authorized to disburse funds from Fund F483, Department LIB, Unit 1824, various object codes in accordance with the grant agreement in an amount not to exceed $38,823.03 per attached Schedule.

Section 5. That the City Manager is hereby authorized to reimburse to the granting agency any expenditure identified as ineligible. The City Manager shall notify the appropriate City Council Committee of expenditures identified as ineligible not later than 30 days after the reimbursement.

Section 6. That the City Manager shall keep the appropriate City Council Committee informed of all final granting agency monitoring reports not later than 30 days after the receipt of the report.

Section 7. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

Interlibrary Loan 2015 Reimbursement
Fund F483, Unit 1824

Fund	Unit	Obj. Code	
F483	1824	3099	26,661.18
F483	1824	3090	12,161.85
	Total		**38,823.03**

AGENDA ITEM # 19

KEY FOCUS AREA: Culture, Arts and Recreation and Educational Enhancements

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 1

DEPARTMENT: Office of Cultural Affairs
Park & Recreation

CMO: Joey Zapata, 670-1204
Mark McDaniel, 670-3256

MAPSCO: 44 T

SUBJECT

Authorize a contract with artist Christopher Blay for a new public art commission to be located near the Coombs Creek walking trail near the intersection of Kessler Parkway and North Clinton Avenue - Not to exceed $65,000 - Financing: 2006 Bond Funds

BACKGROUND

This action authorizes a contract for the fabrication and installation of public art at Coombs Creek Parkway as approved by the Public Art Committee of the Cultural Affairs Commission, the full Cultural Affairs Commission, the Planning and Design Committee of the Park and Recreation Board, and the full Park and Recreation Board.

The City of Dallas Public Art Ordinance provides that all appropriations for City capital improvement projects shall include an amount equal to 1.5% (or .75%) of the total capital improvement project appropriation to be used for the design services of artists and for the creation of artwork for new City facilities (Dallas City Code Article X, SEC. 2-103(a). The public art project for Coombs Creek Parkway was included in the list of 2006 Bond Program public art projects approved by City Council on April 23, 2014, by Resolution No. 14-0664. The artist, Christopher Blay, was selected via a competitive selection process as directed by the City of Dallas Cultural Policy, and was approved by the Public Art Committee and the Cultural Affairs Commission.

Coombs Creek Trail is part of the Dallas Trail Network Plan offering access to the Trinity River Levee Trails.

Phase I of the trail completed within the last year, sits at about 1.5 miles in length with another half mile of soft surface dirt trail on the north end that skirts the edge of a dirt berm and levee spillway for the creek. The trail runs from the Stevens Park Golf Course near the Tennis Courts (south end) and terminates behind the Lone Star Doughnuts Bakery on Beckley (north end). The Coombs Creek Trail affords easier access to the Trinity River Levee than most other routes coming from Oak Cliff.

BACKGROUND (Continued)

This action is for approval of a public art design for the Coombs Creek Parkway Public Art Project only.

PRIOR ACTION/ REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On March 22, 2007, the Park and Recreation Board approved the Priority Public Arts Project List.

On June 19, 2008, the Park and Recreation Board rescinded the March 22, 2007 action, and again on June 20, 2013, the Park and Recreation Board approved a revision to the 2008 Public Arts Project List per the Cultural Policy, section I.2.

On April 23, 2014, City Council approved the Priority Public Arts Project List for Parks from the 2006 Bond Program.

On November 10, 2014, community members were invited to a community meeting at the Oak Cliff Cultural Center to review two locations along Coombs Creek Trail. The majority of the community members recommended the location at the intersection of Kessler Parkway and North Clinton Avenue.

On January 8, 2015, the Park and Recreation Board approved the location at the intersection of Kessler Parkway and North Clinton Avenue.

On March 24, 2015, the Coombs Creek Selection Panel recommended the concept design by artist Christopher Blay.

On April 7, 2015, the Public Art Committee recommended project design for Coombs Creek Parkway Public Art Project.

On April 16, 2015, the Cultural Affairs Commission approved project design for Coombs Creek Parkway Public Art Project.

On October 15, 2015, the Planning and Design Committee considered this item and presented a recommendation to the Park and Recreation Board on the same day.

Information about this item was provided to the Arts, Culture and Libraries Committee on December 7, 2015.

FISCAL INFORMATION

2006 Bond Funds - $65,000

January 13, 2016

WHEREAS, Chapter 2, Article X of the Dallas City Code establishes a Public Art Program to include works of art and design services of artists for certain City capital improvement projects; and

WHEREAS, in carrying out the intent of the Public Art Program, the Office of Cultural Affairs, working with the Cultural Affairs Commission and the Park and Recreation Board, has identified a public art project to complement the Coombs Creek walking trail near the intersection of Kessler Parkway and North Clinton Avenue; and

WHEREAS, Christopher Blay was selected for the project and was approved by the Public Art Committee of the Cultural Affairs Commission, the full Cultural Affairs Commission, the Planning and Design Committee of the Park and Recreation Board, and the full Park and Recreation Board; and

WHEREAS, $65,000.00 is available from 2006 Bond Funds to support the fabrication and installation of a site specific artwork.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That following approval as to form by the City Attorney, the City Manager is hereby authorized to execute a contract with Christopher Blay to fabricate and install a site-specific artwork at the Coombs Creek walking trail near the intersection of Kessler Parkway and North Clinton Avenue.

Section 2. That the Chief Financial Officer is authorized to disburse payments to Christopher Blay in an amount not to exceed $65,000.00, as follows:

Fund	Dept	Unit	Obj	Program #	Encumbrance #	Vendor #
1T00	PKR	N810	4425	PKCOOMBSPA	PKR16019530	VS86297

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 20

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Office of Emergency Management

CMO: Eric Campbell, 670-3255

MAPSCO: N/A

SUBJECT

Authorize **(1)** acceptance of additional grant funds from the U.S. Department of Homeland Security under the Homeland Security Grant Program - 2014 Urban Area Security Initiative to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters in an amount not to exceed $95,800; and **(2)** execution of the grant agreement - Not to exceed $95,800, from $5,818,875 to $5,914,675 - Financing: U.S. Department of Homeland Security Grant Funds

BACKGROUND

The Department of Homeland Security (DHS) was created in 2002 and began releasing funds to state and local governments through grant programs. Since 2003, the City of Dallas has received over $85 million in grant funds under the initiatives that make up the Homeland Security Grant Program. In 2014, the City of Dallas was awarded funds under two initiatives: the Urban Areas Security Initiative (UASI) and the State Homeland Security Grant Program (SHSP). In order to facilitate the distribution of these federal funds, each State is required to establish a State Administrative Agency (SAA) to administer and distribute the grant funding to local governments. In Texas, the SAA has been established within the Office of the Governor.

These initiatives provide funding for equipment acquisition, and planning and training activities to increase the ability of the City of Dallas to prevent, protect against, respond to, and recover from natural and man-made disasters. Some of the activities that these funds support include planning and training for first responders and departmental staff, as well as for citizens participating in the Citizen Emergency Response Team and a public awareness campaign.

Additionally, these funds are also used to assist departments with meeting national, state and regional preparedness goals through the procurement of equipment for various initiatives such as increasing interoperability during incidents.

BACKGROUND (Continued)

Each initiative focuses on a component of the overall needs of Dallas to respond in conjunction with state and federal agencies during times of natural and man-made disasters. UASI focuses on the unique planning, equipment, training, and exercise needs of high-threat, high-density urban areas, with specific carve outs for Law Enforcement activities and Management and Administration of the grant. This award will be used to fund infrastructure upgrades to the City's Public Safety Radio System, and other equipment for special teams and the Fusion Center. SHSP focuses on local governments' role in assisting with state-wide security strategies and key elements of the national preparedness architecture. This award is to fund standardized protective equipment for the Explosive Ordinance Device Team (Bomb Squad).

Previous funding from the Homeland Security Grant Program has been used for equipment and programs to support public safety and homeland security initiatives such as upgrading the Public Safety radio system, the Computer Aided Dispatch System (CAD) for Police and Fire, development of the Urban Search and Rescue Team (USAR), renovation and enhancements of the Emergency Operations Center, development of the Fusion Center and equipment to ensure continuity of operations for City functions, including water systems.

Listed below is the amended funding for the UASI program of HSGP approved by DHS:

Urban Area Security Initiative (DFWA UASI) (non-carve out) $4,275,626 .85

Approval of this item will authorize the increase of funding for the Urban Area Security Initiative Program:

Program	Original	Increase	Revised
UASI	$4,179,826 .85	$95,800.00	$4,275,626.85

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Authorized the acceptance of the 2014 Homeland Security Grant Program on November 12, 2014, by Resolution No. 14-1902.

Information about this item was provided to the Public Safety Committee on December 8, 2015.

FISCAL INFORMATION

$95,800.00 - U.S. Department of Homeland Security Grant Funds

January 13, 2016

WHEREAS, the U.S. Department of Homeland Security has made funding available to the City of Dallas under the Homeland Security Grant Program to build our capacity to prevent, protect against, respond to, and recover from a terrorist attack or natural disaster; and

WHEREAS, grant funds have been awarded to the City of Dallas to procure equipment and provide training for first responders; and

WHEREAS, the City of Dallas will benefit from increased preparedness throughout the city.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to **(1)** accept additional grant funds from the U.S. Department of Homeland Security under the Homeland Security Grant Program (CFDA #97.067, Grant #EMW-2014-SS-00029) - 2014 Urban Area Security Initiative (UASI) to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters in an amount not to exceed $95,800; **(2)** execute any and all documents required by the agreement.

Section 2. That the Chief Financial Officer is authorized to receive and deposit U.S. Department of Homeland Security Grant Funds in Fund F441, Department MGT, Unit 1686, Revenue Source 6506, in an amount not to exceed $95,800.00.

Section 3. That the City Manager is authorized to increase appropriations in an amount not to exceed $95,800.00 in Fund F441, Department MGT, Unit 1686.

Section 4. That the Chief Financial Officer is authorized to disburse funds from Fund F441, Department MGT, Unit 1686, Obj. 3099, not to exceed $95,800.00.

Section 5. That the City Manager is hereby authorized to reimburse to the Department of Homeland Security any expenditure identified as ineligible. The City Manager shall notify the appropriate City Council Committee of expenditures identified as ineligible not later than 30 days after the reimbursement.

Section 6. That the City Manager shall keep the appropriate City Council Committee informed of all final U.S. Department of Homeland Security monitoring reports not later than 30 days after the receipt of the report.

Section 7. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 21

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Office of Emergency Management

CMO: Eric Campbell, 670-3255

MAPSCO: N/A

SUBJECT

Authorize **(1)** acceptance of the 2015 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program to provide funding for equipment acquisition, planning and training activities to enable the City to respond to natural and man-made disasters for the period September 1, 2015 through May 31, 2018; and **(2)** execution of the grant agreement - Not to exceed $5,898,375 - Financing: U.S. Department of Homeland Security Grant Funds

BACKGROUND

The Department of Homeland Security (DHS) was created in 2002 and began releasing funds to state and local governments through grant programs. Since 2003, the City of Dallas has received over $85 million in grant funds under the initiatives that make up the Homeland Security Grant Program. In 2015, the City of Dallas was awarded funds under two initiatives: the Urban Areas Security Initiative (UASI) and the State Homeland Security Grant Program (SHSP). In order to facilitate the distribution of these federal funds, each State is required to establish a State Administrative Agency (SAA) to administer and distribute the grant funding to local governments. In Texas, the SAA has been established within the Office of the Governor.

These initiatives provide funding for equipment acquisition, and planning and training activities to increase the ability of the City of Dallas to prevent, protect against, respond to, and recover from natural and man-made disasters. Some of the activities that these funds support include planning and training for first responders and departmental staff, as well as for citizens participating in the Citizen Emergency Response Team and a public awareness campaign. Additionally, these funds are also used to assist departments with meeting national, state and regional preparedness goals through the procurement of equipment for various initiatives such as increasing interoperability during incidents.

BACKGROUND (Continued)

Each initiative focuses on a component of the overall needs of Dallas to respond in conjunction with state and federal agencies during times of natural and man-made disasters. UASI focuses on the unique planning, equipment, training, and exercise needs of high-threat, high-density urban areas, with specific carve outs for Law Enforcement activities and Management and Administration of the grant. SHSP focuses on local governments' role in assisting with state-wide security strategies and key elements of the national preparedness architecture.

Previous funding from the Homeland Security Grant Program has been used for equipment and programs to support public safety and homeland security initiatives such as upgrading the Public Safety radio system, the Computer Aided Dispatch System (CAD) for Police and Fire, development of the Urban Search and Rescue Team (USAR), renovation and enhancements of the Emergency Operations Center, development of the Fusion Center and equipment to ensure continuity of operations for City functions, including water systems.

Listed below are the levels of funding for each initiative:

Homeland Security Grant (Federal) Urban Area Security Initiative

Urban Area Security Initiative	$4,347,270.98
Law Enforcement	$1,221,035.27
Management & Administration	$ 293,068.75
	$5,861,375.00
State Homeland Security Grant	$ 37,000.00
Total	$5,898,375.00

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Authorized the acceptance of the 2010 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program, Grant No. EMW-2010-SS-T0-0008 on November 10, 2010, by Resolution No. 10-2824.

Authorized the acceptance of the 2011 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program, Grant No. EMW-2011-SS-00019 on January 11, 2012, by Resolution No. 12-0131.

Authorized the acceptance of the 2012 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program, Grant No. EMW-2012-SS-00018-S01 on October 24, 2012, by Resolution No. 12-2662.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS) (Continued)

Authorized the acceptance of the 2013 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program, Grant No. EMW-2013-SS-00045 on December 11, 2013, by Resolution No. 13-2063.

Authorized the acceptance of the 2014 Homeland Security Grant from the Department of Homeland Security, which includes the Urban Area Security Initiative and the State Homeland Security Grant Program, Grant No. EMW-2014-SS-00029 on November 12, 2014, by Resolution No. 14-1902.

Information about this item was provided to the Public Safety Committee on December 8, 2015.

FISCAL INFORMATION

$5,898,375.00 - U.S. Department of Homeland Security Grant Funds

WHEREAS, the U.S. Department of Homeland Security has made funding available to the City of Dallas under the Homeland Security Grant Program to fund emergency preparedness operations and planning; and

WHEREAS, grant funds will be used for operating expenses related to emergency response activities; and

WHEREAS, the City of Dallas will benefit from increased preparedness throughout the city.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to accept a grant from the U.S. Department of Homeland Security under the Homeland Security Grant Program (CFDA #97.067, Grant #EMW-2015-SS-00080-S01) to fund emergency preparedness operations and planning related to emergency response activities for the period September 1, 2015 through May 31, 2018 in an amount not to exceed $5,898,375.00.

Section 2. That the Chief Financial Officer is authorized to receive and deposit U.S. Department of Homeland Security Grant Funds in Fund F479, Department MGT, Unit 1818, Revenue Source 6506, not to exceed $4,347,270.98.

Section 3. That the Chief Financial Officer is authorized to receive and deposit U.S. Department of Homeland Security Grant Funds in Fund F479, Department MGT, Unit 1819, Revenue Source 6506, not to exceed $1,221,035.27.

Section 4. That the Chief Financial Officer is authorized to receive and deposit U.S. Department of Homeland Security Grant Funds in Fund F479, Department MGT, Unit 1820, Revenue Source 6506, not to exceed $293,068.75.

Section 5. That the Chief Financial Officer is authorized to receive and deposit U.S. Department of Homeland Security Grant Funds in Fund F480, Department MGT, Unit 1821, Revenue Source 6506, not to exceed $37,000.00.

Section 6. That the City Manager is authorized to establish appropriations in an amount not to exceed $4,347,270.98 in Fund F479, Department MGT, Unit 1818.

Section 7. That the City Manager is authorized to establish appropriations in an amount not to exceed $1,221,035.27 in Fund F479, Department MGT, Unit 1819.

Section 8. That the City Manager is authorized to establish appropriations in an amount not to exceed $293,068.75 in Fund F479, Department MGT, Unit 1820.

Section 9. That the City Manager is authorized to establish appropriations in an amount not to exceed $37,000.00 in Fund F480, Department MGT, Unit 1821.

Section 10. That the Chief Financial Officer is authorized to disburse funds from Fund F479, Department MGT, Unit 1818, Obj. 3099, not to exceed $4,347,270.98.

Section 11. That the Chief Financial Officer is authorized to disburse funds from Fund F479, Department MGT, Unit 1819, Obj. 3099, not to exceed $1,221,035.27.

Section 12. That the Chief Financial Officer is authorized to disburse funds from Fund F479, Department MGT, Unit 1820, Obj. 3099, not to exceed $293,068.75.

Section 13. That the Chief Financial Officer is authorized to disburse funds from Fund F480, Department MGT, Unit 1821, Obj. 3099, not to exceed $37,000.00.

Section 14. That the City Manager is hereby authorized to reimburse to the U.S. Department of Homeland Security any expenditure identified as ineligible. The City Manager shall notify the appropriate City Council Committee of expenditures identified as ineligible not later than 30 days after the reimbursement.

Section 15. That the City Manager shall keep the appropriate City Council Committee informed of all final U.S. Department of Homeland Security monitoring reports not later than 30 days after the receipt of the report.

Section 16. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 22

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Office of Emergency Management

CMO: Eric Campbell, 670-3255

MAPSCO: N/A

SUBJECT

Authorize approval of the 2015 Dallas County Hazard Mitigation Action Plan, which identifies strategies to mitigate natural hazards in the City of Dallas and Dallas County - Financing: No cost consideration to the City

BACKGROUND

The 2015 Dallas County Hazard Mitigation Action Plan defines the hazards (such as flooding) and potential strategies to mitigate those hazards as federal grant funding becomes available. Without this strategy, the City of Dallas will not be eligible to apply for the grants. This document has been a collaborative undertaking between Dallas County, and cities within Dallas County.

The 2015 Dallas County Hazard Mitigation Action Plan has been developed to identify projects that may be eligible for pre and post disaster mitigation grants when such funding does become available.

The State of Texas, Texas Division of Emergency Management (TDEM), and the Federal Emergency Management Agency (FEMA), have approved the 2015 Dallas County Hazard Mitigation Action Plan pending adoption by the City Council.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to Public Safety Committee on January 11, 2016.

FISCAL INFORMATION

No cost consideration to the City.

January 13, 2016

WHEREAS, the City of Dallas Office of Emergency Management, with assistance from Dallas County and other Dallas County cities, has gathered information and prepared the 2015 Dallas County Hazard Mitigation Action Plan; and

WHEREAS, the 2015 Dallas County Hazard Mitigation Action Plan has been prepared in accordance with FEMA requirements per Title 44 of the Code of Federal Regulations Part 201.6 on Mitigation Planning; and

WHEREAS, the Dallas City Council has reviewed the Plan and affirms that the Plan will be updated in accordance to the plan maintenance process described in the plan.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City of Dallas adopts the 2015 Dallas County Hazard Mitigation Action Plan as this jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

Section 2. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.



Dallas County
Hazard Mitigation Action Plan
(HazMAP)
November 2015

Dallas County Office of Homeland Security & Emergency Management

Prepared by:

Dallas County Office of Homeland Security (HSEM) in conjunction with the Dallas County Hazard Mitigation Action Plan (HazMAP) Working Group.

The 2015 Dallas County Multi-jurisdictional Hazards Mitigation Action Plan is a living document which will be reviewed and updated periodically.

Comments, suggestions, corrections and additions are enthusiastically encouraged from all interested parties.

Please send review comments to:

Michael Gaciri
Hazard Mitigation Specialist
Dallas County Office of Homeland Security and Emergency Management
2121 Panoramic Circle
2nd Floor, Suite 240
Dallas, TX 75212
michael.gaciri@dallascounty.org

This page intentionally left blank.

Executive Summary

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard mitigation planning is a process in which hazards are identified and profiled, people and facilities at risk are assessed for threat and vulnerability, and mitigation actions are developed. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials, and other community stakeholders.

This plan is an update of the Dallas County Hazard Mitigation Plan (HazMAP) that was adopted in January 2009. The plan has been developed to comply with the requirements of the Federal Disaster Mitigation Act of 2000 and subsequent updates.

The Dallas County Hazard Mitigation Working Group, comprising of representatives of each participating jurisdiction, led the development of the update and contributed significant staff time towards the developments. Update development support was also provided through the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) grant, administered by the Texas Division of Emergency Management (TDEM) and sub-guaranteed by the North Central Council of Governments (NCTCOG). Coordination and final compilation of the update was provided by the Dallas County Office of Homeland Security and Emergency Management (HSEM). This mitigation plan is a planning document, not a regulatory document.

The objectives of the plan update remain the same as those of the previous plan that was adopted in 2009, which is to reduce the negative impacts of future disasters on the communities of Dallas County. These include:

- ✓ To save lives and reduce injuries.
- ✓ Minimize damage to buildings and infrastructure (especially critical facilities).
- ✓ Minimize economic losses

Participating jurisdictions in this plan update expanded from 11 to 22 jurisdictions and are as follows:

Participating Jurisdictions	
Dallas County (Unincorporated)	City of Glenn Heights
Town of Addison	Town of Highland Park
City of Balch Springs	City of Irving
City of Carrollton	City of Lancaster
City of Cedar Hill	City of Richardson
City of Cockrell Hill	City of Rowlett
City of Coppell	City of Sachse
City of Dallas	City of Seagoville

Participating Jurisdictions	
City of DeSoto	Town of Sunnyvale
City of Duncanville	City of University Park
City of Farmers Branch	City of Wilmer

Non-Participating Jurisdictions That Adopted a Stand-alone Plan	
City of Garland	City of Hutchins
City of Grand Prairie	City of Mesquite

This plan update shows that communities in Dallas County continue to be subject to a number of natural hazards. The hazards addressed in this plan include severe storms, high winds, hail, lightning, flooding, tornadoes, winter storms, extreme heat, drought, dam or levee failure, wildfire and earthquakes. Other hazards discussed that do not affect Dallas County include expansive soils, coastal erosion, hurricane/tropical storms, and land subsidence. While most of the hazards identified have occurred in Dallas County, flooding, severe storms, drought and tornadoes stand out as the predominant hazard risks. The historical occurrences, location, extent, probability and vulnerability of these hazards have been documented in this update. Also discussed in this update are the local policies and capabilities that participating jurisdictions have and/or would like to implement to mitigate some of the effects of the hazards identified if sufficient resources were available. No significant changes have been made to the hazards identified in the plan.

The Mitigation Strategy is the heart of the plan and outlines various action items that, given sufficient funding, could be implemented to address the risks of the hazards identified. Several of the action items identified are on-going or have been deferred from previous actions items that were discussed in the 2009 plan. These action items are designed to mitigate the effects of natural disasters and include programs such as upgrading of infrastructure to expanding public outreach and education programs. In this respect, the strategy of the plan has remained intact as to that of the previously adopted plan. The programs or action items identified in the plan update have been prioritized by the local jurisdictions and represent a local approach to addressing local hazards that is most relevant to the local jurisdictions.

The main changes in this plan update from the initial mitigation plan that was adopted in 2009 are in the formatting and structuring of the content. The contents of this plan update are designed and organized to be more reader-friendly and functional as possible. For instance, the number of sections has changed from four to nine. The **Summary of Plan** section below provides a breakdown of what is covered in each section.

The hazards have remained the same as those discussed in the 2009 plan and so have the mitigation strategies. We have discussed four new hazards, which do not affect Dallas County, so as to match the plan with the State of Texas Mitigation Plan. These hazards include hurricanes, land subsidence, coastal erosion and expansive soils. Most the changes are in the format and structure of the plan.

One notable structural change is that the plan is comprised of two main parts, a base section and a jurisdiction-specific annex section. The base section of the plan discusses the plan for Dallas County. Section 5 in particular discusses the hazard, the extent and impact of the hazards, the historical occurrences of the hazards identified, the probability of future occurrences, and the results of the vulnerability and risk assessment process. The section captures events that have taken place in all participating jurisdictions as applicable. The jurisdiction-specific annexes or sub-plans section provides a focused and strategic approach to discussing specific hazard risks that are unique to each participating jurisdiction. The jurisdictional annexes build off of the base plan that addressed the natural hazards common throughout Dallas County. It provides a closer look at the capabilities, critical facilities, land use/development trends and vulnerabilities of a particular jurisdiction.

Summary of Plan

Sections 1 and 2 of the plan provide the background of the plan and provide a profile for the planning area and introduce the jurisdictions participating in the plan update. They also outline the scope, purpose, and authority of the plan.

Section 3 provides a profile of the Dallas County planning area. It discusses geographic elements that include location, size, physical features, population and demographic information, governmental structures, and the basic economic aspects of Dallas County.

Section 4 documents the planning process. It addresses Element A of the Local Mitigation Plan Review Tool. It identifies the various stakeholders in the planning process as well as discusses public participation in the plan. It provides an overview of the hazards, time line for the plan, and mitigation strategies, as well as the process of identification and risk assessment methodologies utilized.

Section 5 presents information on individual hazards. For each hazard, the plan presents a description of the hazard, the hazard extent, a history of historical hazard events, the probability of future occurrences, and the results of the vulnerability and risk assessment process.

Section 6 presents the mitigation goals and objectives. Section 7 provides the previous mitigation action items submitted in the 2009 HazMAP and a current analysis for each action. The section also addresses all of the newly developed mitigation actions for HazMAP update.

Section 8 identifies plan maintenance procedures including plan incorporation and implementation.

Section 9 provides the jurisdictional annexes that provide specific information of how each jurisdiction conducted its planning process and includes specific risk and vulnerability assessments of the specific or unique hazard not addressed in Section 5 of this plan update.

The following is a brief discussion of what has been included in each of the sections of the update plan.

Section 1 and 2: Introduction and Scope Purpose and Authority of Plan

In 2009, Dallas County and 10 other participating jurisdictions within Dallas County adopted the Dallas County Hazard Mitigation Action Plan (HazMAP) after it was approved by FEMA. The mitigation planning regulation of the Disaster Mitigation Act requires that mitigation plans be reviewed and revised within five (5) years of approval to maintain eligibility for mitigation grant funding. Dallas County began the planning process to renew the HazMAP in March 2013, and updated each section of the original plan, this time involving 22 of the 26 cities within Dallas County.

Plan Scope: The focus of the Dallas County Hazard Mitigation Action Plan (HazMAP) update is to mitigate relevant hazards as determined using the Dallas County HazMAP adopted in 2009 (formerly referred to as DaLMS) and the Dallas County Hazard Identification and Risk Assessment (HIRA) Matrix. Each participating jurisdiction reviewed the 2009 HazMAP and completed the HIRA to determine the risk levels of the most common hazards that affect Dallas County; hazards that are ranked in percentages using a formula provided in the HIRA tool.

Purpose: The plan update is an opportunity for Dallas County and participating jurisdictions to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss. The purpose of the plan is to:

- ✓ Assess previous mitigation projects and develop unique mitigation strategies to meet future development and risks;
- ✓ Encourage improvements in floodplain management, participation in the National Flood Insurance Program (NFIP), and qualifying for FEMA's Community Rating System, thereby reducing flood insurance premiums for citizens;
- ✓ Devise solutions to strengthen emergency management by addressing prevalent risk of natural and man-caused hazards; and
- ✓ Develop and implement a comprehensive hazard mitigation plan update for Dallas County as a whole.

Authority: The plan update will comply with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108–264). It will also comply with FEMA's February 26, 2002 Interim Final Rule ("the Rule") at 44 CFR, Part 201, which specifies the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA's "Local Multi-Hazard Mitigation Planning Guidance" (released July 1, 2008). The updated plan will be developed in accordance with FEMA's Community Rating System (CRS) Floodplain Management Plan standards and policies.

Section 4: Planning Process

Dallas County Office of Homeland Security and Emergency Management (HSEM) took the lead in updating the Dallas County Hazard Mitigation Action Plan (HazMAP). The Dallas County HazMAP Working Group was formed and comprised of at least one representative from each participating jurisdiction in Dallas County. The table below lists the participating jurisdictions in the Dallas County HazMAP Update.

Participating Jurisdiction	Name	Title
Dallas County (Unincorporated)	Michael Gaciri	Hazard Mitigation Specialist
Town of Addison	John O'Neal	Fire Chief/EMC
City of Balch Springs	David Haas	Emergency Management Coordinator
City of Carrollton	Elliot Reep	Emergency Management Coordinator
City of Cedar Hill	John Ballard	Fire Chief/EMC
City of Cockrell Hill	Bret Haney	Assistant City Administrator
City of Coppell	Brad Simpkins	Emergency Management Coordinator
City of Dallas	Nicholas LaGrassa	Emergency Management Specialist
City of DeSoto	Jerry Duffield	Fire Chief
City of Duncanville	Sam Rhode	Emergency Management Coordinator
City of Farmers Branch	Ashleigh Feryan	Emergency Management Specialist
City of Glenn Heights	Jeremy Tennant	Public Safety Director
Town of Highland Park	Rick Pyle	Assistant Police Chief
City of Irving	Jason Carriere	Emergency Management Coordinator
City of Lancaster	Thomas Griffith	Fire Chief/EMC
City of Richardson	Alisha Gimbel	Preparedness and Mitigation Coordinator
City of Rowlett	Ed Balderas	Fire Chief/EMC
City of Sachse	Rick Coleman	Fire Chief/EMC
City of Seagoville	Todd Gilcrease	Fire Chief/EMC
City of Sunnyvale	Richard Adkins	Fire Fighter / EMT
City of University Park	Randy Howell	Fire Chief/EMC
City of Wilmer	Mark Hamilton	Fire Chief/EMC

The updated plan had several new participating jurisdictions from the original mitigation plan adopted in 2009. As stated earlier, participating jurisdictions increased from 11 to 22. In order to help participating jurisdictions meet the planning update requirements, Dallas County HSEM proposed that each participating jurisdiction form a Hazard Mitigation Planning Team (HMPT) that would coordinate the hazard mitigation update planning process at the jurisdictional level. The HMPT actively participated in developing the plan in the following way:

- ✓ Reviewed and analyzed each section of the 2009 plan

- ✓ Determined changes that were to be documented and the process the team took to make these decisions
- ✓ Assessed and identified specific hazards within the respective jurisdictions
- ✓ Identified goals and mitigation action items to the specific hazards identified within each respective jurisdiction
- ✓ Conducted a capabilities assessment for their jurisdiction
- ✓ Provided opportunity for public participation within their jurisdiction
- ✓ Reviewed and provided input to the drafts developed in the HazMAP

Each jurisdiction then appointed a representative to the Dallas County Hazard Mitigation Planning Working Group. The purpose of the Working Group was to facilitate a collaborative planning process for all participating jurisdictions. The Working Group performed the following tasks in updating the plan:

- ✓ Established plan development, goals, and objectives
- ✓ Established a time line for completion of the plan
- ✓ Ensured that the plan meets the requirements of the Disaster Mitigation Act of 2000
- ✓ Solicited and encouraged the participation of the public in the plan development process
- ✓ Assisted in the gathering information for inclusion in the plan
- ✓ Organized and coordinated the public involvement process
- ✓ Gathered all pertinent information to be included in the plan
- ✓ Assisted in completing a draft plan for review

Kickoff meetings were held on March 11, 2013, April 30, 2013, and May 1, 2013. Other working meetings were held on May 29, 2013, June 7, 2013, and July 24, 2013. The purpose of these meetings was to provide overall guidance to the planning process, review the existing hazard mitigation planning materials, update risk assessment, and discuss mitigation strategies. This plan was developed as a county-wide hazard mitigation plan focusing on collaboration to implement mitigation strategies throughout the county, while maintaining accountability within each participating city to identify and track specific mitigation actions.

Public Participation

An important requirement of mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the planning team with a greater understanding of local concerns and increases the likelihood of successfully implemented mitigation actions.

Public involvement in the development of the update was sought at separate periods in the planning process: (1) the beginning of the planning process, (2) the drafting stage and (3) between completion of the final draft and plan approval and adoption. Public input was sought using three methods: (1) open public meetings, (2) survey instruments and (3) making copies of draft Plan deliverables available for public review on the participating jurisdiction websites, public offices and public libraries.

In addition to the option to have open public meetings, Dallas County provided an opportunity for citizens and stakeholders to provide input and comment through the use of an online public hazard survey. This online survey was designed to obtain data and information from residents from all of Dallas County and the participating jurisdictions. The public were directed to the online survey through various public outreach methods that

included flyers, Facebook, Twitter, newspaper clippings, and public notices on websites and in public areas such as city hall and public libraries.

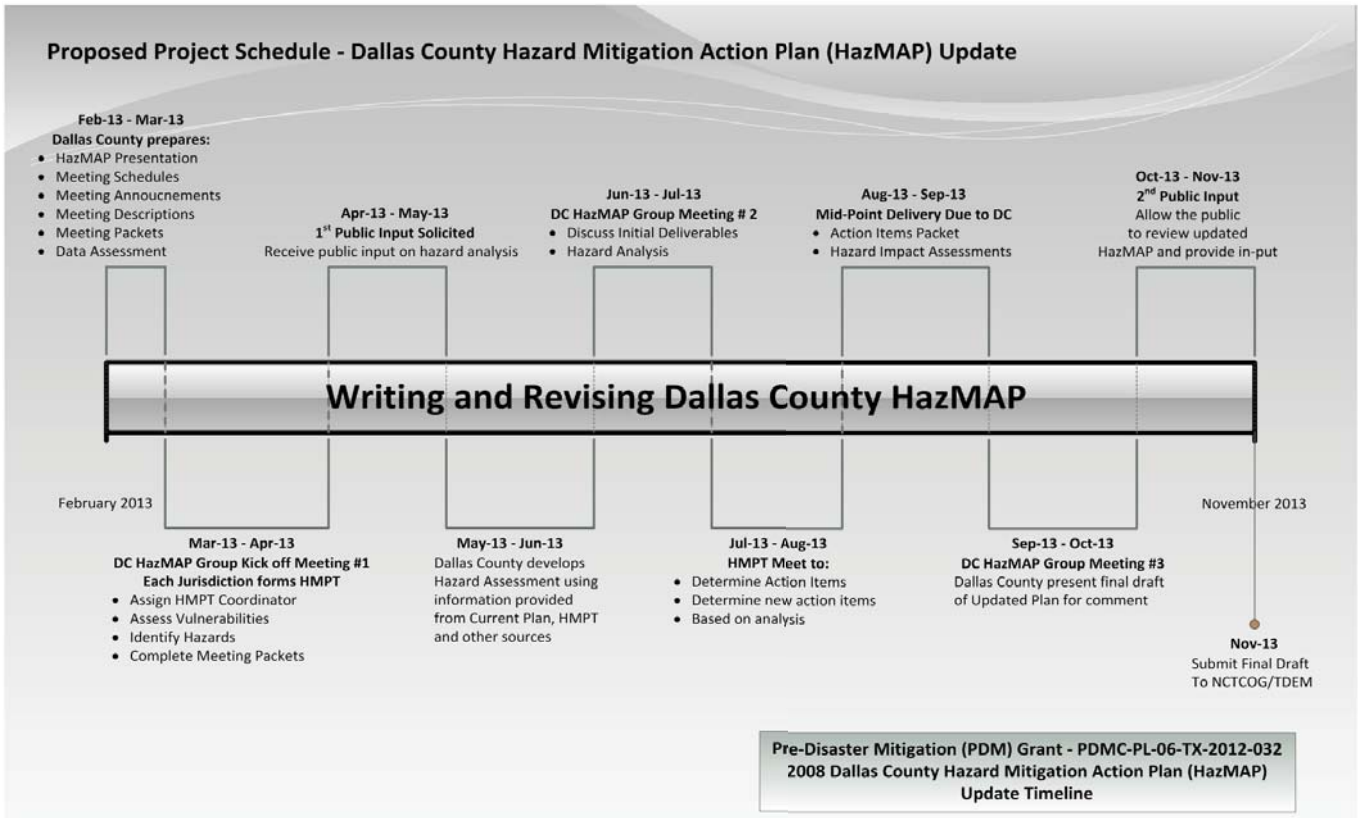
The survey was available in both English and Spanish and was open from April 2013 through October 2013. A total of 527 responses were submitted, which provided valuable input for the participating jurisdictions to further consider in developing the plan update. A summary of the survey findings is provided in Appendix A.

Meeting Summaries

Below is a list of meetings that the Dallas County HazMAP Working Group held and a summary of the purpose for each meeting.

Date	Discussion / Purpose of Meeting
March 11, 2013	Web Conference Meeting Introduction of the mitigation planning requirements to participating jurisdictions A detailed overview of the mitigation planning process was provided as well as he expectations of the participating jurisdictions
April 30, 2013	Kickoff Meeting - Southern Jurisdictions - Dallas County HazMAP Working Group A detailed overview the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collections templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings
May 1, 2013	Kickoff Meeting - Northern Jurisdictions - Dallas County HazMAP Working Group A detailed overview the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collections templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings
July 24, 2013	2nd Meeting of the Dallas County HazMAP Working Group Analyzed completed Hazard Identification Risk Assessment (HIRA) Matrix sheets; Reviewed the information provided in the public survey; Conducted a County wide hazard analysis and vulnerability assessment. Developed mitigation goals for Dallas County Provided additional resources to assist the HMPTs to conduct capabilities assessments, develop mitigation action items using the resources from FEMA
October 2 2013	Web Conference Meeting Reviewed jurisdictional deliverables including the completed HIRA Matrices, specific hazard analysis and vulnerabilities for each jurisdiction Provided guidance for public input and comment
February 3, 2014	Web Conference Meeting Reviewed action items Reviewed public input information on the hazards identified

Date	Discussion / Purpose of Meeting
	Conducted analysis of the public data received Determined and updated action items identified based on the review and analysis conducted


Proposed Project Schedule - Dallas County Hazard Mitigation Action Plan (HazMAP) Update
Feb-13 - Mar-13
Dallas County prepares:
HazMAP Presentation
Meeting Schedules
Meeting Annoucnements
Meeting Descriptions
Meeting Packets
Data Assessment
Apr-13 - May-13
1st Public Input Solicited
Receive public input on hazard analysis
Jun-13 - Jul-13
DC HazMAP Group Meeting # 2
Discuss Initial Deliverables
Hazard Analysis
Aug-13 - Sep-13
Mid-Point Delivery Due to DC
Action Items Packet
Hazard Impact Assessments
Oct-13 - Nov-13
2nd Public Input
Allow the public
to review updated
HazMAP and provide in-put
Writing and Revising Dallas County HazMAP
February 2013
November 2013
Mar-13 - Apr-13
DC HazMAP Group Kick off Meeting #1
Each Jurisdiction forms HMPT
Assign HMPT Coordinator
Assess Vulnerabilities
Identify Hazards
Complete Meeting Packets
May-13 - Jun-13
Dallas County develops
Hazard Assessment using
information provided
from Current Plan, HMPT
and other sources
Jul-13 - Aug-13
HMPT Meet to:
Determine Action Items
Determine new action items
Based on analysis
Sep-13 - Oct-13
DC HazMAP Group Meeting #3
Dallas County present final draft
of Updated Plan for comment
Nov-13
Submit Final Draft
To NCTCOG/TDEM
Pre-Disaster Mitigation (PDM) Grant - PDMC-PL-06-TX-2012-032
2008 Dallas County Hazard Mitigation Action Plan (HazMAP)
Update Timeline

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: _____

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms: High Winds Hail Lightning Winter Storms									
Tornado									
Flooding									
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat									
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire									
Utility Failure									
Energy/Fuel Shortage									
Terrorist Attack									
Urban Fire									
Earthquake									
Levee/Dam Failure									
Drought									
Aircraft Accident									
Stream Bank Erosion									
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	Very few injuries, if at all none
Medium/Moderate	2	Minor Injuries
High	3	Multiple deaths/injuries
Catastrophic	4	High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Section 5: Hazard Identification and Risk Assessment

The identification of the hazards is based on the hazards listed in the Dallas County Local Mitigation Strategy (DaLMS) Plan that was adopted in January 2009. Each jurisdiction through its Hazard Mitigation Planning Team (HMPT) reviewed the risk assessment process conducted in the previous plan as well as the Dallas County Hazard Identification and Risk Assessment (HIRA) matrix. These were the primary guides in assisting the Working Team in developing the Dallas County Risk Assessment. Other references used in creating the risk assessment included the *FEMA Local Mitigation Planning Handbook (March 2013) and the FEMA State and Local Mitigation Planning How-to-Guide.*

While several hazards impact Dallas County and its jurisdictions, they were not all evaluated the same way. This is due to the differences in data collected, risk assessment methodologies, and spatial extent of the hazards. Each jurisdiction was also given a HIRA form as depicted above, which allowed them to reflect unique and varied risks as pertains to it. Participating jurisdictions ranked hazards in terms of the probability or frequency of occurrence and the extent or magnitude of impact. The assessments were also used to set priorities for mitigation based on potential dollar losses and loss of lives.

The hazard identification criteria include event occurrence, future development patterns and/or proximity to hazard. Only historic events from 04/01/2007 through August 2013 have been included in this updated plan for hazards that are considered to affect the planning area equally. The original plan lists historic hazard events from 01/01/1950 through 03/31/2007. The following is a summary of natural hazards identified.

1. **Flooding**: The accumulation of water within a water body, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, or shallow flooding.

2. **Hail**: Due to the rapidly changing climate in Texas, large scale hailstorms are especially prevalent. Hailstorm incidents have been reported throughout the North Texas region, including Dallas County, therefore establishing that all parts of the region are equally vulnerable to hailstorms.

3. **High Winds**: High winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with Tornadoes because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado. Downbursts or microbursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less.

4. **Lightning**: Thunderstorm and lightning events are generated by atmospheric imbalance and turbulence due to the combination of the following conditions: unstable warm air rising rapidly into the atmosphere; sufficient moisture to form clouds and rain; and upward lift of air currents caused by colliding cold and warm weather fronts, sea breezes or mountains. Lightning is generated by the buildup of charged ions in a thundercloud, and the discharge of a lightning bolt interacts with the best conducting object or surface on the ground.

5. **Tornado**: Dallas County lies within the region that is referred to as Tornado Alley. Tornado Alley is the term used to describe the region of the U.S. where the strongest Tornadoes occur most frequent. A tornado is a violently rotating column of air, in contact with the ground, either pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a condensation funnel cloud.

6. **Winter Storm**: Winter storms in Texas, although not as numerous as in our neighbor states to the north, do occur often enough and with enough severity to be a threat to people and property. The types which Texans are most familiar with are snowstorms, blizzards, cold waves, and ice storms. Generally, the winter storm season in Texas runs from late November to mid-March, although severe winter weather has occurred as early as October and as late as May in some locations. Texas is disrupted more severely by severe winter storms than are regions that experience severe weather more frequently. The Texas Panhandle and North Central Texas around Dallas and Texarkana are most vulnerable to severe winter storms.

7. **Drought**: Drought is defined as the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It is often referred to as a condition of climatic dryness that is severe enough to reduce soil moisture and water supplies below the requirements necessary to sustain normal plant, animal, and human life. Given the expanse of the land mass within Texas and the geographic location of two-thirds of the counties of the State are located either in an arid or semi-arid climate, roughly those west of a North-South line formed by Interstate Highway 35, are almost always in varying stages of drought.

8. **Extreme Heat**: Extreme Heat is defined as a combination of very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave. All of Texas is vulnerable to extreme heat, but most particular in West Texas. In addition, large metropolitan areas, such as Dallas/Fort Worth and Houston may experience extreme heat since they have an abundance of concrete. This effect is known as urban heat islands and can be dangerous to those without air conditioners.

9. **Dam and Levee Failure**: A dam failure is defined as a systematic failure of the dam structure resulting in the uncontrolled release of water, often resulting in floods that could exceed the 100-year flood plain boundaries. A dam failure could create mass fatalities, mass structural damage and/or a cascading potential if a populated area is located below the dam structure.

10. **Wildfire**: An uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.

11. **Earthquake**: Almost all of the earthquakes in Texas have been caused by one of two sources. The major source is relief of tectonic stress along fault lines. These are most common in the Rio Grande rift belt, the Panhandle, the Ouachita Belt, and the Coastal Plain. It has been suggested that the small earthquakes that occur in the region, such as the ones that have occurred in Dallas County, may be attributed to well injections associated with oil and gas field operations and occur in areas near large oil and gas fields.

These 11 natural hazards have been addressed in the Risk Assessment according to the following categories:

1. **Definition and types**: Description of natural hazard and different types, if applicable.
2. **Location and extent**: Areas with in Dallas County and participating jurisdictions where natural hazards have occurred and may occur in the future, including their severity.
3. **Occurrence**: Historical record of past natural hazard events were noted in the original plan. These historical events were provided by the National Climatic and Data Center for Dallas County, Texas between 01/01/1950 and 03/31/2007. This plan only includes hazard occurrences between 04/01/2007 and 08/30/2013.
4. **Vulnerability**: Areas subject to potential disaster from natural hazards.
5. **Probability of recurrence**: Potential for natural hazard to occur in the future, based on High, Medium, and Low, where High = Probable and likely in the near future (within 5 years); Medium = Possible in the near future (5 to 15 years); Low = Not likely to occur (longer than 15 years).

Other hazards identified in the State of Texas Mitigation Plan that are mentioned in this plan update but not discussed in detail in the risk assessment include:

1. **Hurricane/Tropical Storm**: Hurricanes and tropical storms are classified as cyclones and are developed by counter-clockwise circulation of winds around a low-pressure center in the Northern Hemisphere. Latent heat from condensation of warm water is the key energy source for these storms.
2. **Expansive Soils**: Soils and soft rock that tend to swell or shrink due to changes in moisture content are known as expansive soils. Expansive soils are often referred to as swelling clays because clay materials are most susceptible to swelling and shrinking.
3. **Coastal Erosion**: Coastal erosion is the wearing away of land and the resulting loss of beach, shoreline or dune material along a coastline.
4. **Land Subsidence**: According to the State of Texas Mitigation Plan, land subsidence is defined as the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface, to localized collapses. Land subsidence extent is measured by the number of feet of land loss, or sinks.

These natural hazards are not addressed in detail due to their no to minimal level of risk within the NCTCOG region including Dallas County.

Section 6: Mitigation Strategies

The mitigation strategy development for the plan update involved reviewing mitigation goals included in the 2009 HazMAP, providing analyses for past actions, and developing new mitigation actions.

Based on the discussions and recommendations of Dallas County Hazard Mitigation Action Plan Working Group members, the goals and objectives developed were derived from the 2009 HazMAP that was already in place. This was because most of the goals and objectives were broad enough to accommodate the strategies for mitigating the hazards identified in both the Hazard Identification and Risk Assessment (HIRA) and the Capabilities Assessment conducted by each participating jurisdiction.

An inclusive process was used to develop and prioritize new mitigation actions for this plan update. These included:

- ✓ Review of the mitigation goals and objectives from the 2009 HazMAP.
- ✓ A "menu" of optional mitigation actions was developed based on action items from the 2009 HazMAP, local and state mitigation plans, as well as federal publications such as the FEMA's Mitigation Ideas: A Resource for Reducing Risk to Natural

Hazards, January 2013 and the *Local Mitigation Planning Handbook, March 2013*. The participants reviewed the optional mitigation actions and narrowed the list down to those that were most applicable to their area of responsibility, most cost effective in reducing risk, could be implemented easily, and would be likely to receive institutional and community support.

- ✓ Potential Federal and State funding sources to assist implementing proposed actions were inventoried.
- ✓ Planning team members considered benefits that would result from the mitigation actions versus the cost of those projects. Detailed cost-benefit analyses were beyond the scope of this plan. However, economic evaluation was one factor that helped team members select one mitigation action from competing actions.

The following goals and objectives were identified:

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Update, enhance, and enforce building codes and ordinances to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Buy-out repetitive loss properties
- ✓ ***Objective 2-C:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-D:*** Expand and coordinate Early Warning Systems currently in use

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in Dallas County.

- ✓ ***Objective 5-A*:** Continue partnerships within the region to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Section 7: Action Items

Jurisdictions that participated in the 2009 HazMAP reviewed the previous actions and determined whether the actions had been completed, should be deferred as an ongoing activity, or should be deleted from the plan. Any actions that are marked as "deferred" or ongoing have been carried over and included in the updated plan.

For the jurisdictions that were joining in the updated plan, each was given the opportunity to review the action items identified and were asked to determine which action item they could include as part of their jurisdictional plan.

It was recommended that jurisdictions use the STAPLE+E criteria recommended by FEMA for determining the priority of action items identified. The STAPLE+E criteria recommends that jurisdictions look at the Social, Technical, Administrative, Political, Legal, Economic, Environmental factors necessary for implementing an action item. However, each participating jurisdiction was free to use any methodology that was best suited to their needs in determining the priority of action items to include in this plan. New action items were placed in the respective jurisdictions annex section of the update plan.

Action items selected were developed along local capabilities and resources. These included:

- ✓ Local Planning and Regulations
- ✓ Structure and Infrastructure Projects
- ✓ Public Education and Awareness Programs
- ✓ Technical and Administrative
- ✓ Financial

Section 8: Plan Maintenance

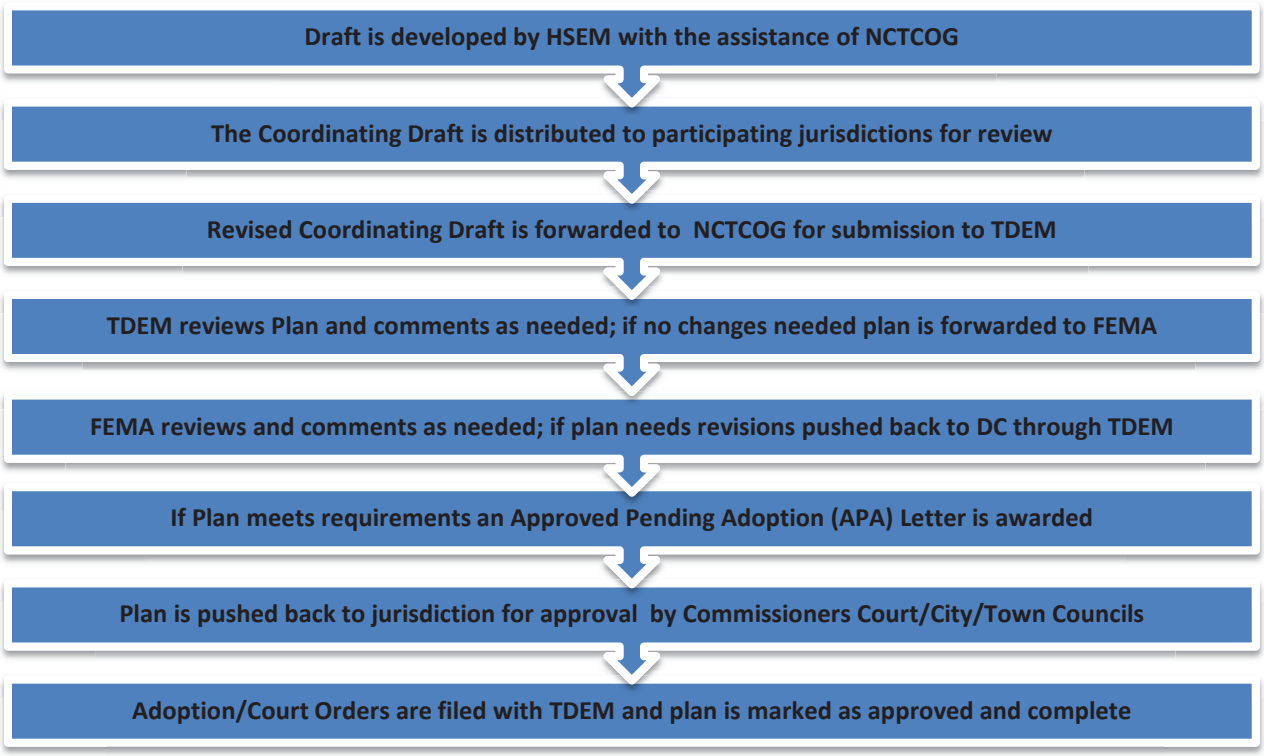
Dallas County HSEM and each participating jurisdiction through the Dallas County Hazard Mitigation Action Plan (HazMAP) Working Group will be responsible for ensuring that this plan is monitored on an ongoing basis. Dallas County HSEM will be available to assist participating jurisdictions in facilitating reviews of the mitigation actions set forth in this plan and discuss progress. Each jurisdiction will be responsible for developing a list of items to be updated in future revisions of this plan. The following are the activities that will be involved in the plan maintenance procedures:

- ✓ Monitoring and evaluating the plan
- ✓ Updating the plan
- ✓ Incorporating the plan into other planning mechanisms
- ✓ Continued public involvement

Section 9: Jurisdictional Annexes

In the jurisdictional annexes we have a discussion on each of the 22 participating jurisdictions' planning and regulatory, administrative and technical, financial capacity, and educational and outreach capabilities, to carry out hazard mitigation activities. These capabilities were evaluated and attention was given to state, regional or local plans, regulations and development requirements. These included, but were not limited to, local plans, zoning laws, sub-division and site-specific regulations, building codes, flood insurance programs, natural resources and conservation statutes. This section was previously included in Chapter 2 of the original plan and developed into a standalone section of this updated plan to provide a better content flow.

Next in the Approval and Adoption Process



This page intentionally left blank.

TABLE OF CONTENTS

EXECUTIVE SUMMARY I

SUMMARY OF PLAN III

TABLE OF CONTENTS XX

SECTION 1: INTRODUCTION 1-1
BACKGROUND 1-1

SECTION 2: THE PLAN SCOPE, PURPOSE, AND AUTHORITY 2-1
SCOPE 2-1
PURPOSE 2-1
AUTHORITY 2-2

SECTION 3: DALLAS COUNTY PROFILE 3-1
OVERVIEW 3-1
GEOGRAPHY 3-1
POPULATION 3-1
DEMOGRAPHICS 3-3
CLIMATE 3-4
TRANSPORTATION 3-6
GOVERNMENT 3-8
ECONOMIC DEVELOPMENT 3-9

SECTION 4: PLANNING PROCESS 4-1
METHODOLOGY FOR DEVELOPING THE PLAN UPDATE 4-1
ESTABLISHING THE DALLAS COUNTY HAZMAP WORKING GROUP 4-2
DEVELOPMENT OF THE WORK PLAN SCHEDULE 4-4
HAZARD ASSESSMENT AND VULNERABILITY ASSESSMENT 4-5
MITIGATION STRATEGIES 4-6
MEETING SUMMARIES 4.8

SECTION 5: HAZARD IDENTIFICATION AND RISK ASSESSMENT 5-1
OVERVIEW 5-1
SEVERE STORMS 5-6
HIGH WINDS/THUNDERSTORM WINDS 5-7
HAIL 5-16
LIGHTNING 5-26
FLOODING 5-29
TORNADOES 5-38
WINTER STORM 5-43
EXTREME HEAT 5-48
DROUGHT: 5-52
DAM OR LEVEE FAILURE 5-57
WILDFIRE 5-61
EARTHQUAKE 5-66
OTHER HAZARDS: 5-71

SECTION 6: MITIGATION STRATEGIES 6-1

SECTION 7: ACTION ITEMS 7-1
PAST ACTIONS 7-1

CITY OF CEDAR HILL *7-1*
CITY OF COPPELL *7-5*
CITY OF DALLAS *7-8*
UNINCORPORATED DALLAS COUNTY *7-40*
CITY OF DESOTO *7-44*
CITY OF DUNCANVILLE *7-49*
CITY OF FARMERS BRANCH *7-54*
CITY OF IRVING *7-59*
CITY OF LANCASTER *7-63*
CITY OF ROWLETT *7-68*
CITY OF SACHSE *7-77*
NEW ACTION ITEMS *7-86*

SECTION 8: PLAN MAINTENANCE **8-1**
MONITORING AND EVALUATION *8-1*
UPDATING *8-3*
INCORPORATION *8-4*

SECTION 9: JURISDICTION ANNEXES **9-1**

TOWN OF ADDISON ANNEX ..... **A-I**

CITY OF BALCH SPRINGS ANNEX **B-1**

CITY OF CARROLLTON ANNEX **C-1**

CITY OF CEDAR HILL ANNEX **D-1**

CITY OF COCKRELL HILL ANNEX **E-1**

CITY OF COPPELL ANNEX **F-1**

CITY OF DALLAS ANNEX **G-1**

UNINCORPORATED DALLAS COUNTY ANNEX **H-1**

CITY OF DESOTO ANNEX **I-1**

CITY OF DUNCANVILLE ANNEX **J-1**

CITY OF FARMERS BRANCH ANNEX **K-62**

CITY OF GLENN HEIGHTS ANNEX **L-1**

TOWN OF HIGHLAND PARK ANNEX **M-1**

CITY OF IRVING ANNEX **N-1**

CITY OF LANCASTER ANNEX **O-1**

CITY OF RICHARDSON ANNEX **P-1**

CITY OF ROWLETT ANNEX **Q-1**

CITY OF SACHSE ANNEX **R-1**

CITY OF SEAGOVILLE ANNEX **S-1**

TOWN OF SUNNYVALE ANNEX T-1

CITY OF UNIVERSITY PARK ANNEX U-1

CITY OF WILMER ANNEX V-1

APPENDIX A: COUNTY WIDE SURVEY RESULTS ..... AP A-1

APPENDIX B: MEETING AND PRESENTATION MATERIALS ..... AP B-1

This page intentionally left blank.

SECTION 1: INTRODUCTION

Background

In March 2013, Dallas County Office of Homeland Security and Emergency Management (HSEM) re-constituted and convened the Dallas County Hazard Mitigation Working Group to undergo a complete planning process to revise and update the Dallas County Local Mitigation Strategy (DaLMS). This multi-jurisdictional hazard mitigation plan has been renamed the Dallas County Hazard Mitigation Action Plan (HazMAP). Each section details the revisions made to this plan during the 10 month planning process. 22 of the 26 incorporated jurisdictions within Dallas County and unincorporated Dallas County participated in the update. In order to better implement mitigation strategies throughout the county and within each participating jurisdiction, each jurisdiction formed a Hazard Mitigation Planning Team (HMPT); formally referred to as Hazard Mitigation Teams (HMT) in the 2009 HazMAP. Each participating jurisdiction was represented at the Dallas County Hazard Mitigation Working Group through a member of their HMPT. Dallas County Hazard Mitigation Working Group revised the format of this plan to present the specific jurisdictional information in the City Annexes section of the update plan. These annexes enable each city to focus on their specific concerns and track their mitigation strategies. The Dallas County Hazard Mitigation Working Group also reformatted the structure and format of the plan to give the document a better flow of content and make it more reader friendly. The outline of the updated plan is included in the introduction section of the plan. No significant changes have been made to the hazards identified in the plan.

Each year in the United States, natural disasters take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters, because additional expenses incurred by insurance companies and nongovernmental organizations are not reimbursed by tax dollars. Many natural disasters are predictable, and much of the damage caused by these events can be reduced or even eliminated.

The Federal Emergency Management Agency (FEMA) defines mitigation as any sustained action taken to reduce or eliminate long-term risk to human life and property from a hazard event. Studies have shown that mitigation activities are highly cost-effective. On average, each dollar spent on mitigation saves society an average of $4 in avoided future losses in addition to saving lives and preventing injuries.

In 2009, Dallas County and 11 other participating jurisdictions within Dallas County adopted the Dallas County Hazard Mitigation Action Plan (HazMAP) after it was approved by FEMA. The mitigation planning regulation of the Disaster Mitigation Act requires that mitigation plans be reviewed and revised within five (5) years of approval to maintain eligibility for mitigation grant funding. Dallas County began the planning process to renew the HazMAP and completely update each section of the original plan, this time involving 22 of the 26 cities within Dallas County.

The table below lists the participating and non-participating cities in the Dallas County Hazard Mitigation Action Plan (HazMAP) update.

Table 1.1: List of Participating and Non-participating cities in the HazMAP Update

Participating Jurisdictions	Non-Participating Jurisdictions
Dallas County (Unincorporated)	City of Garland
Town of Addison *	City of Grand Prairie
City of Balch Springs *	City of Mesquite
City of Carrollton *	City of Hutchins
City of Cedar Hill	
City of Cockrell Hill *	
City of Coppell	
City of Dallas	
City of DeSoto	
City of Duncanville	
City of Farmers Branch	
City of Glenn Heights *	
Town of Highland Park *	
City of Irving	
City of Lancaster	
City of Richardson *	
City of Rowlett	
City of Sachse	
City of Seagoville *	
Town of Sunnyvale *	
City of University Park *	
City of Wilmer *	

* Denotes jurisdictions that are new participants in the plan

SECTION 2: THE PLAN SCOPE, PURPOSE, AND AUTHORITY

Scope

The focus of the Dallas County Hazard Mitigation Action Plan (HazMAP) update is to mitigate relevant hazards as determined using the Dallas County HazMAP adopted in 2009 (formerly referred to as DaLMS) and the Dallas County Hazard Identification and Risk Assessment (HIRA) Matrix. Each participating jurisdiction reviewed the 2009 HazMAP and completed the HIRA to determine the risk levels of the most common hazards that affect Dallas County; hazards that are ranked in percentages using a formula provided in the HIRA tool. Ranking and relevance of these hazards will continue to be evaluated during future updates to the plan, but they may not be fully addressed until they are determined to be of relevance. This enables Dallas County and its participating jurisdictions and partners to prioritize mitigation actions based on hazards which are understood to present the greatest risk to lives and property.

Purpose

This Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan *(HazMAP)* was prepared by Dallas County Office of Homeland Security and Emergency Management (HSEM) and the participating jurisdictions listed above, interested public, appointed representatives, and elected officials of these jurisdictions. Other support and input was provided by the North Central Texas Council of Governments (NCTCOG), the Texas Division of Emergency Management (TDEM), and the Federal Emergency Management Agency (FEMA).

The HazMAP update is an opportunity for Dallas County and participating jurisdictions to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss.

In developing the HazMAP, Dallas County and participating jurisdictions identified 15 natural and man-caused hazards (profiled in detail in Section 5) to be addressed as the goal of the plan is to minimize or eliminate long-term risks to human life and property from known hazards by identifying and implementing cost effective mitigation actions.

Mitigation is defined by FEMA as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Therefore, the purpose of the plan update is to continue developing successful mitigation projects to bring together Dallas County as a whole in order to reduce future risk of loss of life or damage to property in the County.

Through this update process, Dallas County and participating cities within the county seek to:

- ✓ Assess previous mitigation projects and develop unique mitigation strategies to meet future development and risks;
- ✓ Encourage improvements in floodplain management, participation in the National Flood Insurance Program (NFIP), and qualifying for FEMA's Community Rating System, thereby reducing flood insurance premiums for citizens;

- ✓ Devise solutions to strengthen emergency management by addressing prevalent risk of natural and man-caused hazards; and
- ✓ Develop and implement a comprehensive hazard mitigation plan update for Dallas County as a whole.

Authority

The updated plan will comply with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108–264). It will also comply with FEMA's February 26, 2002 Interim Final Rule ("the Rule") at 44 CFR, Part 201, which specifies the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA's "Local Multi-Hazard Mitigation Planning Guidance" (released July 1, 2008). The updated plan will be developed in accordance with FEMA's Community Rating System (CRS) Floodplain Management Plan standards and policies.

SECTION 3: DALLAS COUNTY PROFILE

Update: During the 2013 update, the Dallas County Hazard Mitigation Working Group updated the entire format of the 2009 HazMAP to include a profile of Dallas County, demographic, developmental and economic information of the entire planning area. This information was not included in the 2009 HazMAP that was adopted.

Overview

Dallas County is one of the 254 counties in the State of Texas. It is situated in north central Texas and is bordered by Kaufman and Rockwall counties to the east, Tarrant County to the west, Dallas and Collin counties to the north, and Ellis County to the south. Dallas is the county seat and largest city. Dallas County was officially formed by order of state legislature on March 30, 1846.

Geography

The county's center point is at 32°46' north latitude and 96°48' west longitude. According to the United States Census Bureau, the county has a total area of approximately 909 square miles of which 880 square miles and 29 square miles is water. Dallas County is primarily flat, heavy Blackland Prairie. Elevation in the county ranges from 382 to 850 feet above sea level.

The Elm Fork and West Fork of the Trinity River meet near downtown Dallas. The county is drained by the Trinity River and its tributaries, including White Rock, Mountain, Five-mile, Ten-mile, Muddy, Duck, Turtle, and Mesquite creeks. These streams feed reservoirs for municipal water and recreational use, including Lake Ray Hubbard, Lake North, Joe Pool, Mountain Creek, and White Rock Lakes. The terrain is generally undulating. The eastern two-thirds of the county and the land along the western border are surfaced by slightly acidic clayey soils with loamy topsoil. The rest of the county's soil is alkaline and loamy. The county has tall grasses with pecan and oak trees along streams and mesquite on the prairies. Though the rich soil is the main mineral resource of Dallas County, gravel and sand have been mined from the Trinity floodplain, cement has been made from the local soft limestone, and bricks have been manufactured from the county's clay. Temperatures range from an average high of 95° F in July to an average low of 36° in January. The average rainfall is thirty-six inches a year.

The majority of Dallas County lies within an incorporated jurisdiction. There are twenty six (26) incorporated jurisdictions as shown in Map 3.1

Population

According to the 2010 U.S. Census, Dallas County has an official population of 2,368,139 and is now the ninth most populous county in the United States. There are 807,621 households, and 533,837 families residing in the county. The population distribution is depicted in Table 3.1 and provides a numeric breakdown of population by jurisdiction.

Map 3.1: Dallas County Map

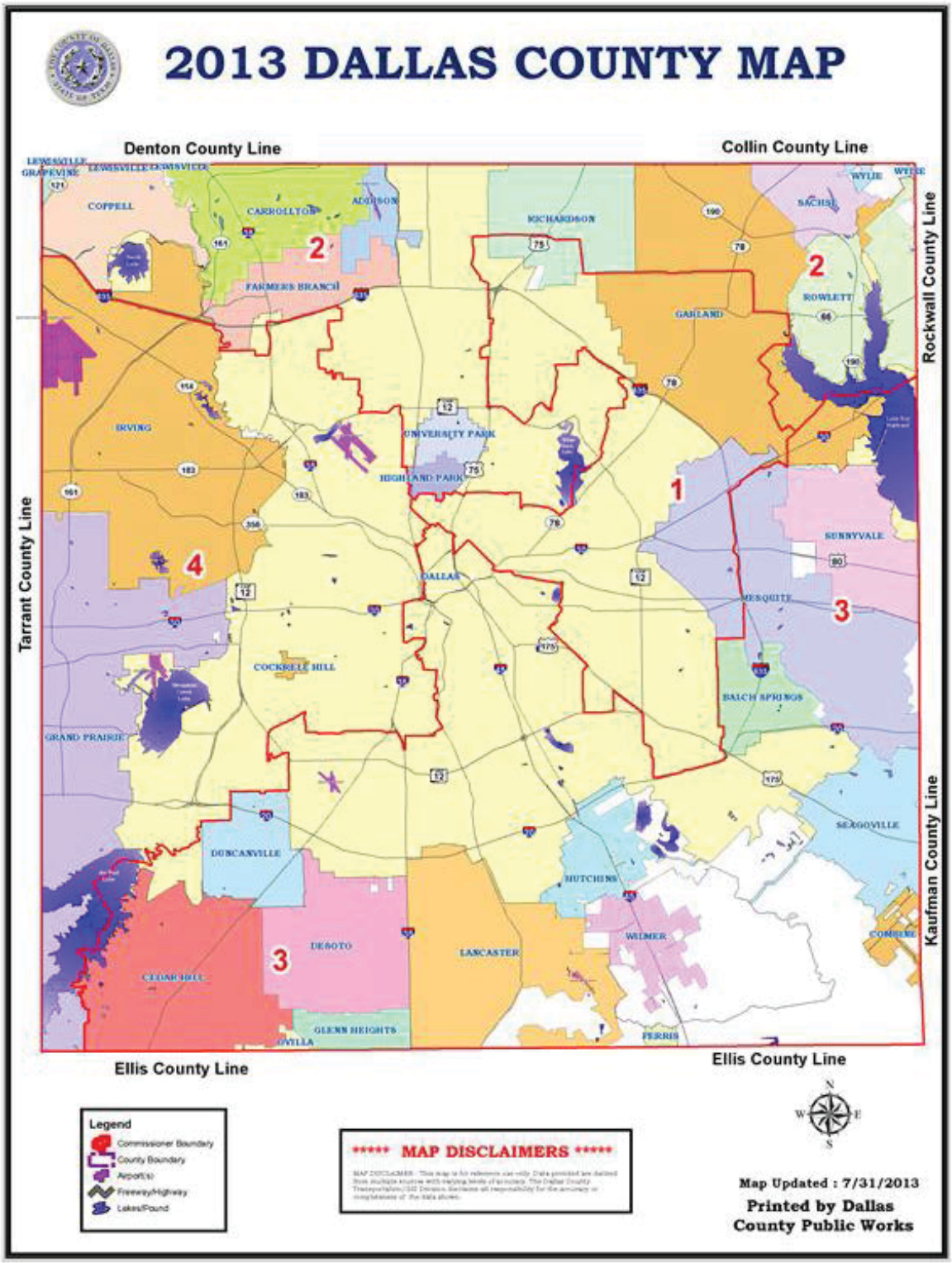


TABLE 3.1: Dallas County Population Distribution

Jurisdiction	2010 Census Population	Total Estimated Population 2014 Estimates	Total Estimated Population	Estimated Special Needs Populations	
				Elderly (over 65)	Individuals Below Poverty Level
Town of Addison	13,056	15,180	13,056	946	1,710
City of Balch Springs	23,728	24,280	23,728	1,530	6,644
City of Carrollton	119,097	124,,400	119,097	9,533	10,719
City of Cedar Hill	45,028	45,820	45,028	3,193	3,827
City of Cockrell Hill	4,193	4,170	4,193	237	1,468
City of Combine	1,942	1,960	1,942	231	203.91
City of Coppell	38,659	39,550	38,659	2,050	1,121
City of Dallas	1,197,816	1,232,360	1,197,816	105,943	275,498
City of DeSoto	49,047	50,520	49,047	5,305	4,169
City of Duncanville	38,524	39,170	38,524	4,539	5,509
City of Farmers Branch	28,616	29,660	28,616	3,799	3,262
City of Garland	226,876	231,700	226,876	20,919	34,712
City of Grand Prairie	175,396	181,230	175,396	11,671	25,432
City of Glenn Heights	11,278	11,440	11,278	465	248
Town of Highland Park	8,564	8,480	8,564	1,474	188
City of Hutchins	5,338	5,350	5,338	281	859
City of Irving	216,290	227,030	216,290	14,999	46,719
City of Lancaster	36,361	37,150	36,361	2,628	4,836
City of Mesquite	139,824	142,230	139,824	11,964	16,779
City of Richardson	99,223	101,820	99,223	12,499	4,366
City of Rowlett	56,199	56,450	56,199	4,244	5,788
City of Sachse	20,329	21,580	20,329	1,193	935
City of Seagoville	14,835	15,130	14,835	1,282	1,825
City of Sunnyvale	5,130	5,280	5,130	578	41
City of University Park	23,068	22,860	23,068	1,773	13,841
City of Wilmer	3,682	4,120	3,682	240	1,064

Source: 2014 NCTCOG Population Estimates – Data Regional Center - http://rdc.nctcog.org/

Demographics

The population density was 2,523 people per square miles. There were 854,119 housing units at an average density of 971 per square mile. The racial makeup of the county was 33.12% Non-Hispanic White, 22.30% Black or African American, 0.10% Native American, 5.15% Asian, 0.06% Pacific Islander, 14.04% from other races, and 2.70% from two or more races. 38.30% of the populations were Hispanic or Latino of any race.

The median income for a household in the county was $43,324 and the median income for a family was $49,062. Males had a median income of $34,988 versus $29,539 for females.

The per capita income for the county was $22,603. About 10.60% of families and 13.40% of the population were below the poverty line, including 18.00% of those under age 18 and 10.50% of those aged 65 or over.

Climate

The Dallas/Fort Worth Metroplex is located in north central Texas, approximately 250 miles (400 km) north of the Gulf of Mexico. It is near the headwaters of the Trinity River, which lie in the upper margins of the Coastal Plain. The rolling hills in the area range from 500 to 800 feet (150 to 240 m) in elevation.

The Dallas-Fort Worth climate is humid subtropical with hot summers. It is also continental, characterized by a wide annual temperature range. Precipitation also varies considerably, ranging from less than 20" more than 50".

Winters are mild, but "blue northers" occur about three times each month, and often are accompanied by sudden drops in temperature. Periods of extreme cold that occasionally occur are short-lived, so that even in January mild weather occurs frequently.

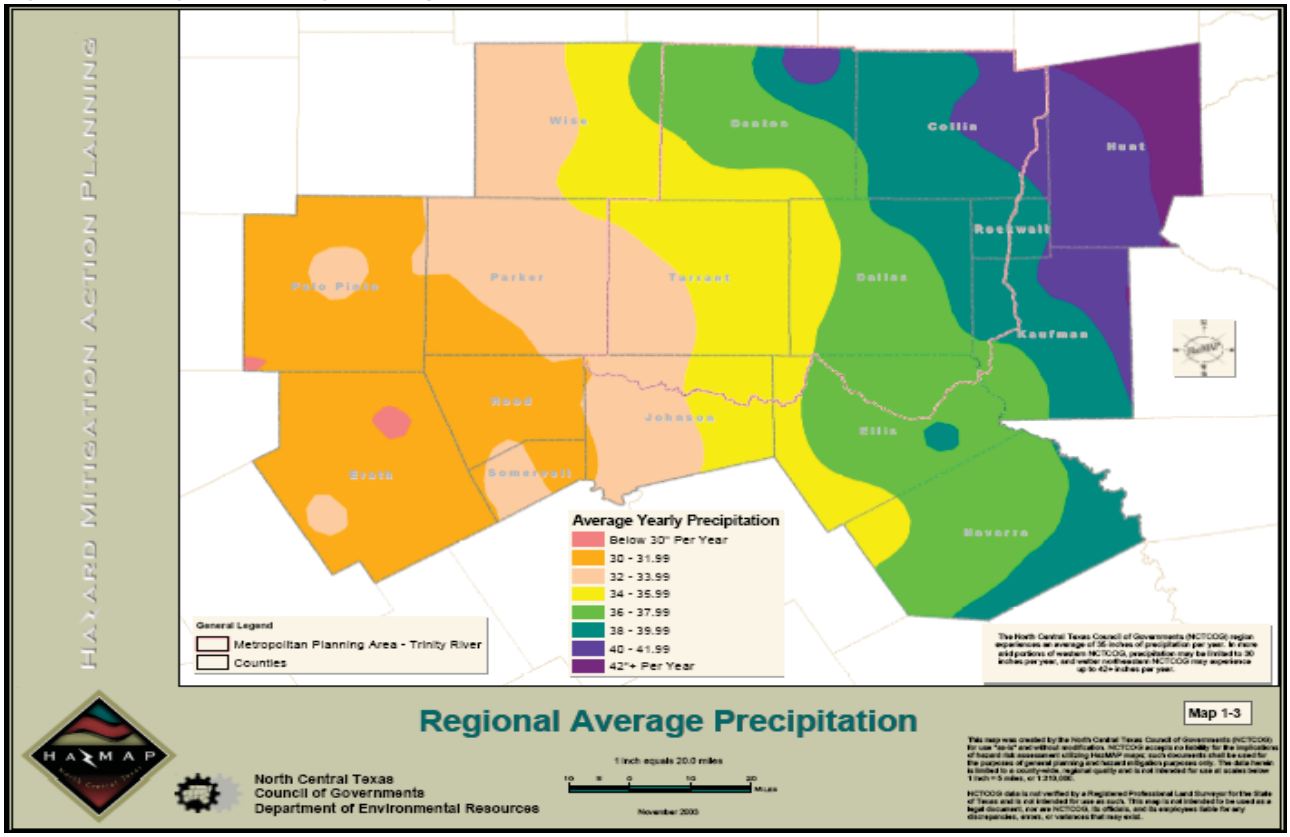
The highest temperatures of summer are associated with fair skies, westerly winds, and low humidity. Characteristically, hot spells in summer are broken into three-to-five day periods by thunderstorm activity. There are only a few nights each summer when the low temperature exceeds 80°F. Summer daytime temperatures frequently exceed 100°F. Air conditioners are recommended for maximum comfort indoors and while traveling via automobile. Average high and low temperatures range from 37°F in January to 98°F in August.

Throughout the year, rainfall occurs more frequently during the night. Usually, periods of rainy weather last for only a day or two, and are followed by several days with fair skies. A large part of the annual precipitation results from thunderstorm activity, with occasional heavy rainfall over brief periods of time. Thunderstorms occur throughout the year, but are most frequent in the spring. Hail falls on about two or three days a year, ordinarily with only slight and scattered damage. Windstorms occurring during thunderstorm activity are sometimes destructive. Snowfall is rare. Figure 3.1 depicts the regional average precipitation.

The average length of the warm seasons (freeze-free period) is about 249 days, or about 8 months. The average last occurrence of 32°F or below is mid-March, and the average first occurrence of 32°F or below is in late November.

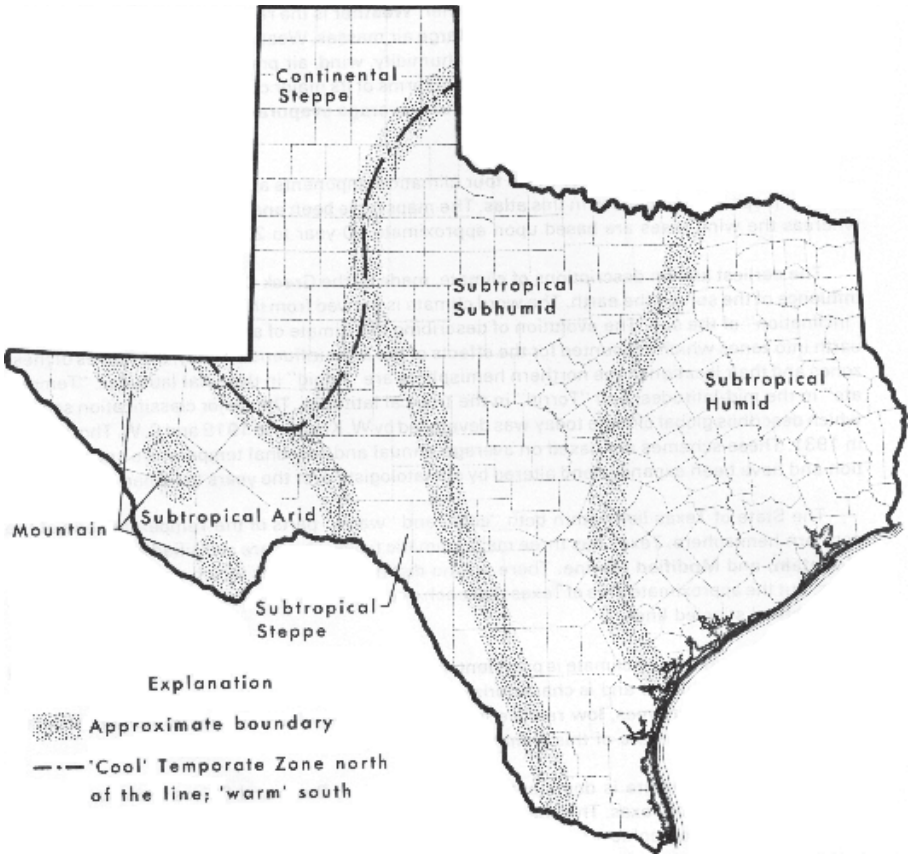
Likely effects of these weather patterns include potential flooding, some damage due to heavy wind, and occasional hail. On certain occasions, heavy rains can close roads, cause small mudslides, etc. In the most destructive storms, tornadoes can form and cause significant damage to people and property. The highest impact to the community would most likely be the destruction that accompanies a large tornado.

Figure 3.1: Regional Averaged Precipation



Source: North Central Texas Council of Governments, Department of Environment and Development

Figure 3.2: Texas Climate

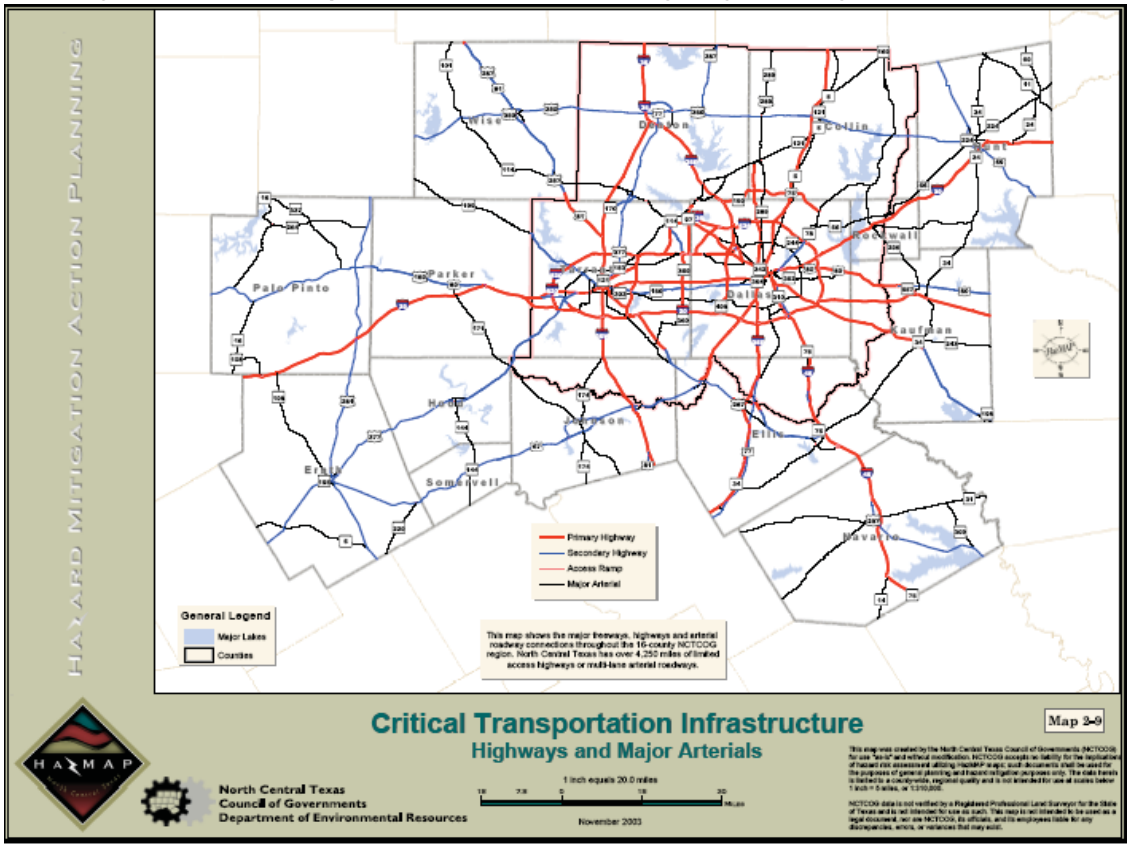


Source: Texas Department of Water Resources - http://www.twdb.state.tx.us/publications/reports/limited_printing/doc/LP192.pdf

Transportation

***a) Highways*:** Several major interstate and state highways intersect the Dallas area. Dallas is divided north and south by major highway. Interstate Highway 35 East, Interstate Highway 45, Interstate Highway 75, and the North Dallas Tollway divide the County East and West. Dividing the County North and South are Interstate Highways 20 and 30. Several major roadways branch off the major highways. Of special interest is I-35 corridor, north to Dallas County and south to Ellis County, which is designated as a major NAFTA thoroughfare. I-20 is the designated corridor for the transportation of radioactive materials to Carlsbad, New Mexico

Figure 3.3: Regional Critical Transportation Infrastructure – Highways and Major Arterials



Source: North Central Texas Council of Governments, Department of Environment and Development

Dallas County Highways	
Interstate 20	US Highway 75
Interstate 30	US Highway 77
Interstate 35E	US Highway 80
Interstate 345	US Highway 175
Interstate 45	Texas State Highway 5
Interstate 635	Texas State Highway 66
Dallas North Tollway	Texas State Highway 78
President George Bush Turnpike	Texas State Highway 114
US Highway 67	Texas State Highway 161
Texas State Highway 183	Texas State Highway 190
Texas State Highway 289	Texas State Highway 342
Texas State Highway Loop 12	Texas State Highway 303

b) Airports: Two major airports serve the Dallas area; the first is Love Field, located north of the Central Business district. Love Field is capable of serving any size aircraft. The second is the Dallas/Fort Worth International Airport located between Dallas and Fort Worth. Addison and Dallas Executive Airports are utilized primarily for private and small jet aircraft.

***c) Federal Facilities & Military Facilities*:** The Dallas area is home to several federal facilities including the Multi-Building Federal center, EPA Region VI Headquarters, the Federal Reserve, the Federal Emergency Management Agency Region VI Headquarters, and numerous military facilities including the Army Air Force Exchange Service headquarters.

Government

Texas County government is generally an extension of state government, focusing on the judicial system, health and welfare service delivery, law enforcement, and road construction. In contrast to other parts of the country, Texas counties seldom have responsibility for schools, water and sewer systems, electric utilities, and commercial airports. County governments in Texas have no ordinance-making powers other than those explicitly and narrowly granted by state law.

Dallas County is governed by a Commissioners Court. The Dallas County Commissioners Court consists of the County Judge (the chairperson of the Court) who is elected County-wide and four Commissioners who are elected by the voters in each of four districts.

The Commissioners Court is the policy-making body for the County; in addition, the County Judge is the senior executive and administrative position in the County. The Commissioners Court sets the county tax rate, adopts the budget, appoints boards and commissions, approves grants and personnel actions, and oversees the administration of county

government. Each commissioner also supervises a Road and Bridge District. The Commissioners Court also approves the budget and sets the tax rate for the hospital district, which is charged with the responsibility for providing acute medical care for citizens who otherwise would not receive adequate medical services.

Other elected officials are the County and District Clerks, Tax Assessor, Sheriff, District Attorney, Treasurer, and five Constables. All trial court judges (District Judges, County Court Judges and Justices of the Peace) are also elected. The State District Judges in each county select the County Auditor, who serves as the chief accountant for the county.

The Commissioners Court of Dallas County serves as both the legislative and executive branch of government, with budget authority over most county departments, including those headed by other elected officials.

Economic Development

Dallas County is the home of nationally-recognized research institutions like UT-Southwestern and UT-Dallas, and Fortune 500 firms like Texas Instruments, Kimberly-Clark, and Southwest Airlines. Dallas County has the fourth-largest concentration of Fortune 500 corporate headquarters among counties in the United States and it serves as a major distribution center for Fortune 500 companies like Frito-Lay, Whirlpool, and Wal-Mart, as well as national/regional operations centers for firms like JP Morgan Chase, Nokia, and Capital On. The county also has an active and innovative small business community.

Dallas County is also a leader in regional transportation hub as it serves as home to the Dallas/Fort Worth International Airport, one of the busiest airports in the world. In addition, the county has a transportation program that provides about $30 million a year in thoroughfare improvement funding. It was also responsible for helping create the North Texas Tollway Authority (NTTA) and Dallas Area Rapid Transit authority (DART). Dallas County had a very strong hi-tech foundation (the semi-conductor was invented in Dallas County), and continues to be a major player in the telecommunications industry.

The County has established one of the largest county open space systems in the state with the system now containing almost 3400 acres of environmentally unique land, and it is now helping build a comprehensive trail system (over 100 miles presently exist in the County) so that it will be possible to travel from neighborhoods to major employers, retail areas, entertainment areas, universities, light rail stations, and parks without the use of a car.

Dallas County operates a community development block grant (CDBG) program in fifteen of its smaller cities so that these cities can have sound infrastructure and housing, and in conjunction with the City of Dallas, it also created the first consolidated city-county job training program in Texas.

Dallas County has one of the lowest property tax rates in the State. Its fiscal policies and management practices have allowed it to be regarded as one of the best run counties in the country by *Governing* magazine, and it is one of only a few counties in the United States to have a "AAA" bond rating from both Moody's and Standard & Poors.

To help further facilitate economic development, Dallas County provides strategic tax abatements, it participates in tax increment finance (TIF) districts, it nominates projects to the Texas enterprise project program, and it supports the formation of foreign trade zones. In addition, it, along with the Dallas County Hospital District, also offers the Freeport tax exemption on goods that leave the State within 175 days.

SECTION 4: PLANNING PROCESS

This section addresses Element A of the Local Mitigation Plan Review Tool.

REGULATION (44 CFR 201.6 LOCAL MITIGATION PLANS) *ELEMENT A. PLANNING PROCESS*
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
A3. Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))

The Dallas County Hazard Mitigation Planning Working Group through the participating jurisdictions' Hazard Mitigation Planning Teams performed a complete planning process from March 2013 through November 2013 to update this plan and prepare a public review draft. The planning process is summarized in this section. Information from the 2009 HazMAP that was adopted that does not apply has been updated.

Methodology for developing the plan update

In an effort to coordinate and integrate various hazard planning activities, Dallas County Office of Homeland Security and Emergency Management (HSEM) took the lead in updating the Dallas County Hazard Mitigation Action Plan (HazMAP). Dallas County HSEM formed the Dallas County HazMAP Working Group that comprised of at least one representative from each participating jurisdiction in Dallas County. **Table 1.2,** lists the participating jurisdictions in the Dallas County HazMAP Update.

The updated plan had several new participating jurisdictions from the original mitigation plan adopted in 2009. In order to help participating jurisdictions meet the planning update requirements, Dallas County HSEM proposed that each participating jurisdiction form a Hazard Mitigation Planning Team (HMPT) that would coordinate the hazard mitigation update planning process at the jurisdictional level. The HMPT participated in the planning process by performing the following activities:

- ✓ Reviewed and analyzed each section of the 2009 plan
- ✓ Determined any changes that were to be documented and the process the team took to make these decisions
- ✓ Assessed and identified specific hazards within the respective jurisdictions
- ✓ Set goals and mitigation action items to the specific hazards identified within each respective jurisdiction
- ✓ Conducted capabilities assessment
- ✓ Provided opportunity for public participation within their jurisdiction

- ✓ Reviewed and provided input to the drafts developed in the HazMAP

The purpose of the Working Group was to facilitate a collaborative planning process for all participating jurisdictions. Kickoff meetings were held on March 11, 2013, April 30, 2013, and May 1, 2013, with other meetings held on May 29, 2013, June 7, 2013, and July 24, 2013. The purpose of these meetings was to provide overall guidance to the planning process, review the existing hazard mitigation planning materials, update risk assessment, and discuss mitigation strategies. This plan was developed as a county-wide hazard mitigation plan focusing on collaboration to implement mitigation strategies throughout the county, while maintaining accountability within each participating city to identify and track specific mitigation actions.

The Dallas County HazMAP is multi-jurisdictional and satisfies the natural hazards mitigation planning requirements as specified in the **Disaster Mitigation Act of 2000,** as amended, for Dallas County and each participating jurisdiction. The plan was developed following the process outlined by the Disaster Mitigation Act of 2000. The update follows guidelines provided by *FEMA 386-8: Multijurisdictional Mitigation Planning (August 2006), FEMA's Local Multi-Hazard Mitigation Planning Guidance (July 2008), FEMA Local Mitigation Planning Handbook (March 2013) and other FEMA guidance*.

Many of the natural and man-made disasters identified in the 2009 plan were the same. The plan update was needed in order to take into account all modified or revised data from the past five years including changing demographics and mitigation strategies. The natural hazard mitigation strategies contained within this plan are the result of a planning process involving all local jurisdictions, special purpose districts, and a cross-section of the business community and citizens of Dallas County.

Establishing the Dallas County HazMAP Working Group

As stated earlier, the Dallas County HazMAP Working Group was comprised of at least one representative from each participating jurisdiction in Dallas County. **Table 1.2** lists the members of the Dallas County HazMAP Working Group. Dallas County HSEM served as the facilitator and coordinator of the Working Group. The Working Group performed the following tasks:

- ✓ Approved the plan development process, and established goals and objectives
- ✓ Established a time line for completion of the plan
- ✓ Ensured that the plan meets the requirements of the Disaster Mitigation Act of 2000
- ✓ Coordinated the Solicitation and encouraged the participation of the public in the plan development process
- ✓ Assisted in the gathering information for inclusion in the plan
- ✓ Organized and coordinated the public involvement process
- ✓ Gathered all pertinent information to be included in the plan
- ✓ Assisted in the completion of a draft plan for review

Table 4.1: Members of the Dallas County HazMAP Working Group

Participating Jurisdiction	Name	Title
Dallas County (Unincorporated)	Michael Gaciri Scott Greeson	Hazard Mitigation Specialist Planning Section Chief
Town of Addison	John O'Neal	Fire Chief, EMC
City of Balch Springs	David Haas	Emergency Management Coordinator
City of Carrollton	Elliot Reep	Emergency Management Coordinator
City of Cedar Hill	John Ballard	Fire Chief, EMC
City of Cockrell Hill	Bret Haney Kevin Devine	Assistant City Administrator Assistant Fire Chief
City of Coppell	Brad Simpkins	Emergency Management Coordinator
City of Dallas	Joseph Ellis	Senior Emergency Management Specialist
City of DeSoto	Jerry Duffield Skyla Pellum	Fire Chief Emergency Management Administrator
City of Duncanville	Sam Rhode	Emergency Management Coordinator
City of Farmers Branch	Don Ross	Fire Marshall
City of Glenn Heights	Phillip Prasifka	Public Safety Director
Town of Highland Park	Rick Pyle	Assistant Police Chief
City of Irving	Jason Carriere	Emergency Management Coordinator
City of Lancaster	Thomas Griffith	Fire Chief
City of Richardson	Mistie Gardner Alisha Gimbel	Emergency Management Coordinator Preparedness and Mitigation Coordinator
City of Rowlett	Doug Kendrick	Fire Chief
City of Sachse	Rick Coleman	Fire Chief
City of Seagoville	Tommy Lemmond	Fire Chief
City of Sunnyvale	Richard Adkins	Fire Fighter / EMT
City of University Park	Mike Nolen	Fire Marshall
City of Wilmer	Mark Hamilton	Fire Chief

Development of the Work Plan Schedule

Dallas County HSEM served as the lead in developing the work plan schedule that outlined the steps that were to be taken in order to update the Dallas County 2009 HazMAP. The work plan provided a detailed breakdown of all activities and meetings that took place at specific points of the update development process. See copies of the proposed schedule: Dallas County Hazard Mitigation Action Plan update and work plan worksheets provided in Figures 4.1 and 4.2.

The Dallas County HazMAP Working Group and jurisdictional Hazard Mitigation Planning Teams (HMPT) from each participating jurisdiction reviewed and identified hazards on a countywide basis, conducted risk assessment of these hazards, researched and analyzed data from various sources, and provided commented on the Dallas County 2009 HazMAP Plan based on the above mentioned activity. Edits and comments were made to the various sections as needed. Data sources used for developing this plan update included:

Source	Data
City and County Appraisal Data 2012 North Central Texas Council of Governments United States Census Bureau	Population, land use and demographics
Regional Hazard Assessment Tool	Hazard occurrences
National Climatic Data Center (NCDC)	Hazard occurrences
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface
National Inventory of Dams	Dam information
FEMA National Flood Insurance Program	National Flood Insurance Rate Maps
Texas Department of Public Safety - State of Texas Hazard Mitigation Plan	Hazard profiles and analysis
Dallas County Emergency Management Plan	Hazard profiles and analysis

Dallas County served as the coordinator and lead agency for all jurisdictions, including the unincorporated areas of Dallas County, by accomplishing the following activities through the planning process:

- ✓ Assigned the Hazard Mitigation Specialist coordinate and provide technical assistance and necessary data to the Planning Committee.
- ✓ Scheduled, coordinated, and facilitated community meetings with the assistance of the Planning Committee.
- ✓ Provided any necessary materials, handouts, etc. for public planning meetings.

- ✓ Worked with the each HMPT to collect and analyze data and develop goals and implementation strategies.
- ✓ Prepared, based on community input and HazMAP Working Group direction, the first draft of the plan and provided technical writing assistance for review, editing and formatting.
- ✓ Coordinated with the stakeholders within the cities and the unincorporated areas of Dallas County during plan development.

Each jurisdiction then appointed a representative to the Dallas County Hazard Mitigation Planning Working Group. Each of the individual jurisdictions participated in accomplishing similar activities associated with development of the plan as follows:

- ✓ Coordinated input from representatives of neighborhood stakeholder groups and provided a representative to the Hazard Mitigation Planning Working Group (HMWG)
- ✓ Attended regular meetings of the HMWG as coordinated by Dallas County
- ✓ Assisted in identifying hazards and estimating potential losses from future hazard events in Dallas County
- ✓ Assisted in developing and prioritizing mitigation actions to address the identified risks within Dallas County
- ✓ Assisted in coordinating public meetings to develop the plan
- ✓ Identified the community resources available to support the planning effort
- ✓ Worked for the support of neighborhood stakeholders for the recommendations resulting from the planning process
- ✓ Submitted the proposed plan to all appropriate departments for review and comment and worked with Dallas County HSEM to incorporate the resulting comments into the proposed plan

Hazard Assessment and Vulnerability Assessment

In addition to the planning activities listed above, each HMPT used the Dallas County Hazard Identification and Risk Assessment (HIRA) worksheet, the risk assessment outlined in the *FEMA Local Mitigation Planning Handbook (March 2013) and the FEMA State and Local Mitigation Planning How-to-Guide, as additional resources in conducting the risk and vulnerability assessment.*

The HIRA worksheet had previously been used in conducting a risk and vulnerability assessment for the Dallas County Emergency Management Plan. The HIRA was developed through a collaborative effort within the county which included reviewing the 2009 HazMAP, the State of Texas Mitigation Plan, and other reputable sources such as federal and state agencies.

The worksheet was disseminated to each participating jurisdiction for their consideration in identifying the most prevalent hazards in the county. The vulnerability to each hazard was assessed using a Likert based scale to measure the impact the hazards had on people, property and the environment. A blank copy of the Dallas County HIRA that was used to conduct the assessment has been provided in Figure 4.3.

While several hazards impact Dallas County and its jurisdictions, they are not all evaluated the same way. This is due to the differences in data collected, risk assessment

methodologies, and spatial extent of the hazards. Each jurisdiction was also given the leeway to reflect unique and varied risks they deemed fit to address. Participating jurisdictions ranked hazards in terms of the probability or frequency of occurrence and the extent or magnitude of impact. The assessments were also used to set priorities for mitigation based on potential dollar losses and loss of lives. A hazard profile and vulnerability analysis for each of the identified hazards can be found in **Section 5**.

Potential dollar losses from each hazard were estimated, using the Regional Hazard Assessment Tool (RHAT) developed by the North Central Texas Council of Governments. The RHAT uses a modeling technique that examined the land use and/or built environment that included general building stock (e.g., residential, commercial, industrial), critical facilities, lifelines, and infrastructure. The resulting risk assessment profiled hazard events, provided information on previous occurrences, estimated probability of future events, and guesstimated the potential extent and magnitude of impact on people and property.

Mitigation Strategies

The mitigation strategy development for the plan update involved reviewing mitigation goals included in the 2009 HazMAP, providing analyses for past actions, and developing new mitigation actions. A Dallas County HazMAP Working Group meeting was held in Richardson, TX on July 24, 2013 to discuss the mitigation strategies.

At the meeting, after an initial presentation regarding types and examples of actions and the importance of mitigation planning, participants were asked to review the mitigation goals and objectives from the 2009 HazMAP and determine what changes, if any, should be made. The consensus among participants was to retain the mitigation goals and objectives. A detailed review of the mitigation goals and objectives will be provided in Section 6

Jurisdictions that were a part of the update process received copies of their mitigation actions submitted in the 2009 HazMAP, and determined whether each action item should be deleted, had been completed, or should be deferred for the plan update. For the jurisdictions that were not part of the 2009 HazMAP, each was asked to review and analyze the action items identified in the 2009 HazMAP, and develop action items.

An inclusive process was used to develop and prioritize new mitigation actions for this plan update. These included:

- ✓ Review of the mitigation goals and objectives from the 2009 HazMAP.
- ✓ A "menu" of optional mitigation actions was developed based on action items from the 2009 HazMAP, local and state mitigation plans, as well as federal publications such as the FEMA's *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards, January 2013* and the *Local Mitigation Planning Handbook, March 2013*. The participants reviewed the optional mitigation actions and narrowed the list down to those that were most applicable to their area of responsibility, most cost effective in reducing risk, could be implemented easily, and would be likely to receive institutional and community support.
- ✓ Potential Federal and State funding sources to assist implementing proposed actions were inventoried.

- ✓ Planning team members considered benefits that would result from the mitigation actions versus the cost of those projects. Detailed cost-benefit analyses were beyond the scope of this plan. However, economic evaluation was one factor that helped team members select one mitigation action from competing actions.

Team members then selected and prioritized mitigation actions. Each team member evaluated the mitigation actions of their own jurisdiction. The prioritization method was based on FEMA's STAPLE+E criteria and included social, technical, administrative, political, legal, economic, and environmental considerations. *The FEMA Local Mitigation Planning Handbook, March 2013, Appendix A, Worksheet 6, was used to assist these jurisdictions in developing the most appropriate action items.*

Team members developed action plans identifying proposed actions, costs and benefits, the responsible organization(s), effects on new and existing buildings, implementation schedule, priority, and potential funding sources.

Following the development of mitigation actions, participating jurisdictions were also asked to review procedures for keeping the plan up to date and devise strategies for plan maintenance.

Public Participation

An important component of mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole, provides the planning team with a greater understanding of local concerns and increases the likelihood of successfully implemented mitigation actions. If citizens and stakeholders, such as local businesses, non-profits, hospitals, and schools, are involved, they are more likely to gain appreciation of the hazards present in their community and take steps to reduce their impact.

Public involvement in the development of the update was sought at separate periods in the planning process: (1) the beginning of the planning process, (2) the drafting stage and (3) between completion of the final draft and plan approval and adoption. Public input was sought using three methods: (1) open public meetings, (2) survey instruments and (3) making copies of draft Plan deliverables available for public review on the participating jurisdiction websites, public offices and public libraries.

In addition to the option to have open public meetings, Dallas County provided an opportunity for citizens and stakeholders to provide input and comment through the use of an online public hazard survey. This online survey was designed to obtain data and information from residents from all of Dallas County and the participating jurisdictions. The public were directed to the online survey through various public outreach methods that included flyers, Facebook, Twitter, newspaper clippings, public notices on websites and in public areas such as city hall and public libraries.

The survey was available in both English and Spanish and was open from April 2013 through October 2013. A total of 527 responses were submitted, which provided input for

the participating jurisdictions to further consider in developing the plan update, as noted in jurisdictional annexes. A summary of the survey findings is provided in Appendix A.

External stakeholders invited via email to participate in the planning and review process of the Dallas County Hazard Mitigation Plan:

Representing	Position / Department	Role
North Central Texas Council of Governments	Emergency Preparedness Department - HazMAP Team	Review Plan
University of Texas at Dallas	Director, Office of Emergency Management	Review Plan
Dallas County Community College District	Director, Office of Risk Management	Review Plan
Southern Methodist University	Director, Office of Risk Management – Emergency Management and Business Continuity	Review Plan
Dallas-Fort Worth Airport	Emergency Management Coordinator, Office of Emergency Management	Review Plan

Meeting Summaries

Below is a list of the meeting that the Dallas County HazMAP Working Group held and a summary of the purpose for each meeting.

Date	Discussion / Purpose of Meeting
March 11, 2013	Web Conference Meeting Introduction of the mitigation planning requirements to participating jurisdictions A detailed overview of the mitigation planning process was provided as well as he expectations of the participating jurisdictions
April 30, 2013	Kickoff Meeting - Southern Jurisdictions - Dallas County HazMAP Working Group A detailed overview the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collections templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings
May 1, 2013	Kickoff Meeting - Northern Jurisdictions - Dallas County HazMAP Working Group A detailed overview the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collections templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings

Date	Discussion / Purpose of Meeting
July 24, 2013	2nd Meeting of the Dallas County HazMAP Working Group Analyzed completed Hazard Identification Risk Assessment (HIRA) Matrix sheets; Reviewed the information provided in the public survey; Conducted a County wide hazard analysis and vulnerability assessment. Developed mitigation goals for Dallas County Provided additional resources to assist the HMPTs to conduct capabilities assessments, develop mitigation action items using the resources from FEMA
October 2 2013	Web Conference Meeting Reviewed jurisdictional deliverables including the completed HIRA Matrices, specific hazard analysis and vulnerabilities for each jurisdiction Provided guidance for public input and comment
February 3, 2014	Web Conference Meeting Reviewed action items Reviewed public input information on the hazards identified Conducted analysis of the public data received Determined and updated action items identified based on the review and analysis conducted

Figure 4.1: Dallas County Hazard Mitigation Action Plan Update Workplan

Date	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7	Quarter 8
Deliverable 1	Dallas County Hazard Mitigation Action Plan (HazMAP) Working Group hold First Meeting; Dallas County HSEM to provide each participating jurisdiction with process overview and project deliverables	Dallas County Hazard Mitigation Action Plan Working Group Second Meeting; Dallas County HSEM to discuss HIRA and capabilites assessment; continue to collect survey responses.	Dallas County Hazard Mitigation Action Plan Working Group Final Meeting: Initial HazMAP draft discussed. Meeting packets turned in.	Finalized Draft Documents are reviewed by Dallas County HSEM and HazMAP Working Group	Dallas County HazMAP document is submitted to the state for review.	Dallas County HazMAP document is reviewed by the state. State provides revisions that are to be made as needed. State forwards the updated HazMAP document to FEMA for review	FEMA reviews Dallas County HazMAP document and provides additional revisions that are to be made as needed	Final Dallas County HazMAP document is approved by FEMA pending adoption by participating jurisdictions; Particitipating jurisdictions adopt HazMAP plan
Deliverable 2	Initial Hazard Mitigation Planning Team Meeting (HMPT); Each Jurisdiction Assess hazards using the Dallas County HIRA and consuct a review of the exsiting plan; Review or conduct capabilities assessment	Mitigation Planning Teams Meetings; Develop Goals, Objective and Action Items	Dallas County HazMAP Document Drafts are updated appropriately and finalized					
Deliverable 3	Provide opportunity for public participation - Online survey, public meetings, public outreach programs	Provide opportunity for public to provide input to the plan - Public reviews draft of HazMAP document with Goals, Objectives and Action Items						
Deliverable 4	Submit assessment to Dallas County HazMAP Group for review after compiled	Submit initial HazMAP draft to Dallas County HazMAP Group for review after compiled						

This represents the meetings where the packets will be used and/or the delieverables that will be a product of these meetings

Figure 4.2

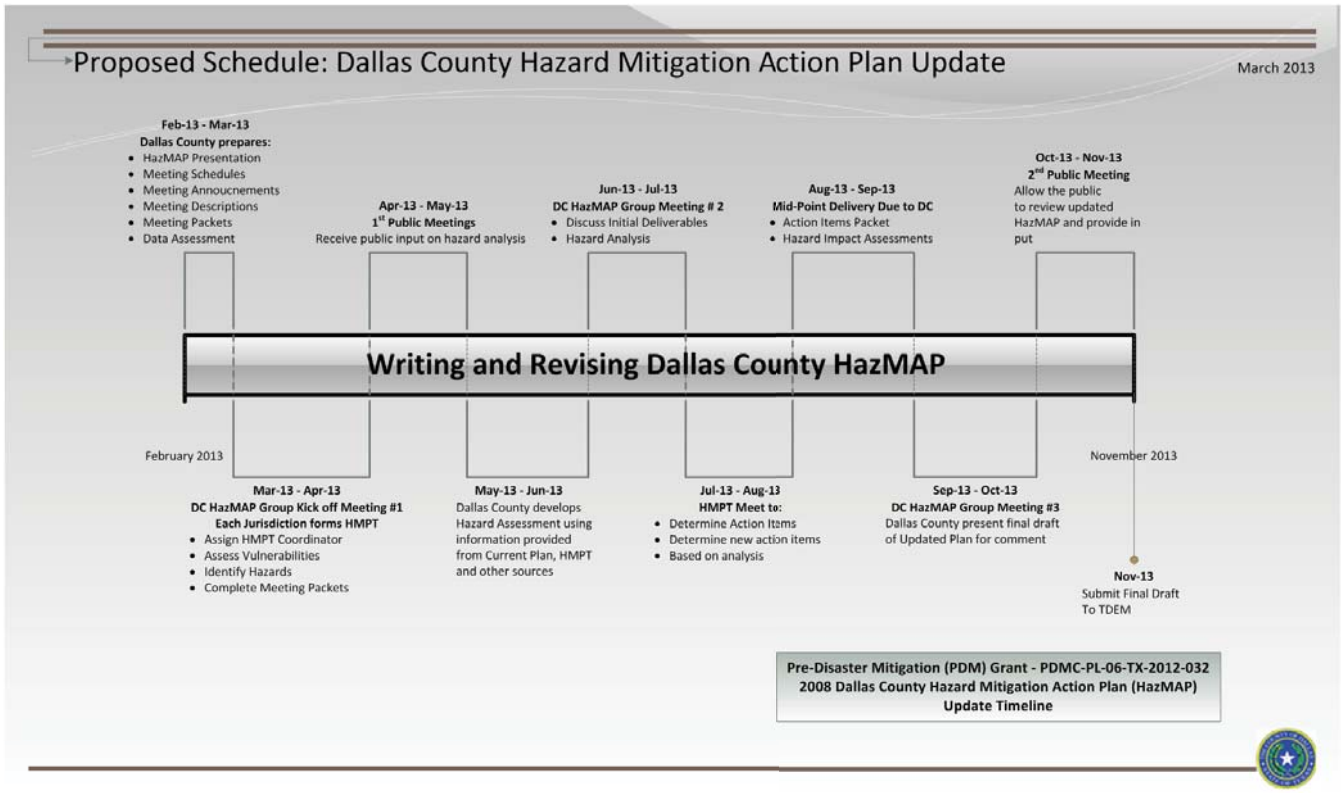

Proposed Schedule: Dallas County Hazard Mitigation Action Plan Update
March 2013
Feb-13 - Mar-13
Dallas County prepares:
HazMAP Presentation
Meeting Schedules
Meeting Annoucnements
Meeting Descriptions
Meeting Packets
Data Assessment
Apr-13 - May-13
1st Public Meetings
Receive public input on hazard analysis
Jun-13 - Jul-13
DC HazMAP Group Meeting # 2
Discuss Initial Deliverables
Hazard Analysis
Aug-13 - Sep-13
Mid-Point Delivery Due to DC
Action Items Packet
Hazard Impact Assessments
Oct-13 - Nov-13
2nd Public Meeting
Allow the public to review updated HazMAP and provide in put
Writing and Revising Dallas County HazMAP
February 2013
November 2013
Mar-13 - Apr-13
DC HazMAP Group Kick off Meeting #1
Each Jurisdiction forms HMPT
Assign HMPT Coordinator
Assess Vulnerabilities
Identify Hazards
Complete Meeting Packets
May-13 - Jun-13
Dallas County develops Hazard Assessment using information provided from Current Plan, HMPT and other sources
Jul-13 - Aug-13
HMPT Meet to:
Determine Action Items
Determine new action items
Based on analysis
Sep-13 - Oct-13
DC HazMAP Group Meeting #3
Dallas County present final draft of Updated Plan for comment
Nov-13
Submit Final Draft To TDEM
Pre-Disaster Mitigation (PDM) Grant - PDMC-PL-06-TX-2012-032
2008 Dallas County Hazard Mitigation Action Plan (HazMAP)
Update Timeline

Figure 4.3: Dallas County Hazard Identification and Risk Assessment (HIRA)

Appendix XYZ: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: _____

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms: High Winds									
Hail									
Lightning									
Winter Storms									
Tornado									
Flooding									
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat									
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire									
Utility Failure									
Energy/Fuel Shortage									
Terrorist Attack									
Urban Fire									
Earthquake									
Levee/Dam Failure									
Drought									
Aircraft Accident									
Stream Bank Erosion									
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

This page intentionally left blank.

SECTION 5: HAZARD IDENTIFICATION AND RISK ASSESSMENT

During 2013, the Dallas County Hazard Mitigation Working Group reviewed the existing prioritization of identified hazards and risk assessment. Through a collaborative process, the Dallas County Hazard Mitigation Working Group identified hazards and added 11 most common natural hazards that affect Dallas County. Other natural hazards mentioned and deemed to have none to minimal effect to Dallas County included expansive soils, hurricane/tropical storms, coastal erosion and land subsidence.

Dallas County Hazard Mitigation Action Plan identified flooding, dam failure, and wildland fire as the only natural hazards recognized to have predictable vulnerable areas. Each participating jurisdiction has further profiled their vulnerability to these geographically defined hazards in their respective annexes. All other hazards are equally likely to occur throughout the Dallas County jurisdictions.

This section covers Element B of the Local Mitigation Plan Review Tool

ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))
B2. Does the plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
B4. Does the plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

Overview

Upon a review of the full range of natural hazards suggested under the FEMA planning guidance, and the original Dallas County Local Mitigation Strategy (DaLMS) the following 11 natural hazards have been identified within Dallas County. The risk assessment conducted followed a process similar to that outlined in the *FEMA State and Local Mitigation Planning How-to-Guide:*

1. Identify Hazards: The purpose of this step is to determine the hazards that pose a threat to the county's geographical area. Modifications to the identified hazards and updates to the prioritization are presented in this Section - Hazard Identification and Risk Assessment (HIRA).

2. Profile Hazards: Updated hazard profiles are presented in Section 5 Hazard Profiles. Maps of identified hazards are included in the applicable hazard profiles within the same section.

3. Identify Asset: Each participating jurisdiction identified critical facilities for inclusion in vulnerability assessments. Where available, replacement values were assigned to the identified facilities to assist in predicting the extent of potential damage. The jurisdictions' critical facilities are presented in Section 9 in the jurisdictional annex. Each of the incorporated cities' critical facilities are presented in the respective city annexes.

4. Assess Vulnerability: A countywide hazard analysis is included in this section. Table 5.1 provides the HIRA analysis completed by Dallas County. The assessment presents an understanding of the risks that affect the entire county due to natural hazards identified. Vulnerability assessments for each of the participating jurisdiction's lists of critical facilities are presented in the respective jurisdiction's annexes. The vulnerability assessment informs development of mitigation strategies as it exposes the potential damage that can occur due to any given hazard.

In addition to conducting the HIRA analysis, the Dallas County HazMAP Working Group adopted the descriptors in the Priority Risk Index (PRI). The purpose of adopting the PRI descriptors was to assist in the categorization of potential hazards and assist in ranking each hazard as provided in the HIRA scales. These include the occurrence, probability, severity and Impact scales. The PRI Table as part of Figure 4.3, provides the category and criteria for each scale used. The table is used with the HIRA to provide the definition of the levels and values.

The identification of the hazards is based on the hazards listed in the Dallas County Local Mitigation Strategy (DaLMS) Plan that was adopted in January 2009. Other hazard identification criteria include event occurrence, future development patterns and/or proximity to hazard. Only historic events from 04/01/2007 through August 2013 have been included in this updated plan for hazards that are considered to affect the planning area equally. The original plan lists historic hazard events from 01/01/1950 through 03/31/2007. The following is a summary of natural hazards identified.

1. **Flooding:** The accumulation of water within a water body, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, or shallow flooding.

2. **Hail**: Due to the rapidly changing climate in Texas, large scale hailstorms are especially prevalent. Hailstorm incidents have been reported throughout the North Texas region, including Dallas County, therefore establishing that all parts of the region are equally vulnerable to hailstorms.

3. **High Winds**: High winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with Tornadoes because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado. Downbursts or microbursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled

air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less.

4. **Lightning**: Thunderstorm and lightning events are generated by atmospheric imbalance and turbulence due to the combination of the following conditions: unstable warm air rising rapidly into the atmosphere; sufficient moisture to form clouds and rain; and upward lift of air currents caused by colliding cold and warm weather fronts, sea breezes or mountains. Lightning is generated by the buildup of charged ions in a thundercloud, and the discharge of a lightning bolt interacts with the best conducting object or surface on the ground.

5. **Tornado**: Dallas County lies within the region that is referred to as Tornado Alley. Tornado Alley is the term used to describe the region of the U.S. where the strongest Tornadoes occur most frequent. A tornado is a violently rotating column of air, in contact with the ground, either pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a condensation funnel cloud.

6. **Winter Storm**: Winter storms in Texas, although not as numerous as in our neighbor states to the north, do occur often enough and with enough severity to be a threat to people and property. The types which Texans are most familiar with are snowstorms, blizzards, cold waves, and ice storms. Generally, the winter storm season in Texas runs from late November to mid-March, although severe winter weather has occurred as early as October and as late as May in some locations. Texas is disrupted more severely by severe winter storms than are regions that experience severe weather more frequently. The Texas Panhandle and North Central Texas around Dallas and Texarkana are most vulnerable to severe winter storms.

7. **Drought**: Drought is defined as the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It is often referred to as a condition of climatic dryness that is severe enough to reduce soil moisture and water supplies below the requirements necessary to sustain normal plant, animal, and human life. Given the expanse of the land mass within Texas and the geographic location of two-thirds of the counties of the State are located either in an arid or semi-arid climate, roughly those west of a North-South line formed by Interstate Highway 35, are almost always in varying stages of drought.

8. **Extreme Heat**: Extreme Heat is defined as a combination of very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave. All of Texas is vulnerable to extreme heat, but most particular in West Texas. In addition, large metropolitan areas, such as Dallas/Fort Worth and Houston may experience extreme heat since they have an abundance of concrete. This effect is known as urban heat islands and can be dangerous to those without air conditioners.

9. **Dam and Levee Failure**: A dam failure is defined as a systematic failure of the dam structure resulting in the uncontrolled release of water, often resulting in floods that could exceed the 100-year flood plain boundaries. A dam failure could create mass

fatalities, mass structural damage and/or a cascading potential if a populated area is located below the dam structure.

10. **Wildfire**: An uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.

11. **Earthquake**: Almost all of the earthquakes in Texas have been caused by one of two sources. The major source is relief of tectonic stress along fault lines. These are most common in the Rio Grande rift belt, the Panhandle, the Ouachita Belt, and the Coastal Plain. It has been suggested that the small earthquakes that occur in the region, such as the ones that have occurred in Dallas County, may be attributed to well injections associated with oil and gas field operations and occur in areas near large oil and gas fields.

These 11 natural hazards have been addressed in the Risk Assessment according to the following categories:

1. **Definition and types:** Description of natural hazard and different types, if applicable.
2. **Location and extent:** Areas with in Dallas Count and participating jurisdictions where natural hazards have occurred and may occur in the future, including their severity.
3. **Occurrence:** Historical record of past natural hazard events were noted in the original plan. These historical events were provided by the National Climatic and Data Center for Dallas County, Texas between 01/01/1950 and 03/31/2007. This plan only includes hazard occurrences between 04/01/2007 and 08/30/2013.
4. **Vulnerability:** Areas subject to potential disaster from natural hazards.
5. **Probability of recurrence:** Potential for natural hazard to occur in the future, based on High, Medium, and Low, where High = Probable and likely in the near future (within 5 years); Medium = Possible in the near future (5 to 15 years); Low = Not likely to occur (longer than 15 years).

Other Hazards identified in the State of Texas Mitigation Plan that are mentioned in this plan update but not discussed in detail in the risk assessment include:

1. **Hurricane/Tropical Storm:** Hurricanes and tropical storms are classified as cyclones and are developed by counter-clockwise circulation of winds around a low-pressure center in the Northern Hemisphere. Latent heat from condensation of warm water is the key energy source for these storms.

2. **Expansive Soils**: Soils and soft rock that tend to swell or shrink due to changes in moisture content are known as expansive soils. Expansive soils are often referred to as swelling clays because clay materials are most susceptible to swelling and shrinking.

3. **Coastal Erosion:** Coastal erosion is the wearing away land and the resultant loss of beach, shoreline or dune material along a coastline

4. **Land Subsidence:** According to the State of Texas Mitigation Plan, land subsidence is defined as the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface, to localized collapses. Land subsidence extent is measured by the number of feet of land loss, or sinks.

These natural hazards are not addressed in detail due to their no to minimal level of risk within the NCTCOG region including Dallas County.

Severe Storms

Definition
A severe storm is an atmospheric disturbance that results in one or more of the following phenomena: strong winds and large hail, thunderstorms, tornadoes, rain, snow, or other mixed precipitation. Typically, major impacts from a severe storm are to transportation and loss of utilities.

Types: For the purpose of the Dallas County Hazard Mitigation Action Plan update Severe Storms profile, the following severe storms elements are considered:

A. **High winds/Thunderstorm winds/ Strong winds** – Storms with sustained winds of 40 mph or gusts of 58 mph or greater, not caused by thunderstorms, expected to last for an hour or more. The National Weather Service classifies wind from 38 to 55 MPH as gale force winds; 56 to 74 MPH as storm force winds and any winds over 75 MPH as hurricane force winds. Destructive winds like those described normally occur between October and March.

B. **Hail and /or Severe Thunderstorm** – Storms that produce winds of 58 mph or greater, or three-quarter inch or larger hail

C. **Lightning** - A visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds, between the cloud and air, between a cloud and the ground or between the ground and a cloud.

D. **Winter storm** – A storm with significant snowfall, ice, and/or freezing rain; the quantity of precipitation varies by elevation. Heavy snowfall is 4 inches or more in a 12-hour period, or 6 or more inches in a 24-hour period in non-mountainous areas; and 12 inches or more in a 12-hour period or 18 inches or more in a 24-hour period in mountainous areas.

The section that follows profiles the identified severe storm hazards in more detail.

Location and Extent: Dallas County is subject to a number of severe storms conditions such as thunder, lightning, wind, snow, ice, and hail. Since severe weather disturbances often represent the extremes in wind, cold, precipitation, or other weather phenomena, direct damage to the natural and built environment has occurred statewide.

High Winds/Thunderstorm Winds

Definitions: Wind is defined as the motion of air relative to the earth's surface. The horizontal component of the three-dimensional flow and the near-surface wind phenomenon are the most significant aspects of the hazard.

Straight-line winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with Tornadoes because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado. Downbursts or microbursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less.

Wind speeds in some of the stronger downbursts can reach 100 to 150 miles per hour, which is similar to that of a strong tornado. The winds produced from a downburst often occur in one direction, and the worst damage is usually on the forward side of the downburst.

Location: High winds affect the entire planning area equally. **Map 5.1** depicts reports of high wind events in Dallas County from 2006 to 2012 with data pulled from the NOAA - National Climatic Data Center.

Extent: The Beaufort Wind Scale is representative of the damage from high winds Dallas County may endure. For example, in 2007 a high wind storm of a Beaufort Wind Scale Force 11 (57 knots) was reported as causing damage resulting in $10,000 of structures being damaged or destroyed. The Beaufort Wind Scale allows planners in the community to assess historical data and mitigate for future high wind storms.

Table 5.1: Beaufort Wind Scale

Force	Wind	WMO	Appearance of Wind Effects	
	(Knots)	Classification	On the Water	On Land
0	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Large wavelets, crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Moderate waves 4-8 ft. taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger waves 8-13 ft., whitecaps common, more spray	Larger tree branches moving, whistling in wires

Force	Wind (Knots)	WMO Classification	Appearance of Wind Effects	
			On the Water	On Land
7	28-33	Near Gale	Sea heaps up, waves 13-20 ft., white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Moderately high (13-20 ft.) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Whole trees in motion, resistance felt walking against wind
9	41-47	Strong Gale	High waves (20 ft.), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Very high waves (20-30 ft.) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Exceptionally high (30-45 ft.) waves, foam patches cover sea, visibility more reduced	
12	64+	Hurricane	Air filled with foam, waves over 45 ft., sea completely white with driving spray, visibility greatly reduced	

Occurrence: Table 5.2 depicts updated high-wind data between 2007 through 2012. Any prior data is available in the original Dallas County Local Mitigation Strategy (DaLMS). The historic data in the original plan is from March 1955 through March 2007.

Table 5.2: High Wind Extent Locations

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
DALLAS			1/29/2008	Strong Wind	45 MG	0	0	5,000	0
DALLAS			1/29/2008	Strong Wind	41 MG	0	0	2,000	0
DALLAS			1/29/2008	High Wind	35 MS	0	0	0	0
DALLAS CO.	FARMERS BRANCH	FARMERS BRANCH	3/18/2008	Thunder storm Wind	59 EG	0	0	0	0
DALLAS CO.	DALLAS	DALLAS	4/10/2008	Thunder storm Wind	50 EG	0	0	1,000	0
DALLAS CO.	DALLAS LOVE FLD	DALLAS LOVE FLD	4/10/2008	Thunder storm Wind	50 MG	0	0	0	0
DALLAS CO.	CARROLLTON	CARROLLTON	4/10/2008	Thunder storm Wind	61 EG	0	0	3,000,000	0
DALLAS CO.	LANCASTER	LANCASTER	4/10/2008	Thunder storm Wind	56 EG	0	0	20,000	0
DALLAS CO.	ADDISON	ROWLETT	4/10/2008	Thunder storm	50 EG	0	0	25,000	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
				Wind					
DALLAS CO.	CEDAR HILL	CEDAR HILL	4/17/2008	Thunder storm Wind	52 EG	0	0	0	0
DALLAS CO.	DALLAS-FT WORTH INTL	DALLAS-FT WORTH INTL	6/17/2008	Thunder storm Wind	56 MG	0	0	0	0
DALLAS CO.	HIGHLAND PARK	DALLAS	6/17/2008	Thunder storm Wind	50 EG	0	0	25,000	0
DALLAS CO.	ARCADIA PARK	ARCADIA PARK	7/15/2008	Thunder storm Wind	52 EG	0	0	10,000	0
DALLAS (ZONE)			8/3/2008	Strong Wind	35 EG	0	0	15,000	0
DALLAS CO.	UNIVERSITY PARK	UNIVERSITY PARK	8/29/2008	Thunder storm Wind	56 MG	0	0	0	0
DALLAS CO.	IRVING	IRVING	2/10/2009	Thunder storm Wind	52 EG	0	0	0	0
DALLAS CO.	GARLAND	GARLAND	2/10/2009	Thunder storm Wind	70 EG	0	0	0	0
DALLAS (ZONE)			4/17/2009	Strong Wind	42 MG	0	0	7,000	0
DALLAS CO.	CARROLLTON	CARROLLTON	5/2/2009	Thunder storm Wind	61 EG	0	12	5,000,000	0
DALLAS CO.	CARROLLTON	CARROLLTON	5/2/2009	Thunder storm Wind	61 EG	0	0	5,000	0
DALLAS CO.	LANCASTER	LANCASTER	5/2/2009	Thunder storm Wind	50 EG	0	0	3,000	0
DALLAS CO.	MESQUITE	MESQUITE	5/2/2009	Thunder storm Wind	61 EG	0	0	3,000	0
DALLAS CO.	GRAND PRAIRIE ARPT	GRAND PRAIRIE ARPT	6/10/2009	Thunder storm Wind	50 MG	0	0	3,000	0
DALLAS CO.	(DFW)DALLAS-FT WORTH	(DFW)DALLAS-FT WORTH	6/10/2009	Thunder storm Wind	56 MG	0	0	4,000	0
DALLAS CO.	COPPELL	TRINITY MILLS	6/10/2009	Thunder storm Wind	61 EG	0	0	6,000	0
DALLAS CO.	DALLAS REDBIRD ARPT	DALLAS REDBIRD ARPT	6/10/2009	Thunder storm Wind	62 MG	0	0	4,000	0
DALLAS CO.	RICHARDSON	RICHARDSON	6/10/2009	Thunder storm Wind	61 EG	0	0	8,000	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
DALLAS CO.	ADDISON	ADDISON	6/10/2009	Thunder storm Wind	52 EG	0	0	8,000	0
DALLAS CO.	BALCH SPGS	BALCH SPGS	6/10/2009	Thunder storm Wind	61 EG	0	0	100,000	0
DALLAS CO.	HUTCHINS	HUTCHINS	6/10/2009	Thunder storm Wind	52 EG	0	0	5,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	6/11/2009	Thunder storm Wind	56 EG	0	0	3,000	0
DALLAS CO.	UNIVERSITY PARK	UNIVERSITY PARK	6/11/2009	Thunder storm Wind	56 EG	0	0	5,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	6/11/2009	Thunder storm Wind	52 EG	0	0	4,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	6/11/2009	Thunder storm Wind	52 EG	0	0	3,000	0
DALLAS CO.	GRAND PRAIRIE ARPT	GRAND PRAIRIE ARPT	7/26/2009	Thunder storm Wind	50 MG	0	0	2,000	0
DALLAS CO.	DUNCANVILLE	DUNCANVILLE	7/26/2009	Thunder storm Wind	52 EG	0	0	2,000	0
DALLAS CO.	DE SOTO	DE SOTO	7/30/2009	Thunder storm Wind	58 EG	0	0	5,000	0
DALLAS CO.	OAK CLIFF	OAK CLIFF	7/30/2009	Thunder storm Wind	56 EG	0	0	2,000	0
DALLAS CO.	RICHARDSON	RICHARDSON	7/30/2009	Thunder storm Wind	56 EG	0	0	6,000	0
DALLAS CO.	BOBWYN	BOBWYN	5/17/2010	Thunder storm Wind	50 EG	0	0	50,000	0
DALLAS CO.	SEAGOVILLE	SEAGOVILLE	9/8/2010	Thunder storm Wind	56 EG	0	0	0	0
DALLAS CO.	ADDISON	ADDISON AIRPORT	9/17/2010	Thunder storm Wind	52 MG	0	0	0	0
DALLAS CO.	DUNCANVILLE	DUNCANVILLE	4/11/2011	Thunder storm Wind	65 EG	0	0	3,000	0
DALLAS CO.	LANCASTER ARPT	LANCASTER ARPT	4/11/2011	Thunder storm Wind	65 EG	0	0	0	0
DALLAS CO.	LANCASTER ARPT	LANCASTER ARPT	4/11/2011	Thunder storm	65 EG	0	0	0	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
				Wind					
DALLAS CO.	LANCASTER	LANCASTER	4/11/2011	Thunder storm Wind	83 EG	0	0	30,000	0
DALLAS CO.	SEAGOVILLE	SEAGOVILLE	4/11/2011	Thunder storm Wind	65 EG	0	0	40,000	0
DALLAS CO.	GARLAND	GARLAND	4/14/2011	Thunder storm Wind	70 EG	0	0	50,000	0
DALLAS CO.	RICHARDSON	RICHARDSON	4/14/2011	Thunder storm Wind	56 MG	0	0	20,000	0
DALLAS CO.	GARLAND	GARLAND	4/14/2011	Thunder storm Wind	56 MG	0	0	50,000	0
DALLAS CO.	ROWLETT	ROWLETT	4/14/2011	Thunder storm Wind	68 MG	0	0	0	0
DALLAS CO.	GARLAND	GARLAND	4/14/2011	Thunder storm Wind	64 MG	0	0	50,000	0
DALLAS CO.	MESQUITE	MESQUITE	4/14/2011	Thunder storm Wind	56 MG	0	0	0	0
DALLAS CO.	(DFW)DALLAS-FT WORTH	(DFW)DALLAS-FT WORTH	4/23/2011	Thunder storm Wind	50 MG	0	0	3000	0
DALLAS CO.	(ADS)ADDISON ARPT DA	(ADS)ADDISON ARPT DA	4/23/2011	Thunder storm Wind	50 MG	0	0	3000	0
DALLAS CO.	IRVING	IRVING	5/11/2011	Thunder storm Wind	56 MG	0	0	5000	0
DALLAS CO.	IRVING	IRVING	5/24/2011	Thunder storm Wind	65 EG	0	0	75,000	0
DALLAS CO.	(DAL)LOVE FLD DALLAS	(DAL)LOVE FLD DALLAS	5/24/2011	Thunder storm Wind	65 EG	0	0	5000	0
DALLAS CO.	EAST DALLAS	EAST DALLAS	5/24/2011	Thunder storm Wind	61 EG	0	0	9,000	0
DALLAS CO.	WILMER	WILMER	5/24/2011	Thunder storm Wind	61 EG	0	0	6,000	0
DALLAS CO.	RICHARDSON	RICHARDSON	5/24/2011	Thunder storm Wind	56 EG	0	0	6,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	5/24/2011	Thunder storm Wind	56 EG	0	0	5,000	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
DALLAS CO.	FLORENCE HILL	FLORENCE HILL	9/18/2011	Thunder storm Wind	52 EG	0	0	0	0
DALLAS CO.	SEAGOVILLE	SEAGOVILLE	9/18/2011	Thunder storm Wind	61 EG	0	0	0	0
DALLAS CO.	DE SOTO CARROLL ARPT	DE SOTO CARROLL ARPT	9/18/2011	Thunder storm Wind	61 EG	0	0	50,000	0
DALLAS CO.	HUTCHINS	HUTCHINS	9/29/2011	Thunder storm Wind	52 EG	0	0	0	0
DALLAS CO.	DE SOTO	DE SOTO	9/29/2011	Thunder storm Wind	55 MG	0	0	0	0
DALLAS CO.	GARLAND	GARLAND	10/23/11	Thunder storm Wind	61 EG	0	0	10,000	0
DALLAS CO.	ROWLETT	ROWLETT	10/23/11	Thunder storm Wind	61 EG	0	0	0	0
DALLAS CO.	GARLAND	GARLAND	10/23/11	Thunder storm Wind	61 EG	0	0	10,000	0
DALLAS CO.	MESQUITE	MESQUITE	10/23/11	Thunder storm Wind	55 EG	0	0	10,000	0
DALLAS CO.	LIGGETT		4/3/2012	Thunder storm Wind	70 EG	0	0	12,000	0
DALLAS CO.	COPPELL		4/3/2012	Thunder storm Wind	61 EG	0	0	7,000	0
DALLAS CO.	COPPELL		4/3/2012	Thunder storm Wind	65 EG	0	0	8,000	0
DALLAS CO.	(DAL)LOVE FLD DALLAS		5/29/2012	Thunder storm Wind	50 MG	0	0	4,000	0
DALLAS CO.	EAST DALLAS		6/6/2012	Thunder storm Wind	52 EG	0	0	5,000	0
DALLAS CO.	RENNER		7/7/2012	Thunder storm Wind	43 EG	2	0	10,000	0
DALLAS CO.	(DFW)DALLAS-FT WORTH		7/20/2012	Thunder storm Wind	56 MG	0	0	0	0
DALLAS CO.	(DFW)DALLAS-FT WORTH		7/20/2012	Thunder storm Wind	53 MG	0	0	0	0
DALLAS CO.	DUNCANVILLE		7/20/2012	Thunder storm	52 EG	0	0	0	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
				Wind					
DALLAS CO.	LANCASTER ARPT	LANCASTER ARPT	8/17/2012	Thunder storm Wind	52 MG	0	0	0	0
DALLAS CO.	(DAL)LOVE FLD DALLAS		12/19/12	Thunder storm Wind	57 MG	0	0	5,000	0
DALLAS CO.	MOUNTAIN CREEK LAKE		12/19/12	Thunder storm Wind	52 EG	0	0	5,000	0
DALLAS CO.	RICHARDSON		12/19/12	Thunder storm Wind	52 EG	0	0	5,000	0
DALLAS CO.	ALPHA	ALPHA	2/10/13	Thunder storm Wind	56 EG	0	0	3,000	0
DALLAS CO.	FLORENCE HILL	FLORENCE HILL	2/10/2013	Thunder storm Wind	56 EG	0	0	5,000	0
DALLAS CO.	UNIVERSITY PARK	UNIVERSITY PARK	2/10/2013	Thunder storm Wind	56 EG	0	0	5,000	0
DALLAS CO.	GARLAND	GARLAND	5/21/2013	Thunder storm Wind	50 MS	0	0	10,000	0
DALLAS CO.	GARLAND	GARLAND	5/21/2013	Thunder storm Wind	60 EG	0	0	30,000	0
DALLAS CO.	FLORENCE HILL	FLORENCE HILL	7/17/2013	Thunder storm Wind	52 EG	0	0	4,000	0
DALLAS CO.	GARLAND	GARLAND	8/13/2013	Thunder storm Wind	43 EG	0	0	3,000	0
DALLAS CO.	ROWLETT	ROWLETT	8/13/2013	Thunder storm Wind	43 EG	0	0	3000	0
DALLAS CO.	EAGLE FORD	EAGLE FORD	5/8/2014	Thunder storm Wind	78 EG	0	0	80,000	0
DALLAS CO.	(DAL)LOVE FLD DALLAS	(DAL)LOVE FLD DALLAS	5/8/2014	Thunder storm Wind	52 EG	0	0	50,000	0
DALLAS CO.	(DAL)LOVE FLD DALLAS	(DAL)LOVE FLD DALLAS	5/8/2014	Thunder storm Wind	61 MG	0	0	50,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	5/8/2014	Thunder storm Wind	56 EG	0	0	60,000	0
DALLAS CO.	HIGHLAND PARK	HIGHLAND PARK	5/8/2014	Thunder storm Wind	56 EG	0	0	60,000	0

COUNTY	CITY		DATE	EVENT	MAG. (KTS.)	DTH	INJ	PrD (USD)	CrD. (USD)
	START	END							
DALLAS CO.	SAYENE	SAYENE	5/8/2014	Thunder storm Wind	52 EG	0	0	30,000	0
DALLAS CO.	(DFW)DALLAS-FT WORTH	(DFW)DALLAS-FT WORTH	5/25/2014	Thunder storm Wind	50 MG	0	0	4,000	0

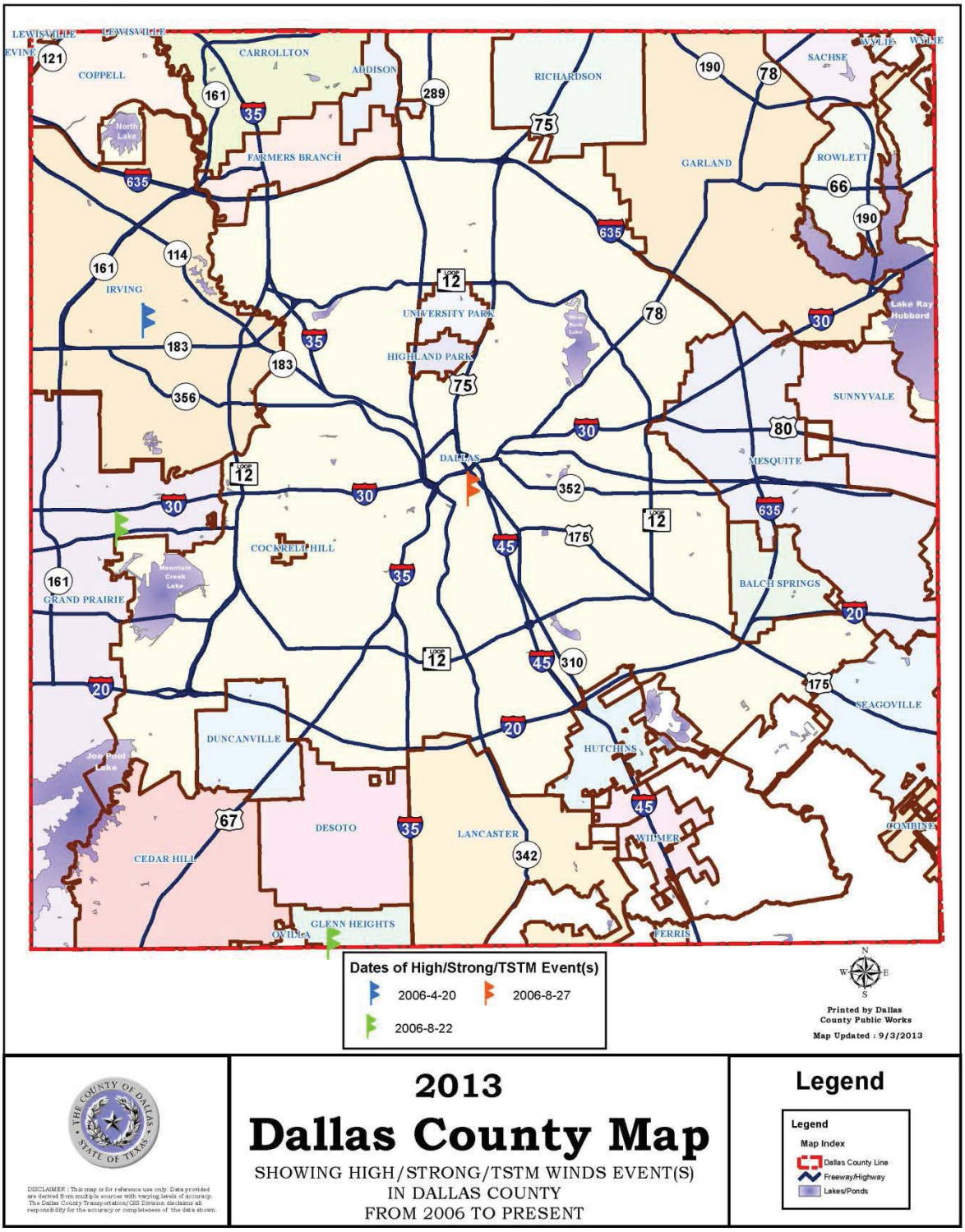
Column Definitions: MAG – Magnitude: DTH – Death; PrD – Property Damage; CrD – Crop Damage
Wind Magnitude Definitions: Measured Gust: 'MG', Estimated Gust: 'EG', Measured Sustained: 'MS', Estimated Sustained: 'ES'
Source: **https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS**

Magnitudes: Dallas County and participating jurisdictions experienced 99 high wind events ranging from 35 knots to 83 knots (40 to 96 mph), during the time period analyzed for this plan (01/01/2008-06/01/2014). It can be expected that any future high wind events will be similar in magnitude.

Vulnerability: High winds can occur suddenly and without warning. Damages sustained from "micro and macro-bursts, straight line, and other types of winds" can cause significant damages to structures, infrastructure, and vehicles throughout Dallas County. The entire County is equally exposed to the damage risks associated with high winds. Typically, incidents are fairly localized and damages associated with individual events are relatively limited. High winds affect the entire planning area equally.

Probability of recurrence: The probability of high winds impacting jurisdictions in Dallas County is high.

Map 5.1: High Winds Event in Dallas County



Hail

Definition: Outgrowth of a severe thunderstorm in which balls or irregularly shaped lumps of ice greater than 0.75 inches in diameter fall with rain. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to warm air rising rapidly into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until, having developed sufficient weight, they fall as precipitation.

Location: Hail affects the entire planning area equally. **Map 5.2** depicts hail events in the Dallas County from 2006 to 2012.

Extent: The size of hailstones is directly related to the severity and size of the storm. Strong updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a function of the intensity of heating at the Earth's surface. The higher the temperature the higher the elevation which results in increased suspension time and bigger hailstone sizes.

The severity of damage caused by hailstorms depends on the hailstone sizes (average and maximum), number of hailstones per unit area, and associated winds. Storms that produce high winds in addition to hail are most damaging and can result in numerous broken windows and damaged siding.

The NOAA/TORRO Hailstorm Intensity Scale as seen in **Table 5.3** is representative of the damage from hail storms Dallas County has experienced in the past and will likely experience in the future. For example, in April of 2012 a hail storm produced up to 2.0 inches (a size code of H5 with an intensity category of destructive) in the City of Duncanville causing property damage cost of $1.2 million. The Hailstorm Intensity Scale allows planners to gauge past damage and mitigate for future expected damage.

Vulnerability: Hailstorms can cause extensive property damage affecting both urban and rural landscapes. Fortunately, most hailstorms produce marble-size or smaller hailstones. These can cause damage to crops, but they normally do not damage buildings or automobiles. Larger hailstones can destroy crops, livestock, and wildlife and can cause extensive damage to buildings, including roofs, windows, and outside walls. Vehicles can be total losses. When hail breaks windows, water damage from accompanying rains can also be significant. A major hailstorm can easily cause damage running into the millions of dollars.

Table 5.3: Combined NOAA/TORRO Hailstorm Intensity Scales

Size Code	Intensity Category	Typical Hail Diameter (inches)	Approximate Size	Typical Damage Impacts
H0	Hard Hail	up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33-0.60	Marble or Mothball	Slight damage to plants, crops
H2	Potentially Damaging	0.60-0.80	Dime or grape	Significant damage to fruit, crops, vegetation
H3	Severe	0.80-1.20	Nickel to Quarter	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	1.2-1.6	Half Dollar to Ping Pong Ball	Widespread glass damage, vehicle bodywork damage
H5	Destructive	1.6-2.0	Silver dollar to Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	2.0-2.4	Lime or Egg	Aircraft bodywork dented, brick walls pitted
H7	Very destructive	2.4-3.0	Tennis ball	Severe roof damage, risk of serious injuries
H8	Very destructive	3.0-3.5	Baseball to Orange	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.5-4.0	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	4+	Softball and up	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Occurrence: Table 5.4 depicts hail event data between 2007 through 2013. Any prior data is available in the original Dallas County Local Mitigation Strategy (DaLMS). The historic data in the original plan is from March 1955 through March 2007.

Table 5.4: Hail Event in Dallas County 2007 - 2013

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	FLORENCE HILL	2/10/2013	3:20	0.75 in.	0	0	0.00K	0.00K
Hail	ALPHA	12/19/2012	20:57	0.75 in.	0	0	0.00K	0.00K
Hail	HUTCHINS	8/7/2012	18:19	1.00 in.	0	0	0.00K	0.00K
Hail	DUNCANVILLE	6/13/2012	19:01	2.00 in.	0	0	1.200M	0.00K
Hail	FLORENCE HILL	6/13/2012	18:53	1.75 in.	0	0	1.200M	0.00K
Hail	FLORENCE HILL	6/13/2012	18:48	2.75 in.	0	0	1.20K	0.00K
Hail	GRAND PRAIRIE	6/13/2012	18:47	1.75 in.	0	0	300.00K	0.00K
Hail	LAKELAND HGTS	6/13/2012	18:47	3.00 in.	0	0	800.00K	0.00K
Hail	FLORENCE HILL	6/13/2012	18:40	3.00 in.	0	0	800.00K	0.00K
Hail	GRAND PRAIRIE ARPT	6/13/2012	18:40	2.75 in.	0	0	500.00K	0.00K
Hail	GRAND PRAIRIE	6/13/2012	18:20	3.00 in.	0	0	120.00K	0.00K
Hail	GRAND PRAIRIE	6/13/2012	18:20	1.75 in.	0	0	600.00K	0.00K
Hail	SOWERS	6/13/2012	18:16	2.50 in.	0	0	1.000M	0.00K
Hail	SOWERS	6/13/2012	18:07	2.00 in.	0	0	200.00K	0.00K
Hail	PEELER	6/13/2012	18:05	2.50 in.	0	0	1.400M	0.00K
Hail	SHADY GROVE	6/13/2012	18:05	1.50 in.	0	0	1.000M	0.00K
Hail	LIGGETT	6/13/2012	17:58	2.75 in.	0	0	2.000M	0.00K
Hail	SOWERS	6/13/2012	17:58	1.50 in.	0	0	2.500M	0.00K
Hail	SAYENE	6/13/2012	17:51	1.75 in.	0	1	1.000M	0.00K
Hail	EAST DALLAS	6/13/2012	17:45	1.75 in.	0	0	100.00K	0.00K
Hail	EAST DALLAS	6/13/2012	17:45	1.75 in.	0	0	400.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	HIGHLAND PARK	6/13/2012	17:35	1.50 in.	0	0	200.000M	0.00K
Hail	HIGHLAND PARK	6/13/2012	17:24	1.00 in.	0	0	0.00K	0.00K
Hail	REINHARDT	6/13/2012	17:23	1.50 in.	0	0	60.00K	0.00K
Hail	UNIVERSITY PARK	6/13/2012	17:23	2.75 in.	0	0	3.000M	0.00K
Hail	UNIVERSITY PARK	6/13/2012	17:23	1.75 in.	0	0	1.200M	0.00K
Hail	BOUCHARD	6/13/2012	17:22	2.50 in.	0	0	900.00K	0.00K
Hail	CURTIS	6/13/2012	17:20	2.00 in.	0	0	90.00K	0.00K
Hail	HIGHLAND PARK	6/13/2012	17:20	2.75 in.	0	0	900.000M	0.00K
Hail	RICHARDSON	6/13/2012	17:15	1.00 in.	0	0	10.00K	0.00K
Hail	BOUCHARD	6/13/2012	17:14	1.00 in.	0	0	50.00K	0.00K
Hail	BOUCHARD	6/13/2012	17:12	1.50 in.	0	0	120.00K	0.00K
Hail	BOUCHARD	6/13/2012	17:08	1.00 in.	0	0	10.00K	0.00K
Hail	RENNER	6/13/2012	16:52	0.88 in.	0	0	0.00K	0.00K
Hail	(ADS)ADDISON ARPT DA	6/13/2012	16:52	2.00 in.	0	0	75.00K	0.00K
Hail	GARLAND	6/6/2012	16:15	0.75 in.	0	0	0.00K	0.00K
Hail	MESQUITE	6/6/2012	16:13	0.75 in.	0	0	0.00K	0.00K
Hail	HIGHLAND PARK	6/6/2012	16:08	0.75 in.	0	0	0.00K	0.00K
Hail	EAST DALLAS	6/6/2012	15:50	0.88 in.	0	0	0.00K	0.00K
Hail	IRVING	6/6/2012	15:00	1.00 in.	0	0	0.00K	0.00K
Hail	UNIVERSITY PARK	5/30/2012	13:08	0.88 in.	0	0	0.00K	0.00K
Hail	ADDISON	5/30/2012	13:01	0.75 in.	0	0	0.00K	0.00K
Hail	ADDISON	5/30/2012	12:57	1.00 in.	0	0	0.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	(ADS)ADDISON ARPT DA	5/30/2012	12:45	0.88 in.	0	0	0.00K	0.00K
Hail	REINHARDT	5/28/2012	22:28	0.88 in.	0	0	0.00K	0.00K
Hail	LAWSON	4/3/2012	14:15	1.50 in.	0	0	12.00K	0.00K
Hail	COPPELL	4/3/2012	13:21	2.75 in.	0	0	7.000M	0.00K
Hail	COPPELL	4/3/2012	13:21	2.50 in.	0	0	1.500M	0.00K
Hail	GRIBBLE	4/3/2012	13:20	2.75 in.	0	0	7.000M	0.00K
Hail	GARLAND	4/3/2012	13:18	1.75 in.	0	0	600.00K	0.00K
Hail	SOWERS	4/3/2012	13:15	1.50 in.	0	0	300.00K	0.00K
Hail	COPPELL	4/3/2012	13:15	3.00 in.	0	0	5.000M	0.00K
Hail	GARLAND	4/3/2012	13:04	1.25 in.	0	0	0.00K	0.00K
Hail	COPPELL	4/3/2012	13:00	1.00 in.	0	0	10.00K	0.00K
Hail	GARLAND	10/23/2011	0:45	0.88 in.	0	0	0.00K	0.00K
Hail	GARLAND	10/23/2011	0:45	1.00 in.	0	0	4.00K	0.00K
Hail	GARLAND	10/23/2011	0:39	1.00 in.	0	0	0.00K	0.00K
Hail	DE SOTO	9/18/2011	20:35	1.00 in.	0	0	0.00K	0.00K
Hail	BOUCHARD	9/18/2011	19:45	1.75 in.	0	0	10.00K	0.00K
Hail	GARLAND	9/18/2011	19:42	2.00 in.	0	0	15.00K	0.00K
Hail	REINHARDT	9/18/2011	19:37	1.00 in.	0	0	0.00K	0.00K
Hail	BOUCHARD	9/18/2011	19:31	1.25 in.	0	0	0.00K	0.00K
Hail	DALLAS CO.	6/21/2011	21:45	0.75 in.	0	0	0.00K	0.00K
Hail	DALLAS CO.	6/21/2011	2:36	1.00 in.	0	0	0.00K	0.00K
Hail	EAST DALLAS	5/24/2011	20:25	1.00 in.	0	0	0.00K	0.00K
Hail	DALLAS	5/24/2011	20:15	1.50 in.	0	0	8.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	UNIVERSITY PARK	5/24/2011	19:49	2.75 in.	0	0	300.00K	0.00K
Hail	FARMERS BRANCH	5/24/2011	19:30	1.75 in.	0	0	30.00K	0.00K
Hail	UNION BOWER	5/24/2011	19:28	1.75 in.	0	0	150.00K	0.00K
Hail	COPPELL	5/24/2011	19:25	1.75 in.	0	0	30.00K	0.00K
Hail	GRIBBLE	5/24/2011	19:20	1.75 in.	0	0	20.00K	0.00K
Hail	(DFW)DALLAS -FT WORTH	5/24/2011	19:20	2.00 in.	0	0	20.00K	0.00K
Hail	IRVING	5/24/2011	19:17	4.25 in.	0	0	300.00K	0.00K
Hail	COPPELL	5/24/2011	19:14	1.00 in.	0	0	0.00K	0.00K
Hail	DALLAS	5/23/2011	10:22	0.75 in.	0	0	0.00K	0.00K
Hail	IRVING	5/23/2011	10:19	0.75 in.	0	0	0.00K	0.00K
Hail	UNION BOWER	5/22/2011	19:42	0.75 in.	0	0	0.00K	0.00K
Hail	DALLAS	5/22/2011	19:41	1.00 in.	0	0	0.00K	0.00K
Hail	COPPELL	5/20/2011	15:13	0.88 in.	0	0	0.00K	0.00K
Hail	ADDISON	5/20/2011	13:30	1.00 in.	0	0	0.00K	0.00K
Hail	REINHARDT	5/2/2011	0:04	1.25 in.	0	0	0.00K	0.00K
Hail	ADDISON	5/2/2011	0:00	1.75 in.	0	0	0.00K	0.00K
Hail	GRAND PRAIRIE	5/1/2011	23:40	1.75 in.	0	0	15.00K	0.00K
Hail	GRAND PRAIRIE	5/1/2011	23:30	2.00 in.	0	0	15.00K	0.00K
Hail	DE SOTO	5/1/2011	3:50	1.00 in.	0	0	0.00K	0.00K
Hail	MESQUITE	4/30/2011	18:05	1.00 in.	0	0	0.00K	0.00K
Hail	MESQUITE COLE ARPT	4/30/2011	18:00	1.25 in.	0	0	4.00K	0.00K
Hail	MESQUITE	4/30/2011	17:57	1.75 in.	0	0	15.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	MESQUITE	4/30/2011	17:48	0.88 in.	0	0	0.00K	0.00K
Hail	SACHSE	4/26/2011	16:26	1.25 in.	0	0	0.00K	0.00K
Hail	SACHSE	4/26/2011	16:26	1.00 in.	0	0	0.00K	0.00K
Hail	MESQUITE	4/25/2011	9:43	0.75 in.	0	0	0.00K	0.00K
Hail	GARLAND	4/25/2011	9:40	1.00 in.	0	0	0.00K	0.00K
Hail	DE SOTO	4/25/2011	4:07	0.88 in.	0	0	0.00K	0.00K
Hail	RICHARDSON	4/19/2011	16:50	0.88 in.	0	0	0.00K	0.00K
Hail	ROWLETT	4/14/2011	22:10	0.75 in.	0	0	0.00K	0.00K
Hail	GARLAND	4/14/2011	22:10	1.75 in.	0	0	50.00K	0.00K
Hail	GARLAND	4/14/2011	22:07	0.88 in.	0	0	0.00K	0.00K
Hail	SACHSE	4/14/2011	22:05	2.00 in.	0	0	30.00K	0.00K
Hail	RICHARDSON	4/14/2011	22:00	1.00 in.	0	0	0.00K	0.00K
Hail	GARLAND	4/14/2011	21:56	1.75 in.	0	0	50.00K	0.00K
Hail	FARMERS BRANCH	4/14/2011	21:55	1.50 in.	0	0	25.00K	0.00K
Hail	ROWLETT	4/11/2011	1:11	1.00 in.	0	0	0.00K	0.00K
Hail	(ADS)ADDISON ARPT DA	4/4/2011	4:20	0.75 in.	0	0	0.00K	0.00K
Hail	MEADERS	4/4/2011	3:56	1.00 in.	0	0	0.00K	0.00K
Hail	RICHARDSON	3/8/2011	15:20	0.88 in.	0	0	0.00K	0.00K
Hail	SEAGOVILLE	5/20/2010	13:10	1.00 in.	0	0	0.00K	0.00K
Hail	COCKRELL HILL	5/20/2010	11:55	1.75 in.	0	0	10.00K	0.00K
Hail	SEAGOVILLE	5/17/2010	14:10	1.75 in.	0	0	20.00K	0.00K
Hail	RICHARDSON	3/10/2010	10:45	0.88 in.	0	0	0.00K	0.00K
Hail	IRVING	3/10/2010	10:23	1.00 in.	0	0	0.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	SOWERS	3/10/2010	10:23	1.50 in.	0	0	0.00K	0.00K
Hail	GARLAND	7/19/2009	13:57	1.00 in.	0	0	0.00K	0.00K
Hail	SACHSE	7/19/2009	13:47	1.00 in.	0	0	0.00K	0.00K
Hail	GARLAND	7/19/2009	13:44	1.75 in.	0	0	5.00K	0.00K
Hail	DE SOTO CARROLL ARPT	7/8/2009	17:28	1.00 in.	0	0	0.00K	0.00K
Hail	DE SOTO	7/8/2009	17:27	1.25 in.	0	0	0.00K	0.00K
Hail	DALLAS	7/8/2009	17:09	1.00 in.	0	0	0.00K	0.00K
Hail	HIGHLAND PARK	7/8/2009	16:57	1.75 in.	0	0	10.00K	0.00K
Hail	FARMERS BRANCH	6/11/2009	6:06	0.88 in.	0	0	0.00K	0.00K
Hail	HUTCHINS	5/4/2009	16:53	0.88 in.	0	0	0.00K	0.00K
Hail	COPPELL	5/3/2009	2:45	0.75 in.	0	0	0.00K	0.00K
Hail	ADDISON	3/30/2009	22:13	0.75 in.	0	0	0.00K	0.00K
Hail	GRIBBLE	3/30/2009	22:03	0.88 in.	0	0	0.00K	0.00K
Hail	COPPELL	3/30/2009	21:55	0.75 in.	0	0	0.00K	0.00K
Hail	CEDAR HILL	4/17/2008	20:31	1.00 in.	0	0	0.00K	0.00K
Hail	FARMERS BRANCH	4/8/2008	23:18	0.75 in.	0	0	0.00K	0.00K
Hail	MESQUITE	2/5/2008	14:12	1.75 in.	0	0	5.00K	0.00K
Hail	DALLAS	2/5/2008	14:05	1.75 in.	0	0	5.00K	0.00K
Hail	GARLAND	2/5/2008	14:00	1.00 in.	0	0	0.00K	0.00K
Hail	DUNCANVILLE	2/5/2008	13:36	0.75 in.	0	0	0.00K	0.00K
Hail	GRAND PRAIRIE	6/4/2007	16:23	1.00 in.	0	0	0.00K	0.00K

Type	Location	Date	Time	Mag	Death	Injuries	Property Damage	Crop Damage
Hail	GRAND PRAIRIE	6/4/2007	16:05	0.75 in.	0	0	0.00K	0.00K
Hail	DALLAS	5/24/2007	15:13	0.88 in.	0	0	0.00K	0.00K
Hail	MESQUITE	5/14/2007	17:40	0.75 in.	0	0	0.00K	0.00K
Hail	COPPELL	5/3/2007	17:36	0.75 in.	0	0	0.00K	0.00K
Hail	DALLAS	4/13/2007	17:45	1.75 in.	0	0	10.00K	0.00K
Hail	COPPELL	4/3/2007	18:25	0.88 in.	0	0	0.00K	0.00K
Hail	RICHARDSON	4/3/2007	17:55	0.75 in.	0	0	0.00K	0.00K

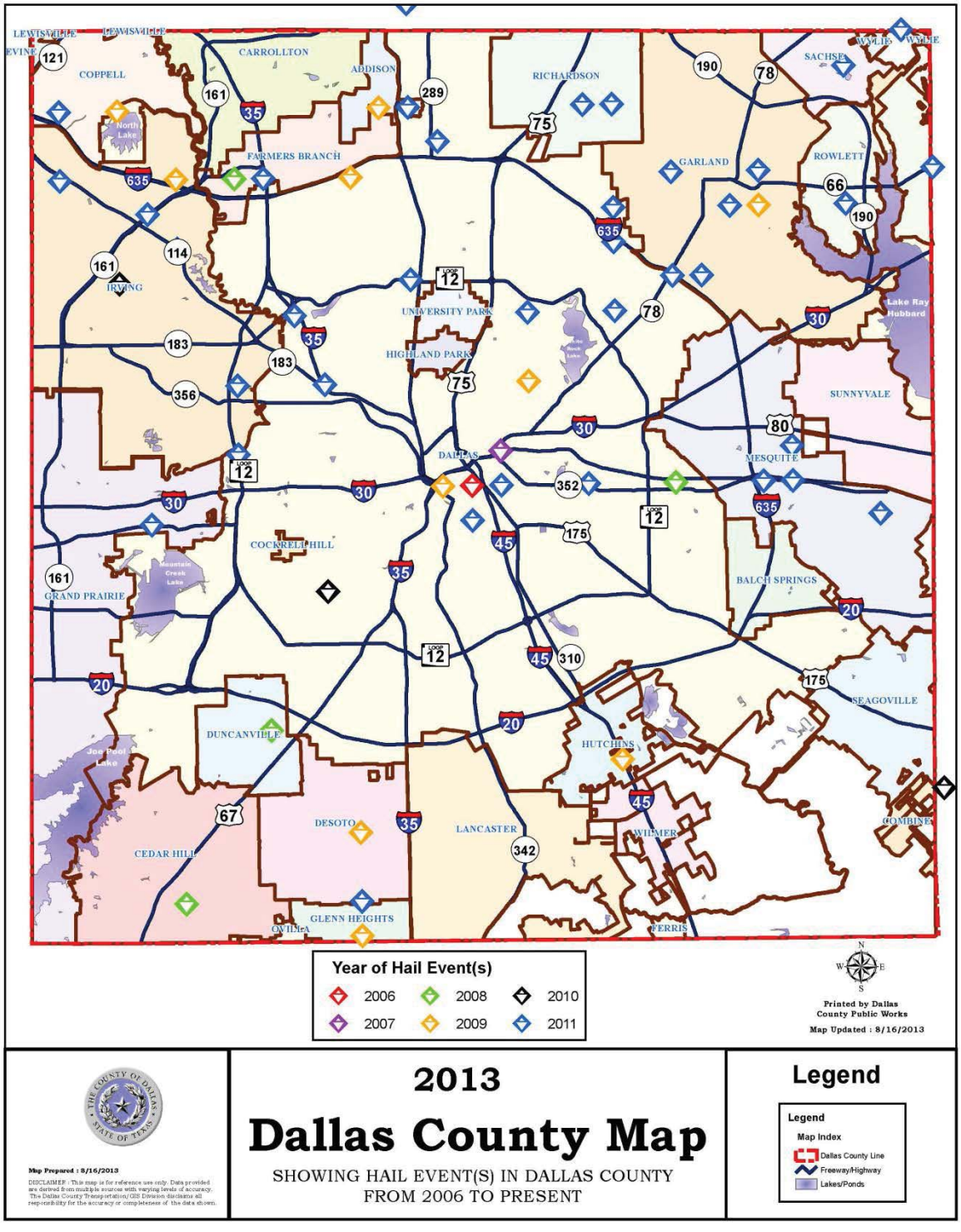
Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Vulnerability: Due to the rapidly changing climate in Texas, large scale hailstorms are especially prevalent. Hailstorm incidents have been reported throughout the region therefore establishing that all parts of region are equally vulnerable to hailstorms.

Probability of recurrence: High: Hail storms affect the entire planning area equally.

Extent: Dallas County and participating jurisdictions experienced 139 hail events ranging from magnitude H2 (.75 inch diameters) to magnitude H10 (4+inch diameters), during the time period analyzed for this plan (01/01/2008 through 06/30/2013). It can be expected that any future hail events will be similar in magnitude.

Map 5.2: Hail Events in Dallas County



Lightning

Definition: Thunderstorm and lightning events are generated by atmospheric imbalance and turbulence due to the combination of the following conditions: unstable warm air rising rapidly into the atmosphere; sufficient moisture to form clouds and rain; and upward lift of air currents caused by colliding cold and warm weather fronts, sea breezes or mountains. Lightning is generated by the buildup of charged ions in a thundercloud, and the discharge of a lightning bolt interacts with the best conducting object or surface on the ground. The air channel of a lightning strike reaches temperatures higher than 50,000 degrees Fahrenheit. The rapid heating and cooling of the air near the channel causes a shock wave, which produces thunder.

Location: Lightning affects the entire planning area equally.

Extent: Lightning affects the entire county and can occur anywhere. According to the National Lightning Detection Network (NLDN), Dallas County receives four to eight Lightning Flashes per squared kilometer per year. It can be expected that future lightning events will fall around the same extent range.

Probability of recurrence: Statewide Texas has a significant exposure to thunderstorms and lightning. Overall, lightning is the most constant and widespread threat to people and property during the thunderstorm season. The recurrence of lightning is high. The Dallas County Lightning Events **Map 5.3** depicts the lightning events reported in Dallas County from 2006 through to 2011.

Occurrence: Table 5.5 depicts a summary of lightning events in Dallas County between 2000 through 2012.

Vulnerability: Lightning can occur out of many types of thunderstorms but may also occur “out of the blue” from distant thunderstorms. The cloud to cloud variety pose very little harm whereas cloud to ground lightning can result in electrical surges, disrupted communications, fires, serious injury and potentially death. This will affect isolated areas in Dallas County but may occur anywhere throughout.

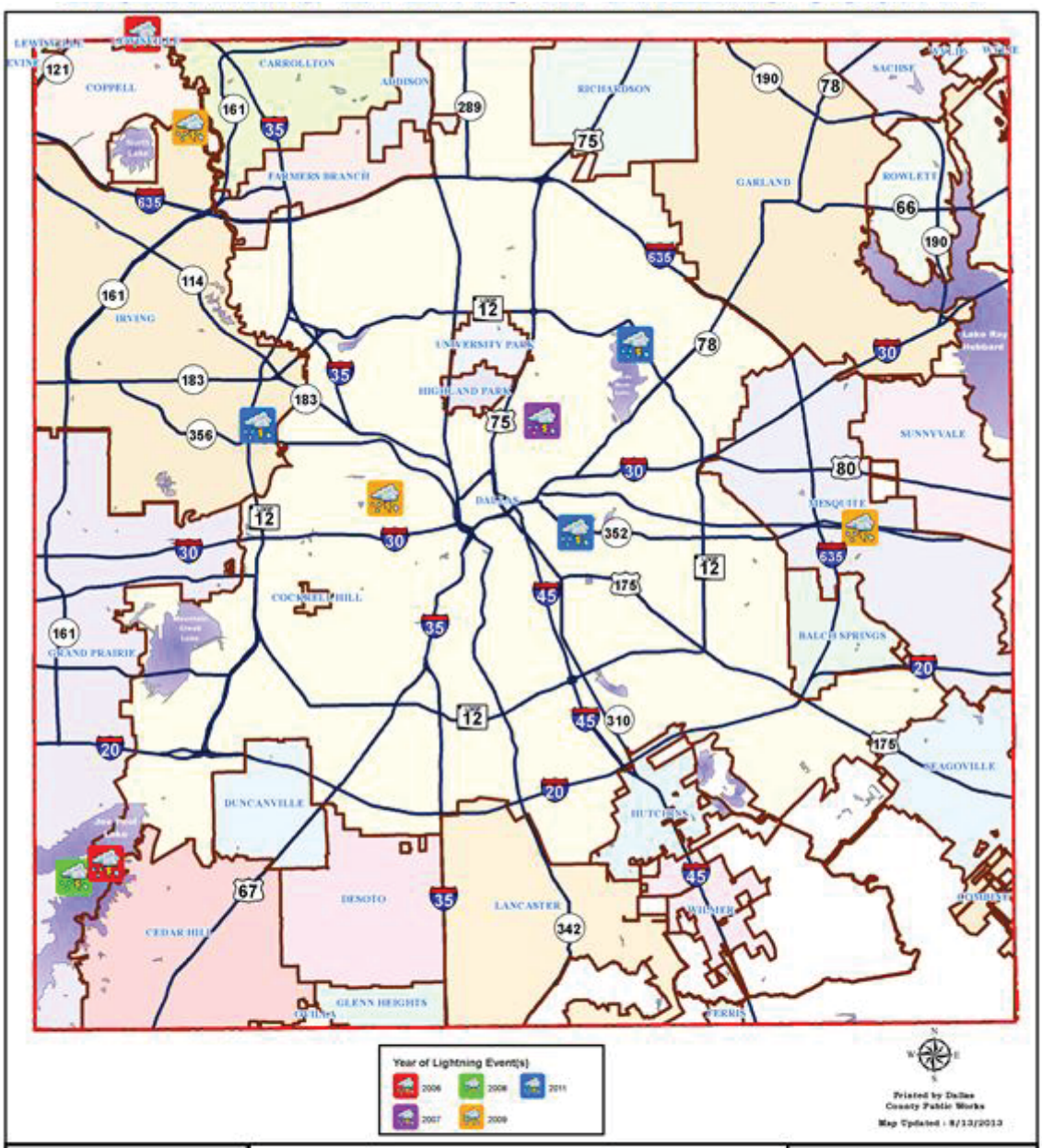
Magnitude: According to data from the National Climatic Data Center, Dallas County and participating jurisdictions experienced ten lightning events during the time period analyzed for this plan (01/01/2007-06/30/2013). The lightning events caused death and injury as well as property damage. Most often the damage caused by fires started by the lightning bolt strike. It can be expected that any future lightning events will be similar in magnitude.

Table 5.5: Historical Lightning Events

Type	Location	County	Date	Time	Death	Injuries	Property Damage	Crop Damage
Lightning	SACHSE	DALLAS CO.	2/10/2013	4:00	0	0	250.00K	0.00K
Lightning	GRAND PRAIRIE	DALLAS CO.	6/6/2012	18:00	0	0	30.00K	0.00K
Lightning	UNIVERSITY PARK	DALLAS CO.	8/29/2011	7:45	0	0	200.00K	0.00K
Lightning	EAST DALLAS	DALLAS CO.	5/24/2011	21:30	0	0	45.00K	0.00K
Lightning	IRVING	DALLAS CO.	5/24/2011	21:25	0	1	0.00K	0.00K
Lightning	COPPELL	DALLAS CO.	9/21/2009	19:30	0	0	0.50K	0.00K
Lightning	EAGLE FORD	DALLAS CO.	6/11/2009	8:00	0	0	50.00K	0.00K
Lightning	MESQUITE	DALLAS CO.	6/11/2009	7:30	0	0	3.00K	0.00K
Lightning	FLORENCE HILL	DALLAS CO.	7/15/2008	18:00	1	0	0.00K	0.00K
Lightning	HIGHLAND PARK	DALLAS CO.	5/8/2007	9:00	0	0	100.00K	0.00K

Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Map 5.3: Lightning Events in Dallas County



Flooding

Definition: Flooding is the most prevalent and costly disaster in the United States. Flooding is defined as the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. The statistical meaning of terms like “25-year storm” and “100-year flood” can be confusing. Simply stated, a floodplain can be located anywhere; it just depends on how large and how often a flood event occurs. Floodplains are those areas that are subject to inundation from flooding. Floods and the floodplains associated with them are often described in terms of the percent chance of a flood event happening in any given year. As a community management or planning term, “floodplain” most often refers to an area that is subject to inundation by a flood that has a one percent chance of occurring in any given year (commonly and incorrectly referred to as the 100-year floodplain).

Types: Common flooding hazards within Dallas County include flood hazards from flash flooding and from new development. Flash floods are a high risk hazard since they can roll boulders, tear out trees, and destroy buildings and bridges. A flash flood is a rapid flooding of low-lying areas in less than six hours, which is caused by intense rainfall from a thunderstorm or several thunderstorms. Flash floods can also occur from the collapse of a man-made structure or ice dam. Construction and development can change the natural drainage and create brand new flood risks as new buildings, parking lots, and roads create less land that can absorb excess precipitation from heavy rains, hurricanes, and tropical storms.

Flood hazard areas are identified as a Special Flood Hazard Area (SFHA). SFHAs are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone V, and Zone VE. Moderate flood hazard areas, labeled Zone B or Zone X, are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percentannual- chance flood, are defined as Zone C or Zone X. These flood zone identifications allow planners to determine appropriate land use in designated zones. Table 5.6 shows the flood zone classification used to identify flood areas

Table 5.6: Flood Zone Classification

Zone A	**The 100-year or base floodplain. There are six types of A Zones:**	
	A	The base floodplains mapped by approximate methods, i.e., BFEs are not determined. This is often called an unnumbered A Zone or an approximate A Zone.
	A1-30	These are known as numbered A Zones (*e.g.*, A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
	AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
	AO	The base floodplain with sheet flow, ponding, or shallow flooding. Base flood depths (feet above ground) are provided.
	AH	Shallow flooding base floodplain. BFEs are provided.
	A99	Area to be protected from base flood by levees or Federal Flood Protection Systems under construction. BFEs are not determined.
	AR	The base floodplain that results from the decertification of a previously accredited flood protection system that is in the process of being restored to provide a 100-year or greater level of flood protection.
Zone V and VE	**V**	The coastal area subject to a velocity hazard (wave action) where BFEs are not determined on the FIRM.
	VE	The coastal area subject to a velocity hazard (wave action) where BFEs are provided on the FIRM.
Zone B and Zone X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from the 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.	
Zone C and Zone X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.	
Zone D	Area of undetermined but possible flood hazards.	

Source: 34Thttp://www.fema.gov/floodplain-management/flood-zones34T

Location and Extent: Flooding is one of the most common natural hazards in Dallas County. Historically, Dallas County has had regular occurrences of flash flooding. Over 90% of the land in Dallas County is located within a city.

Occurrence: Table 5.7 depicts a summary of flood events in Dallas County between 2000 through 2012

Magnitude Narrative: Majority of the flood events that occurred in Dallas County and the participating jurisdictions during the time period analyzed for this plan were a result of excessive rainfall over a short amount of time. Water levels have been reported from a few inches (2 to 3 inches) to as high as chest deep water (5 feet). These events resulted in four deaths and minor to moderate property damage. It can be expected that any future flood or flash flood events will be similar in magnitude.

Table 5.7: Flood Events in Dallas County 2000- 2012

Event	City - Location	Date	Death	Injuries	Mag	Crop Damage	Property Damage
Flood	BOBWYN	8/18/2012	0	0		0	$100,000
Flash Flood	GRIBBLE	8/18/2012	1	0		0	$30,000
Flash Flood	DALLAS	8/18/2012	0	0		0	$200,000
Flash Flood	DALLAS	8/18/2012	0	0		0	$50,000
Flash Flood	IRVING	8/18/2012	0	0		0	$60,000
Flash Flood	MEADERS	8/18/2012	0	0		0	$200,000
Flash Flood	(RBD)REDBIRD ARPT DA	4/8/2012	0	0		0	$20,000
Flood	BOBWYN	3/20/2012	0	0		0	$0
Flash Flood	REINHARDT	3/19/2012	0	0		0	$50,000
Flood	COPPELL	1/25/2012	0	0		0	$50,000
Flood	FARMERS BRANCH	5/23/2011	0	0		0	0
Flood	COPPELL	9/8/2010	0	0		0	0
Flash Flood	COPPELL	9/8/2010	0	0		0	$250,000
Flash Flood	SACHSE	10/9/2009	0	0		0	$500
Flash Flood	ALPHA	10/9/2009	0	0		0	0
Flood	ROWLETT	9/13/2009	0	0		0	0
Flash Flood	ROWLETT	9/13/2009	0	0		0	$150,000
Flash Flood	MOUNTAIN CREEK LAKE	9/11/2009	0	0		0	$500
Flash Flood	OAK CLIFF	9/11/2009	0	0		0	$30,000
Flash Flood	HIGHLAND PARK	7/30/2009	0	0		0	$20,000
Flash Flood	EAGLE FORD	6/11/2009	0	0		0	$75,000
Flash Flood	HENSLEY FLD ARPT	6/11/2009	0	0		0	7,000
Flash Flood	SUNNYVALE	6/11/2009	0	0		0	$200,000

Event	City - Location	Date	Death	Injuries	Mag	Crop Damage	Property Damage
Flash Flood	GRIBBLE	6/11/2009	0	0		0	$15,000
Flash Flood	(DAL)LOVE FLD DALLAS	6/11/2009	0	0		0	$30,000
Flash Flood	DALLAS	6/11/2009	0	0		0	$15,000
Flash Flood	HIGHLAND PARK	6/11/2009	0	0		0	$10,000
Flash Flood	ELAM	6/11/2009	0	0		0	$70,000
Flash Flood	EAGLE FORD	6/11/2009	0	0		0	$20,000
Flash Flood	BOUCHARD	6/11/2009	0	0		0	$200,000
Flash Flood	(DAL)LOVE FLD DALLAS	6/11/2009	0	0		0	$75,0000
Flash Flood	COPPELL	6/11/2009	0	0		0	$50,000
Flash Flood	ALPHA	5/2/2009	0	0		0	$7,000
Flash Flood	FARMERS BRANCH	5/2/2009	0	0		0	$5,000
Flash Flood	BALCH SPGS	5/2/2009	0	0		0	$7,000
Flash Flood	DUNCANVILLE	5/2/2009	0	0		0	$2,000
Flood	NEW HOPE	8/20/2008	0	0		0	0
Flash Flood	WHEATLAND AREA	8/20/2008	0	0		0	0
Flash Flood	HIGHLAND PARK	4/17/2008	0	0		0	0
Flash Flood	LIGGETT	4/17/2008	0	0		0	0
Flash Flood	GARLAND	3/18/2008	0	0		0	$15,000
Flash Flood	DALLAS	3/18/2008	1	0		0	$150,000
Flash Flood	DALLAS	10/15/2007	0	0		0	$20,000
Flash Flood	IRVING	9/10/2007	0	0		0	0
Flash Flood	GARLAND	9/9/2007	0	0		0	$25,000
Flood	BALCH SPGS	9/5/2007	0	0		0	0

Event	City - Location	Date	Death	Injuries	Mag	Crop Damage	Property Damage
Flash Flood	LANCASTER	9/5/2007	0	0		0	$25,000
Flash Flood	RICHARDSON	8/1/2007	0	0		0	$0
Flash Flood	DALLAS	7/3/2007	0	0		0	$10,000
Flood	DALLAS	7/2/2007	0	0		0	0
Flash Flood	GARLAND	6/27/2007	0	0		0	0
Flash Flood	DUNCANVILLE	6/26/2007	0	0		0	$1,000
Flash Flood	GARLAND	6/26/2007	1	0		0	0
Flash Flood	DUNCANVILLE	6/13/2007	0	0		0	0
Flash Flood	DALLAS LOVE FLD	5/30/2007	0	0		0	$3,000
Flash Flood	EAST DALLAS	5/24/2007	0	0		0	0
Flash Flood	ADDISON	4/3/2007	0	0		0	0
Flash Flood	DE SOTO	3/30/2007	0	0		0	0
Flash Flood	GRAND PRAIRIE	3/13/2007	0	1		0	$10,000
Flash Flood	IRVING	10/16/2006	0	0		0	0
Flash Flood	COUNTYWIDE	3/19/2006	1	0		0	$300,000
Flood		3/19/2006	0	0		0	0
Flash Flood	DALLAS	8/8/2005	0	0		0	0
Flash Flood	RICHARDSON	7/15/2005	0	0		0	0
Flood		7/1/2005	0	0		0	0
Flash Flood	HUTCHINS	1/12/2005	0	0		0	0
Flash Flood	MESQUITE	1/12/2005	0	0		0	0
Flash Flood	GARLAND	1/3/2005	0	0		0	0
Flash Flood	DALLAS	7/28/2004	0	0		0	$3,000,000
Flash Flood	LANCASTER	7/28/2004	0	0		0	$17,000,000
Flash Flood	LANCASTER	6/28/2004	0	0		0	0

Event	City - Location	Date	Death	Injuries	Mag	Crop Damage	Property Damage
Flash Flood	DALLAS	6/9/2004	0	0		0	0
Flash Flood	DALLAS	9/18/2003	0	0		0	0
Flash Flood	DALLAS	5/25/2003	0	0		0	$25,000
Flash Flood	DALLAS	12/30/2002	0	0		0	0
Flash Flood	DALLAS	10/18/2002	0	0		0	0
Flash Flood	GARLAND	10/18/2002	0	0		0	0
Flash Flood	GARLAND	4/7/2002	0	0		0	0
Flash Flood	MESQUITE	3/30/2002	0	0		0	0
Flash Flood	DALLAS	3/30/2002	0	0		0	0
Flash Flood	MESQUITE	3/30/2002	0	0		0	0
Flash Flood	DALLAS	3/19/2002	0	0		0	0
Flash Flood	DALLAS	12/16/2001	0	0		0	0
Flash Flood	CEDAR HILL	8/31/2001	0	0		0	0
Flash Flood	DUNCANVILLE	8/31/2001	0	0		0	0
Flash Flood	GRAND PRAIRIE	7/1/2001	0	0		0	0
Flash Flood	MESQUITE	6/30/2001	0	0		0	0
Flash Flood	DALLAS	6/30/2001	0	0		0	0
Flash Flood	DALLAS	5/6/2001	0	0		0	0
Flash Flood	DALLAS	3/12/2001	0	0		0	0
Flash Flood	MESQUITE	3/11/2001	0	0		0	0
Flash Flood	DALLAS	2/27/2001	0	0		0	0
Flash Flood	DALLAS	2/16/2001	0	0		0	0
Flash Flood	DALLAS	2/16/2001	0	0		0	0

Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Vulnerability: Flooding is a natural hazard that has been identified as having a predictable vulnerable area. Flood hazard areas are determined using statistical analyses of records of river flow, previous occurrence information, topographic surveys, and hydrological analyses.

FEMA's Flood Insurance Rate Maps (FIRMs) identify areas subject to flood hazard. These include Special Flood Hazard Areas, which is defined as the area that will be inundated by the flood event having a one percent chance of being equaled or exceeded in any given year. The one-percent-annual-chance flood is also referred to as the base flood or 100-year flood. Moderate flood hazard areas are also shown on the FIRM, and are the areas between the limits of the base flood and the two-percent-annual-chance (or 500-year) flood. **Map 5.4** depicts the Dallas County Flood Plain, while **Table 5.8** shows the flood zone designations.

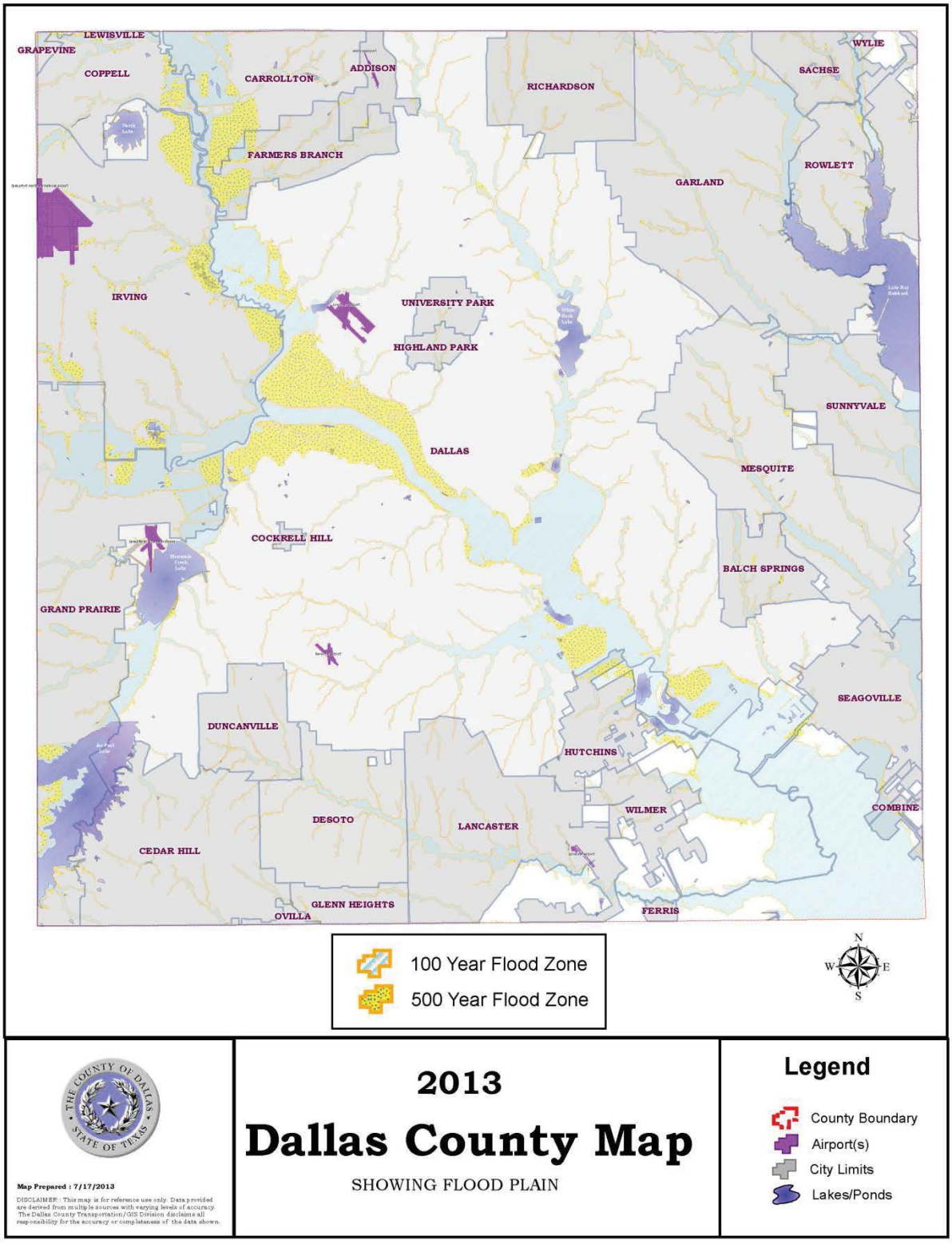
Table 5.8: Flood Zone Designations for the 100-Year Flood Areas

Zone	Description
O (High Risk)	River or stream flood hazard areas and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown.
X (Moderate to Low Risk)	Areas outside the 1% annual chance floodplain, areas of 1% annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. Insurance purchase is not required in these zones.

Floods in Dallas County have caused loss of life, personal injuries, and damage to property, along with damage to infrastructure. Secondary events from major flooding can include polluted water, increasing the spread of disease and contamination.

Probability of recurrence: The probability of flooding recurring within jurisdictions in Dallas County is high. Section 10 provides a more specific vulnerability assessment of the areas within each jurisdiction. Please see individual jurisdictions for a detailed description of vulnerability and priority measures to address this hazard.

Map 5.4: Dallas County Flood Plain



National Flood Insurance Program

As per Requirement 201.6(c)(2)(ii) "The risk assessments in all plans approved after October 1, 2008 must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods." Repetitive Loss Property information provides local jurisdictions with the properties that had submitted insurance claims due to flooding damage to buildings and its contents. The information provided by Federal Emergency Management Agency included 66 repetitive loss properties for the jurisdictions that participated in this plan as of 01/31/2015.

Table 5.8.1 below provides a summary of the Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties in the jurisdictions participating in this plan.

Table 5.8.1: Repetitive Loss (RL) and Severe Repetitive Loss (SRL) Properties

Jurisdiction	Total Number of Repetitive Loss Properties	Properties within 100-year Floodplain			Total Number of Repetitive Loss Properties Within 100-year Floodplain	Percent of Repetitive Loss Properties Within 100-year Floodplain
		Single Family	Other Residential	Non Residential		
Unincorporated Dallas County*	2	1	0	1	2	100%
Addison	0	0	0	0	0	0%
Balch Springs	18	17	0	1	13	72.22%
Carrollton	0	0	0	0	0	0%
Cedar Hill	0	0	0	0	0	0%
Cockrell Hill	0	0	0	0	0	0%
Coppell	0	0	0	0	0	0%
Dallas	0	0	0	0	0	0%
DeSoto	9	8	1	0	3	33.33%
Duncanville	4	4	0	0	0	0%
Farmers Branch	8	8	0	0	6	75%
Glenn Heights	0	0	0	0	0	0%
Highland Park	1	1	0	0	0	0%
Irving	11	8	0	3	6	54.54%
Lancaster	12	12	0	0	9	75%
Richardson	0	0	0	0	0	0%
Rowlett	1	1	0	0	0	0%
Sachse	0	0	0	0	0	0%
Seagoville	0	0	0	0	0	0%
Sunnyvale	0	0	0	0	0	0%
University Park	0	0	0	0	0	0%
Wilmer	0	0	0	0	0	0%
Total**	**66**	**60**	**1**	**5**	**39**	**59.09%**

Tornadoes

Definition: Is a violently rotating column of air, in contact with the ground, either pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a condensation funnel cloud. Significant damage can occur even when the condensation funnel does not reach the ground. The damage from a tornado is a result of the high wind velocity and wind-blown debris, although commonly accompanied by large hail as well. Tornadoes are considered to be the most erratic, most unpredictable, and most violent of all atmospheric storms. The strongest of tornadoes can have winds that exceed 250 miles per hour.

According to the National Oceanic and Atmospheric Administration, an average of 800 – 1,200 Tornadoes are reported nationwide and they are more likely to occur during the spring and early summer months of March through June. Tornadoes can occur at any time of day but are mostly likely to form in late afternoons and early evenings.

Most tornadoes are just a few dozen yards wide and touch down only briefly, but highly destructive tornadoes may carve out a path over a mile wide and several miles long. The destruction caused by tornadoes may range from light to inconceivable depending on the intensity, size and duration of the storm. Typically, tornadoes cause the greatest damages to structures of light construction, such as residential homes, and are quite localized in impact.

Location and Extent: Tornado Alley is the term used to describe the region of the U.S. where the strongest tornadoes occur most frequent. Tornado Alley does not have an officially defined area but includes eastern South Dakota, Colorado, Nebraska, Kansas, Oklahoma and north Texas. This area has a reported concentration of five or more tornadoes per 10,000 square miles. **Map 5.5** depicts the area referred to as Tornado Alley and Figure 5.1 depicts the National Oceanic and Atmospheric Administration (NOAA) tornado zones in Texas. Tornadoes affect the entire planning area equally.

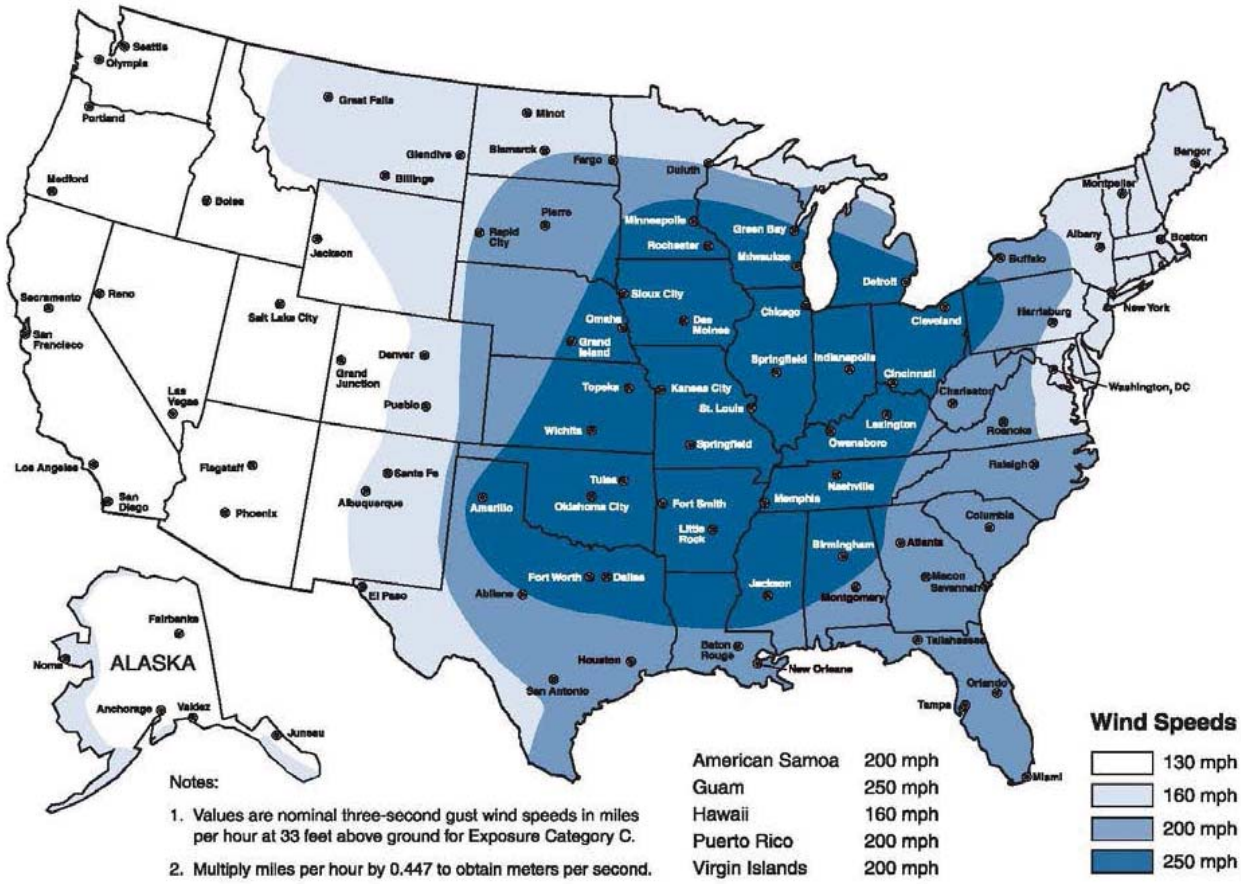
Table 5.9 shows the Enhanced Fujita Scale for tornadoes which was developed to measure tornado strength and associated damages.

TABLE 5.9: ENHANCED FUJITA (EF) SCALE

Enhanced Fujita Category	Wind Speed (mph)	Potential Damage
EF0	65-85	**Light damage.** Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
EF1	86-110	**Moderate damage.** Roofs severely stripped; manufactured homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135	**Considerable damage.** Roofs torn off well-constructed houses; foundations of frame homes shifted; manufactured homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.

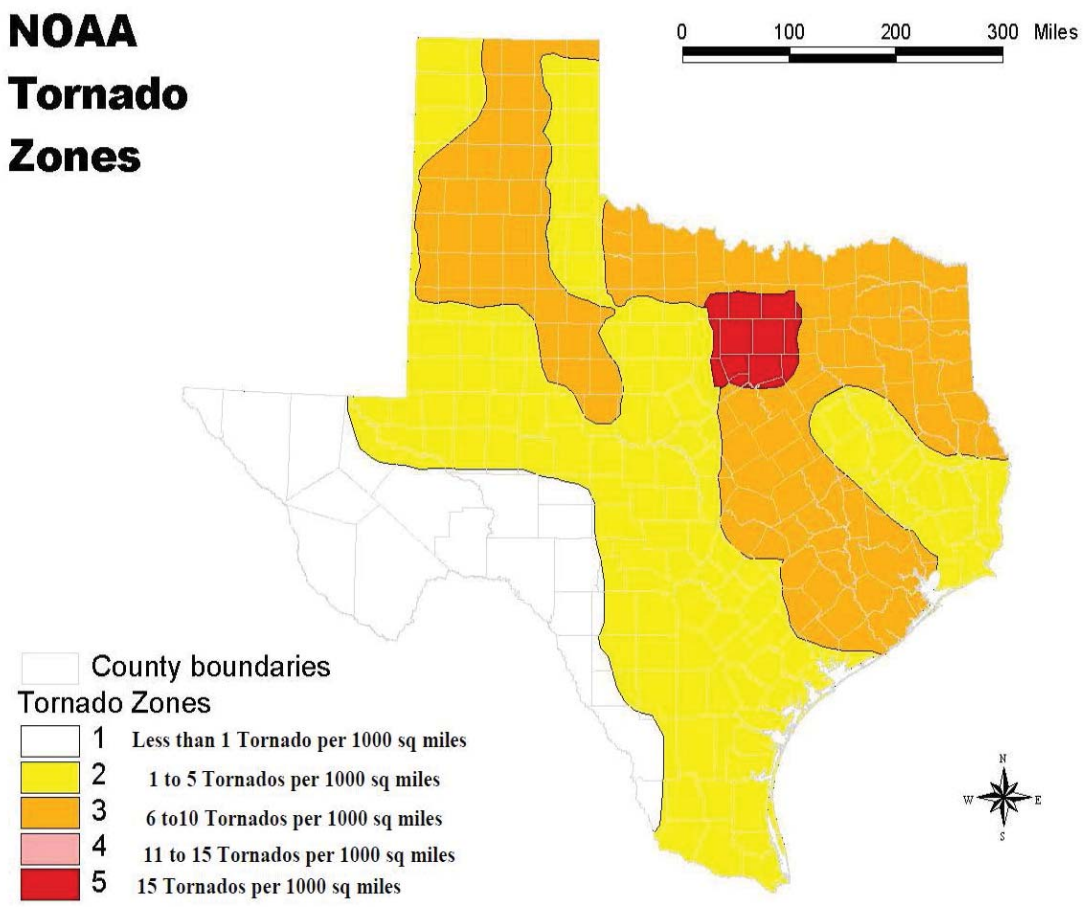
Enhanced Fujita Category	Wind Speed (mph)	Potential Damage
EF3	136-165	**Severe damage.** Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166-200	**Devastating damage.** Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF5	>200	**Incredible damage.** Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 m (109 yard); high-rise buildings have significant structural deformation; incredible phenomena will occur.

Map 5.5: Tornado Alley



Source: FEMA 320: Taking Shelter from the Storm

Figure 5.1: NOAA Tornado Zones in Texas



Source: State of Texas Hazard Mitigation Plan 2010-2013

Occurrence: With an average of 139 (1953-2004) tornadoes touching down each year, Texas ranks first in tornado occurrences. Historically, Dallas County has had several tornadoes with the most recent occurring in April 2012. **Table 5.10** below depicts historical tornado occurrences, magnitude and impacts of the hazard in Dallas County between 2000 and 2012.

Vulnerability Narrative: Tornados in Dallas County have the ability to occur with little to no warning and follow no predictable patterns. There are many developments that are composed of modular or mobile structures that are more susceptible to the damaging effects of tornados and offer little to no protection.

The entirety of Dallas County is equally exposed to the damage risks associated with tornadoes. Typically, incidents are fairly localized and damages associated with individual events are relatively limited.

Map 5.6: Tornado Events in Dallas County 2006 through 2012

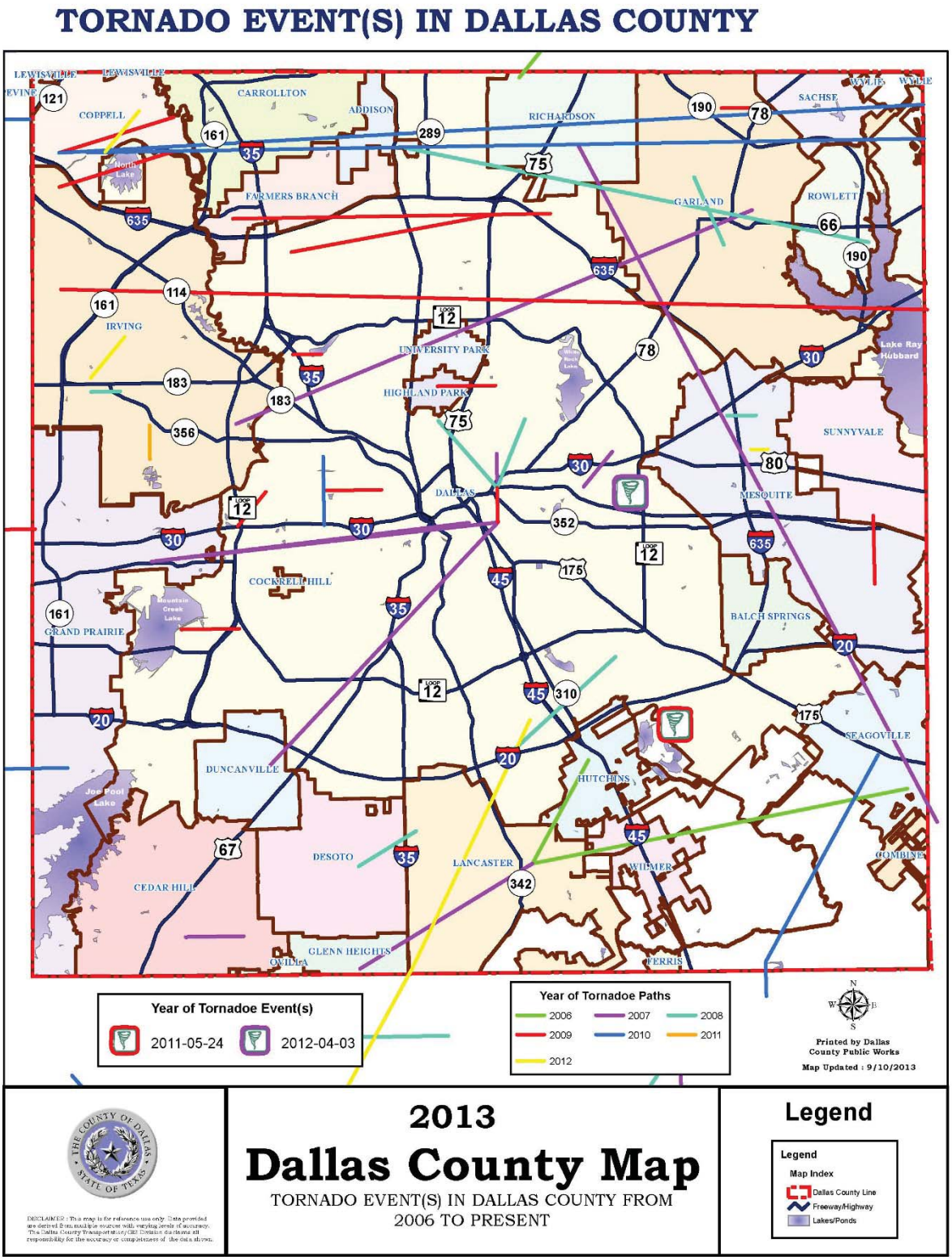


TABLE 5.10: Tornadoes in Dallas County 2000 through 2012

Event	City - Location	Date	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
Tornado	NEW HOPE	4/3/2012	EF0	0	2	$300,000	0
Tornado	COPPELL	4/3/2012	EF0	0	0	$15,0000	0
Tornado	SOWERS	4/3/2012	EF0	0	0	$10,0000	0
Tornado	SAYENE	4/3/2012	EF0	0	0	$4,000	0
Tornado	DESOTO CARROLL ARPT	4/3/2012	EF2	0	10	$40,000,0000	$3,000
Tornado	ELAM	5/24/2011	EF0	0	0	0	0
Tornado	SOWERS	5/24/2011	EF1	0	0	$150,000	0
Tornado	EAGLE FORD	9/8/2010	EF2	0	1	$750,000	0
Tornado	FERRIS	9/8/2010	EF1	0	0	$200,000	0
Tornado	DESOTO	4/10/2008	EF1	0	0	$1,000,000	0
Tornado	CEDAR HILL	6/26/2007	EF0	0	0	$60,000	0
Tornado	DALLAS	4/13/2007	EF0	0	0	$50,000	0
Tornado	CEDAR HILL	4/25/2005	F0	0	0	0	0
Tornado	IRVING	4/5/2003	F0	0	0	$1,000	0
Tornado	CARROLLTON	9/5/2001	F1	0	0	$125,000	0

Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Probability of recurrence: The probability of tornadoes recurring in Dallas County is high. May is the most active month for tornadoes in Texas, followed by April. Dallas/Fort Worth and the surrounding area is the area that sees the most tornadoes in Texas, and their most active month is May. Tornado season ends when the cold fronts stop coming into the state, usually by the end of May in the southern part, and the end of June in Northern Texas.

Magnitude: Dallas County and participating jurisdictions experienced 15 tornado events ranging from EF0 to EF2, during the time period analyzed for this plan (01/01/2002-06/30/2013). It can be expected that any future tornado events will be similar in magnitude.

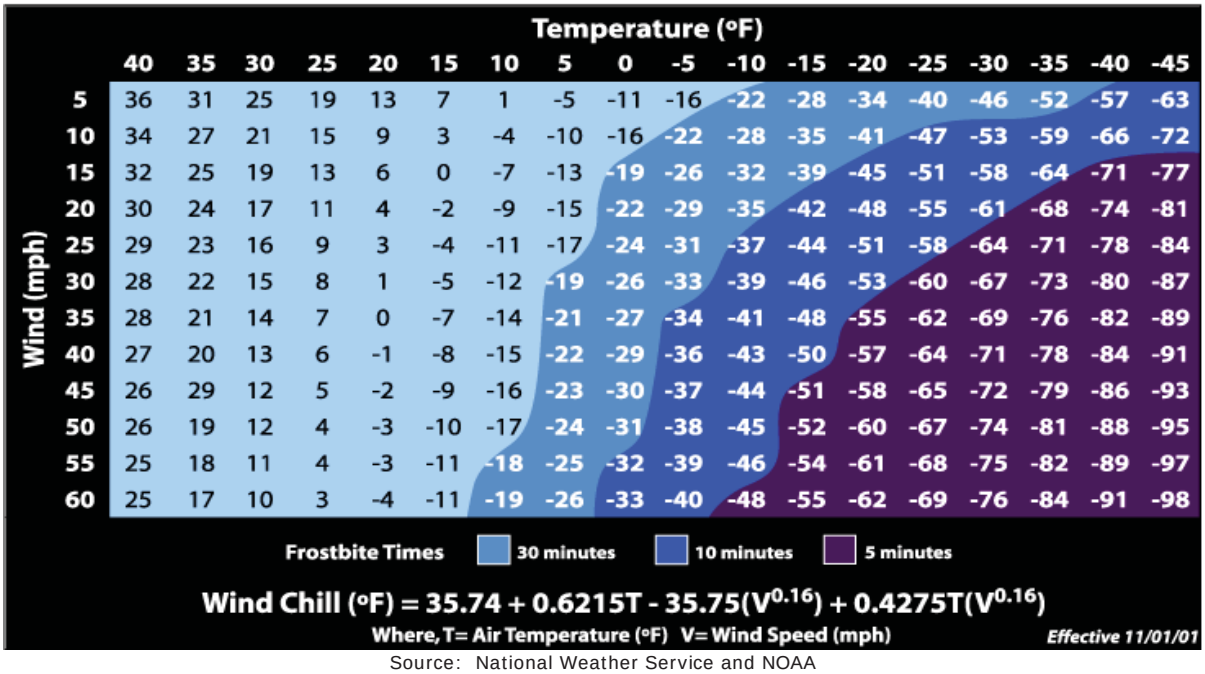
Winter Storm

Winter storms originate as mid-latitude depressions or cyclonic weather systems, sometimes following the path of the jet stream. A winter storm or blizzard, combines heavy snowfall, high winds, extreme cold, and ice storms. Many winter depressions give rise to exceptionally heavy rain and widespread flooding and conditions worsen if the precipitation falls in the form of snow. The winter storm season varies widely, depending on latitude, altitude and proximity to moderating influences.

Location and Extent: The **Map 5.7** depicts winter storm location and occurrences of winter storms in Dallas County.

The index used by the National Weather Service to measure the wind chill temperature was developed in 2001.

Figure 5.2: Wind Chill Temperature Index Chart



Source: National Weather Service and NOAA

The Wind Chill Chart displays the frostbite times in regards to temperature and wind. This chart allows the communities to prepare for severe winter storms or an ice event. These events are infrequent but can cause damage. The primary areas of concern are on bridges and roadways.

Figure 5.2.1: Ice Accumulation Index

The Sperry-Piltz Ice Accumulation Index, or "SPIA Index" – Copyright, February, 2009

ICE DAMAGE INDEX	DAMAGE AND IMPACT DESCRIPTIONS
0	Minimal risk of damage to exposed utility systems; no alerts or advisories needed for crews, few outages.
1	Some isolated or localized utility interruptions are possible, typically lasting only a few hours. Roads and bridges may become slick and hazardous.
2	Scattered utility interruptions expected, typically lasting 12 to 24 hours. Roads and travel conditions may be extremely hazardous due to ice accumulation.
3	Numerous utility interruptions with some damage to main feeder lines and equipment expected. Tree limb damage is excessive. Outages lasting 1 – 5 days.
4	Prolonged & widespread utility interruptions with extensive damage to main distribution feeder lines & some high voltage transmission lines/structures. Outages lasting 5 – 10 days.
5	Catastrophic damage to entire exposed utility systems, including both distribution and transmission networks. Outages could last several weeks in some areas. Shelters needed.

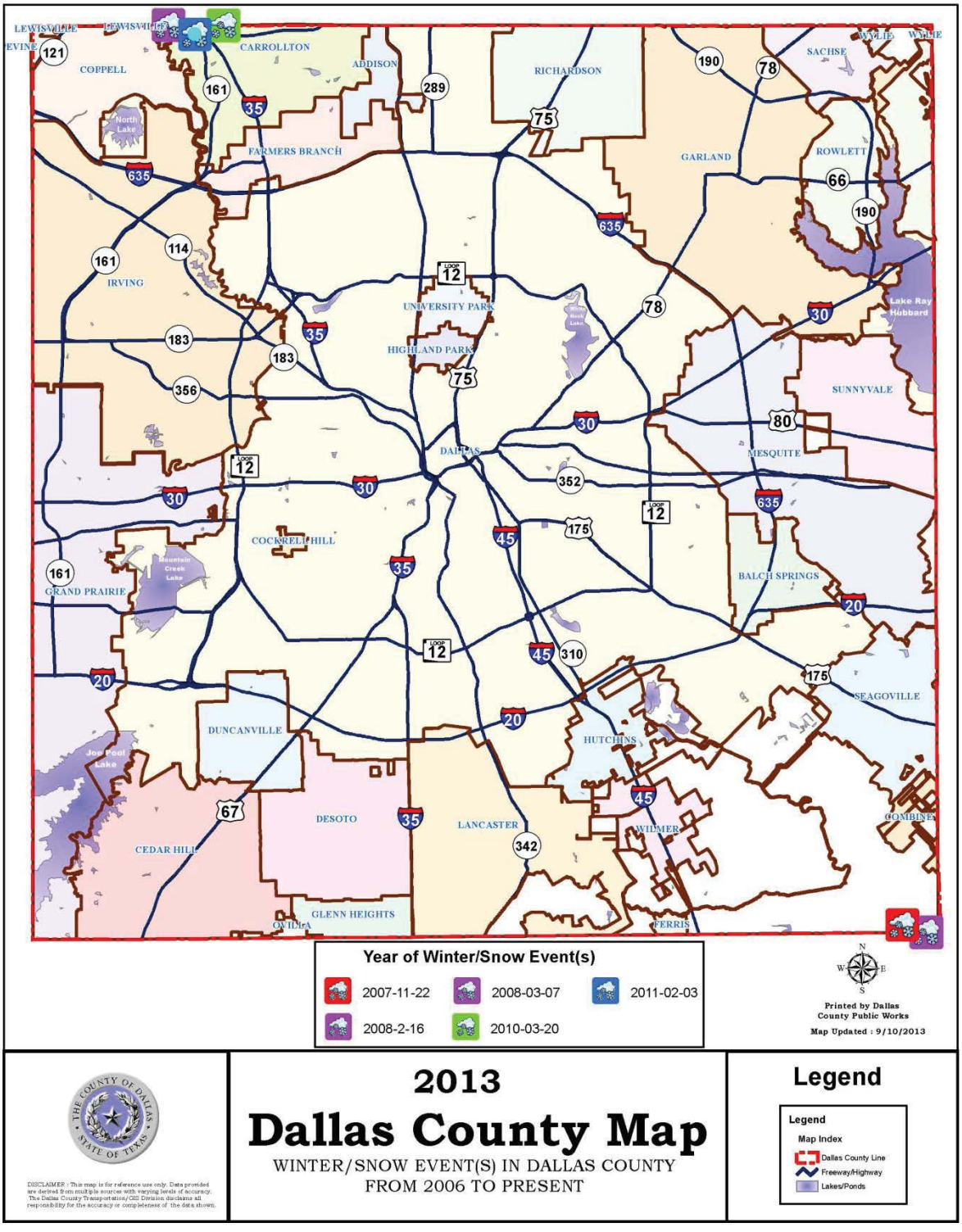
(Categories of damage are based upon combinations of precipitation totals, temperatures and wind speeds/directions.)

Source: http://www.spia-index.com/SPIAIndexDescription.png

The SPIA index chart allow for a community to prepare for a winter or an ice storm event. These events are infrequent but can cause damage. The primary areas of concern are on bridges, roadways and utility infrastructure including electric and natural gas supply lines.

According to the National Climatic Data Center, Dallas County experienced 12 winter storm/ice events between 2006 and 2012 that resulted in three deaths and property damage worth $1.95 million dollars. The magnitude of these events ranged from 3-5 inches of snow fall, 1-3 inches of sleet, and up to an inch of ice accumulation. It can be expected that any future events will be similar in magnitude.

Map 5.7: Winter/Snow Events in Dallas County



Occurrence: **Table 5.11** below lists winter and snow storm events in Dallas. The table also includes the impact that these events had on people and property.

Table 5.11: Winter Events in Dallas County 2006 - 2012

Type	County	Date	Time	Death	Injuries	Property Damage	Crop Damage
Cold/Wind Chill	DALLAS	12/26/2012	8:00	2	0	0.00K	0.00K
Heavy Snow	DALLAS	2/3/2011	23:00	0	0	150.00K	0.00K
Ice Storm	DALLAS	2/1/2011	1:00	0	0	500.00K	0.00K
Winter Weather	DALLAS	3/20/2010	17:45	0	0	100.00K	0.00K
Winter Weather	DALLAS	3/20/2010	17:45	0	0	100.00K	0.00K
Heavy Snow	DALLAS	2/11/2010	3:30	0	0	16.000M	0.00K
Winter Weather	DALLAS	1/7/2010	3:30	0	0	700.00K	0.00K
Winter Weather	DALLAS	1/7/2010	3:30	0	0	700.00K	0.00K
Frost/Freeze	DALLAS	1/4/2010	20:30	0	0	40.00K	0.00K
Winter Weather	DALLAS	12/24/2009	11:30	0	0	250.00K	0.00K
Winter Weather	DALLAS	12/24/2009	11:30	0	0	250.00K	0.00K
Ice Storm	DALLAS	1/27/2009	8:00	1	0	300.00K	0.00K
Winter Weather	DALLAS	1/5/2009	8:00	0	0	35.00K	0.00K
Winter Weather	DALLAS	1/5/2009	8:00	0	0	35.00K	0.00K
Winter Weather	DALLAS	12/23/2008	6:00	0	0	0.00K	0.00K
Winter Weather	DALLAS	12/23/2008	6:00	0	0	0.00K	0.00K
Winter Weather	DALLAS	12/15/2008	17:00	0	0	0.00K	0.00K
Winter Weather	DALLAS	12/15/2008	17:00	0	0	0.00K	0.00K

Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Vulnerability Narrative: Winter storms tend to come with warning, but severity is always a concern that cannot be properly predicted. Winter storms can affect wide areas of the county typically causing traffic congestion on major thoroughfares, icing on elevated surfaces, disrupting power and other utilities, and when accompanied with lower temperatures can cause water lines to fail. Rural roadways do not receive the same attention as Interstates and highways from road crews with sanding and plowing equipment

Probability of recurrence: Occasional; Winter Storms affect the entire planning area equally.

Magnitude: Dallas County and participating jurisdictions experienced 18 winter storm events that included heavy snow, wind chills, ice freeze, ice storms and sleet, during the time period analyzed for this plan (01/01/2008-06/30/2013). These winter events resulted in 3 deaths and multiple in direct injuries. They also resulted in millions of dollars in property damage. Snowfall totals across the county averaged 4-6 with the higher amounts across the eastern half of the county. It can be expected that any future events will be similar in magnitude.

Extreme Heat

Definition: Extreme or Extreme Heat is defined as a combination of very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave.

Location: Extreme heat events are regional in nature. The entire county is equally affected by extreme heat.

Extent: The severity of the extreme heat is dependent on a combination of temperature and humidity. When combined with high humidity, high temperatures can put an area in the Extreme Danger category on the National Weather Service Heat Index scale. When extreme heat is combined with drought, results can include, not only excessively dry hot conditions that contribute to a high risk of life-threatening heat related illnesses, but can also provoke dust storms with low visibility.

Heat kills by pushing the human body beyond its limits. Under normal conditions, the body's internal thermostat produces perspiration that evaporates and cools the body. However, in extreme heat and high humidity, evaporation is slowed and the body must work extra hard to maintain a normal temperature.

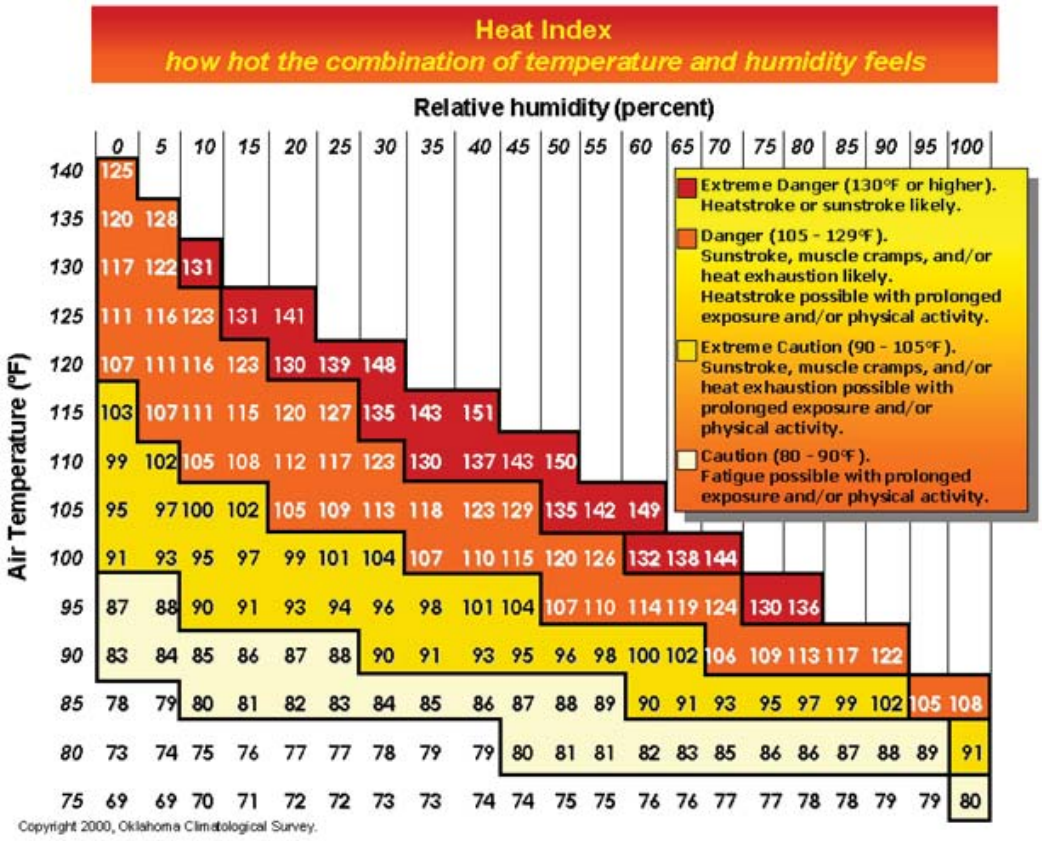
Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Other conditions that can induce heat-related illnesses include stagnant atmospheric conditions and poor air quality.

A prolonged drought can have a serious economic impact on a community. Increased demand for water and electricity may result in shortages of resources. Moreover, food shortages may occur if agricultural production is damaged or destroyed by a loss of crops or livestock.

The greater effects from an extreme heat event will be felt in areas that have residents over the age of 65 and the low income areas. This is due to the fact that the elderly are more susceptible to heat induced illnesses and the economic constraints on low income populations as a result of shortage of resources.

Figure 5.3 depicts the Heat Index chart and displays the relative danger in regards to air temperature and relative humidity. Extreme Heat is a hazard Dallas County has faced in the past and will continue to face in the future and the combination of high temperatures and high humidity prompt heat advisories. **Occurrence: Map 5.8** and **Table 5.11** depict Extreme Heat occurrences in Dallas County.

Figure 5.3: NOAA's National Weather Service Heat Index



Source: http://www.ima.army.mil/southwest/sites/divisions/Safety/Heat%20Index.gif

The chart below illustrates the dangers of being exposed to extreme heat conditions:

Category	Heat Index	Possible heat disorders for people in high risk groups
Extreme Danger	130°F or higher (54°C or higher)	Heat stroke or sunstroke likely.
Danger	105 - 129°F (41 - 54°C)	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity.
Extreme Caution	90 - 105°F (32 - 41°C)	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Caution	80 - 90°F (27 - 32°C)	Fatigue possible with prolonged exposure and/or physical activity.

Source: https://ehs.okstate.edu/heatindx.htm

Table 5.11: Extreme Heat Occurrences in Dallas County

Type	County	Date	Time	Death	Injuries	Property Damage	Crop Damage
Excessive Heat	DALLAS	7/20/2012	16:00	1	0	0.00K	0.00K
Heat	DALLAS	8/6/2011	2:21	3	210	0.00K	0.00K
Excessive Heat	DALLAS	8/1/2011	6:00	4	130	0.00K	0.00K
Heat	DALLAS	7/1/2011	0:00	9	223	0.00K	0.00K
Heat	DALLAS	6/13/2011	11:00	3	140	0.00K	0.00K
Heat	DALLAS	6/20/2010	0:00	1	0	0.00K	0.00K
Heat	DALLAS	4/29/2010	12:30	0	0	0.00K	0.00K
Heat	DALLAS	6/23/2009	17:00	1	0	0.00K	0.00K
Excessive Heat	DALLAS	8/1/2008	20:00	4	0	0.00K	0.00K
Excessive Heat	DALLAS	7/28/2008	15:00	2	0	0.00K	0.00K
Excessive Heat	DALLAS	7/23/2008	15:00	1	0	0.00K	0.00K
Excessive Heat	DALLAS	8/13/2007	10:00	1	0	0.00K	0.00K

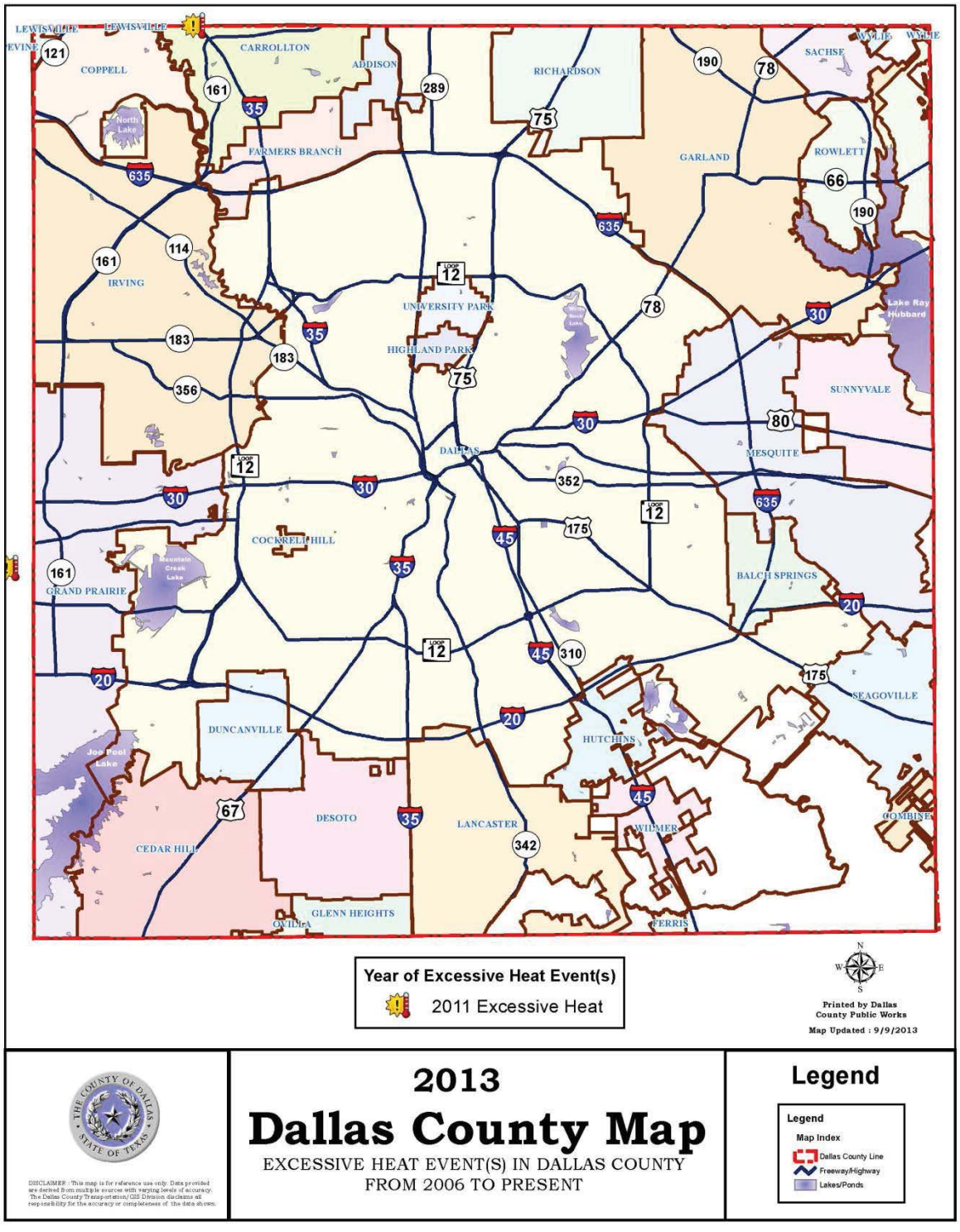
Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Vulnerable: All of Texas is vulnerable to extreme heat. Extreme heat happens regularly over extended periods of time. This can cause rapid and continual loss of moisture in vegetation, typically compounding drought and wildfire conditions. The dangers to citizens and first responders from heat related illness is usually exacerbated. In addition, large metropolitan areas such as Dallas/Fort Worth may experience extreme heat since they have an abundance of concrete. This effect is known as urban heat islands and can be dangerous to those without air conditioners.

Probability of recurrence: Extreme heat affects the entire planning area equally.

Magnitude: Dallas County and participating jurisdictions experienced 12 extreme heat events during the time period analyzed for this plan. In 2011, North Texas Region experienced over a month of 100-degree plus temperatures. It can be expected that any future heat or excessive heat incidents will be similar in magnitude.

Map 5.8: Excessive Heat Reports in Dallas County 2011



Drought

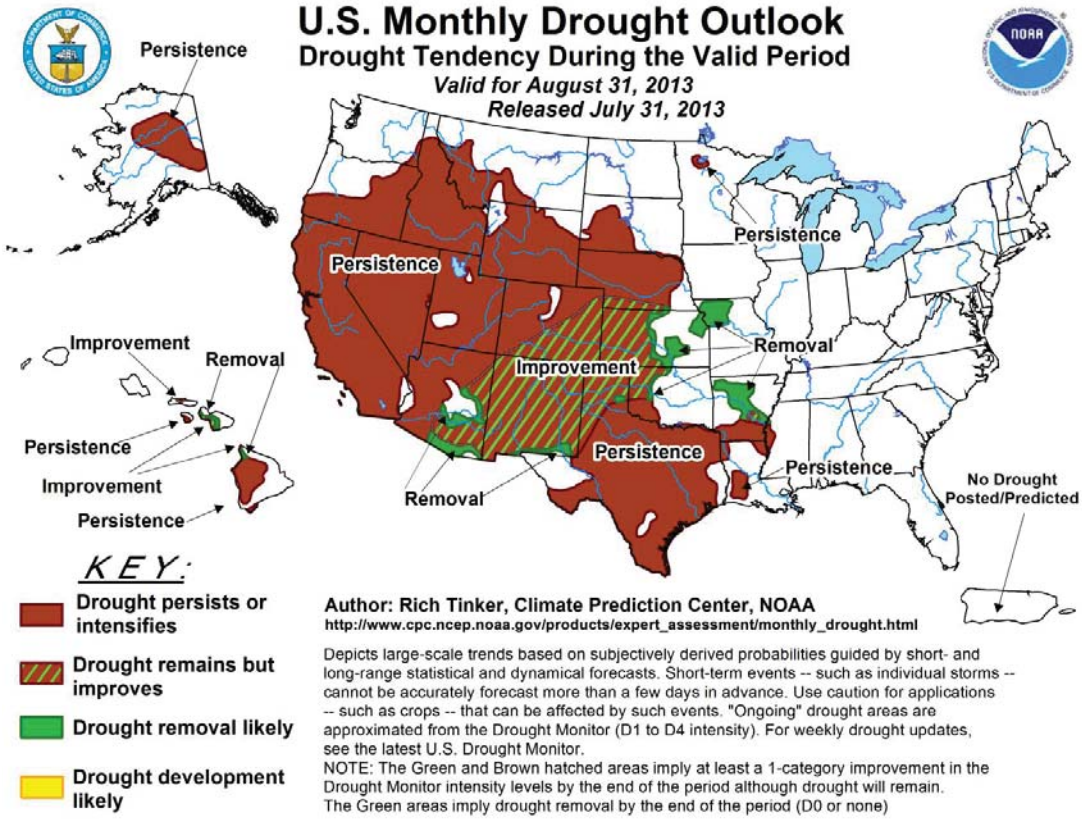
Definition: Drought can be defined as a water shortage caused by the natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It can be aggravated by other factors such as high temperatures, high winds, and low relative humidity.

Type: Drought conditions types can be described by their potential impacts and by using the National Drought Mitigation Center at the University of Nebraska-Lincoln categories.

- Agricultural – Drought threatens crops that rely on natural precipitation.
- Water supply – Drought threatens supplies of water for irrigated crops and for communities.
- Fire hazard – Drought increases the threat of wildfires from dry conditions in forest and rangelands.

Location: Throughout history, Texas has been prone to droughts. These droughts are caused by a combination of weather patterns and geographic locations. All Dallas County is susceptible to drought. Map 5.6 depicts drought events in Dallas County from 2006 to present.

Map 5.9: United States Seasonal Drought Outlook



Extent: In 1965, Wayne Palmer developed an index to "measure the departure of the moisture supply." Palmer based his index on the supply-and-demand concept of the water balance equation, taking into account more than only the precipitation deficit at specific locations. The objective of the PDSI, as this index is now called, was to provide a measurement of moisture conditions that were "standardized" so that comparisons using the index could be made between locations and between months.

The PDSI is based on precipitation and temperature. The PDSI can therefore be applied to any site for which sufficient precipitation and temperature data is available.

The PDSI varies roughly between -4.0 and +4.0. Weekly PDSI values are calculated for the Climate Divisions during every growing season and are available at the Climate Prediction Center at http://www.cpc.ncep.noaa.gov/. See the Palmer Drought Severity Index and the Drought Intensity Categories tables below.

Table 5.12: PALMER DROUGHT SEVERITY INDEX (PDSI)

PDSI Classifications for Dry and Wet Periods	
4.00 or more	Extremely Wet
3.00 to 3.99	Very Wet
2.00 to 2.99	Moderately Wet
1.00 to 1.99	Slightly Wet
0.50 to 0.99	Incipient Wet Spell
0.49 to -0.49	Near Normal
-0.50 to -0.99	Incipient Dry Spell
-1.00 to -1.99	Mild Drought
-2.00 to -2.99	Moderate Drought
-3.00 to -3.99	Severe Drought
-4.00 or less	Extreme Drought

Source: http://drought.unl.edu/Planning/Monitoring/ComparisonofIndicesIntro/PDSI.aspx

DROUGHT INTENSITY CATEGORIES

Category	Description	Possible Impacts	Palmer Drought Index
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed	-3.0 to -3.9
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies	-5.0 or less

Occurrence: Table 5.13 depicts historical occurrence of drought in Dallas County. According to the National Climatic Data Center, drought in Dallas County has resulted in property and crop damage valued at $5,000 and 63,000 dollars respectively between 04/01/2007 and 06/30/2013. The magnitude levels of these drought occurrences have not been provided. Occurrences prior to that are included in the original plan adopted in January 2009.

Table 5.13: Occurrences of Drought

Location	Date	Event	Mag	Deaths	Injuries	Property Damage	Crop Damage
Dallas County	4/1/2011	Drought		0	0	0	$5,000
Dallas County	8/1/2011	Drought		0	0	0	$10,000
Dallas County	9/1/2011	Drought		0	0	0	$25,000
Dallas County	10/1/2011	Drought		0	0	0	$5,000
Dallas County	8/7/2012	Drought		0	0	0	0
Dallas County	12/1/2012	Drought		0	0	0	$2,000
Dallas County	1/1/2013	Drought		0	0	0	$1,000
Dallas County	4/1/2013	Drought		0	0	0	$2,000
Dallas County	6/25/2013	Drought		0	0	0	$2,000
Dallas County	7/1/2013	Drought		0	0	0	$2,000
Dallas County	8/1/2013	Drought		0	0	$5,000	$5,000
Dallas County	9/1/2013	Drought		0	0	0	$4,000
TOTAL						**$5,000**	**$63,000**

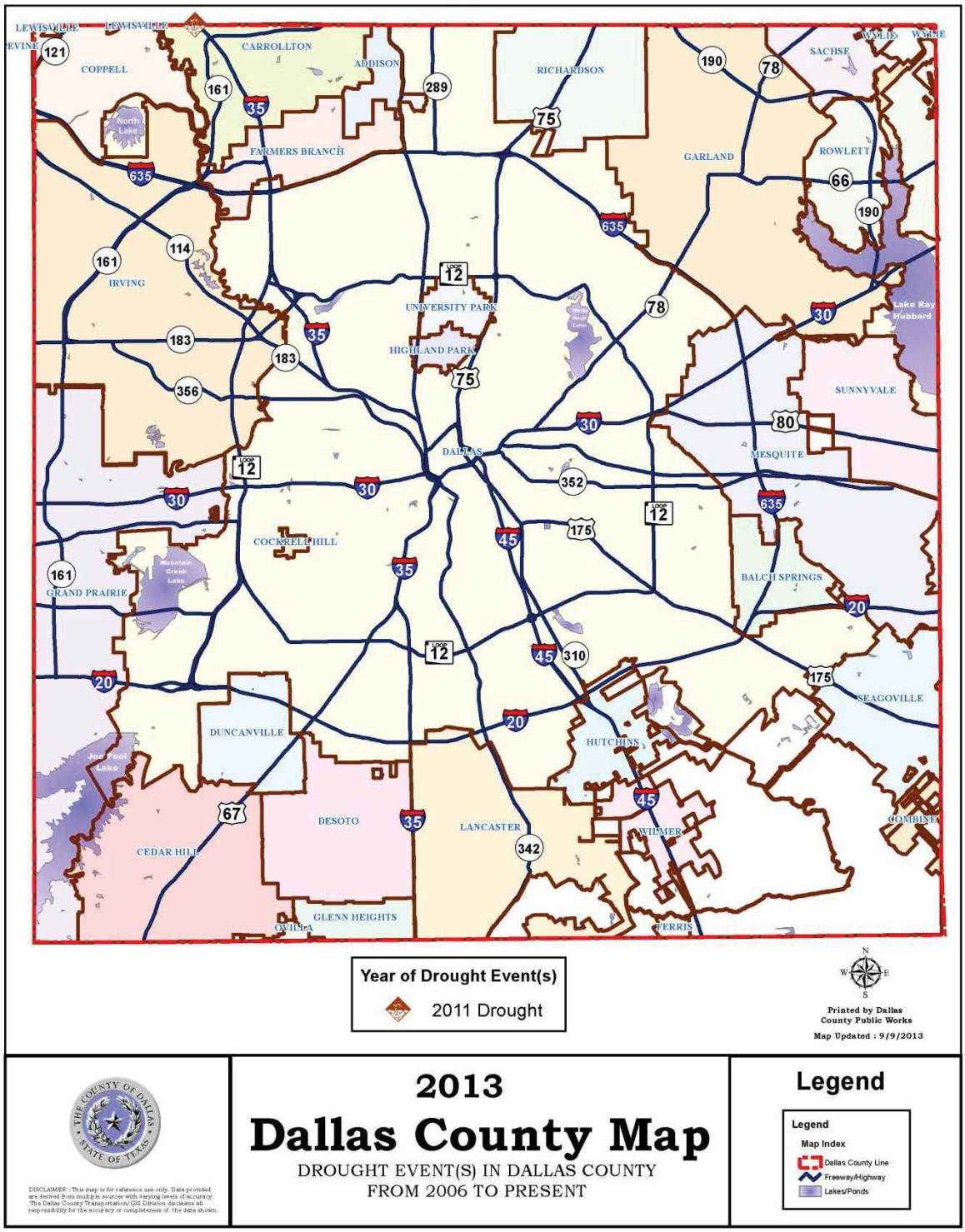
Source: NOAA National Climatic Data Center – http://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=48%2CTEXAS

Vulnerability: Drought causes concern for agricultural industries, due to lack of crops, feed, and drinking water for livestock. As drought continues, many residents who are on private wells as well as those served by small independent water utilities begin to experience water shortages. The lack of water can also impact fire response capabilities and firefighting efforts.

Probability of recurrence: Drought conditions do occur in Dallas County. The PDSI Classification allows county planners to anticipate the effects of drought and plan preparedness and mitigation activities for future events as they will likely occur.

Magnitude: Dallas County and participating jurisdictions experienced 11 drought events, ranging from Abnormally Dry (D0) to Extreme Drought (D3), during the time period analyzed for this plan (01/01/2008-06/30/2013). It can be expected that future drought events will be of similar magnitude.

Map 5.10: Drought Events in Dallas County



Dam or Levee Failure

Definition and types: A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams typically are constructed of earth, rock, concrete, or mine tailings. A dam failure is an accidental or unintentional collapse, breach, or other failure of an impoundment structure that results in downstream flooding. Because dams are man-made structures, dam failures are usually considered technological hazards. However, since most dam failures result from prolonged periods of rainfall, they are often cited as secondary or cascading effects of natural flooding disasters and are not named as the primary hazard that causes disaster declarations.

Location and extent: The State of Texas has 7,413 dams, all regulated by the Texas Commission on Environmental Quality (TCEQ). Of these, 854 are considered "high hazard," 779 are considered "significant hazard," and 5,780 are considered "low hazard." According to the American Society of Civil Engineers' "Report Card," the Association of State Dam Safety Officials reports that there are 403 unsafe dams in Texas.

Dallas County has 60 dams. **Map 5.11** displays the location of all dams within Dallas County. According to the National Inventory of Dams (NID) there are 19 high hazard dams within Dallas County. **Table 5.14** details the location information in terms of latitude and longitude in addition to height; ownership, storage, and primary purpose of each of these high hazard dams in Dallas County.

The extent or magnitude of a dam failure event can be measured in terms of the classification of the dam. The National Interagency Committee on Dam Safety defines high hazard dams as those where failure or mis-operation will cause loss of human life. Prior to 2009, high hazard dams were defined as those at which failure or mis-operation would probably cause loss of human life. Dams classified as significant are those at which failure or mis-operation probably would not result in loss of human life but could cause economic loss, environmental damage, disruption of lifeline facilities, or other significant damage. Low hazard potential dams are those at which failure or mis-operation probably would not result in loss of human life but would cause limited economic and/or environmental losses. Losses would be limited mainly to the owner's property.

Occurrence: There is no recorded information or known history on previous occurrence of dam failure or levee failures within Dallas County.

Vulnerability Narrative: Dam and levee failure can cause widespread damage to areas downstream and lower in elevation of the dam or levee. The sudden release could cause serious injury and death to residents, damage to infrastructure and property.

Dam failure is a hazard recognized to have a predictable vulnerability area. There are 19 high hazard dams in the Dallas County Local Mitigation Strategy according to the National Inventory of Dams which will be further addressed. Dam inundation studies in coordination with dam owners will need to be conducted on these dams to mitigate the effects of dam failure. Once a better understanding of the current safety status of the dam, mitigation action items may be identified and prioritized for future funding consideration.

Table 5.14

Ownership	Latitude	Longitude	NID Height (Ft.)	NID Storage (acre feet)	Primary Purpose
CITY OF DALLAS; USA DEPARTMENT OF THE INTERIOR	-96.577133	32.646691	23	456	Water Supply
EXELON POWER	-96.943747	32.732562	47	64372	Other
CITY OF DALLAS PARK AND RECREATION DEPARTMENT	-96.818326	32.758535	26	281	Flood Control
TXI OPERATIONS LP	-96.88969	32.766702	24	60	Other
LUMINANT POWER	-96.972505	32.949101	65	24000	Other
COLUMBIAN COUNTRY CLUB OF DALLAS	-96.871605	32.9666	20	327	Irrigation
CITY OF DALLAS	-96.725052	32.815227	35	28962	Water Supply
DALWORTH SWCD	-96.555297	32.926796	32	773	Flood Control
BOIS D ARC ISLAND LEVEE DISTRICT	-96.536945	32.621728	29	167	Flood Control
DALWORTH SWCD	-96.606517	32.549487	29	1508	Flood Control
TOSCH LAKE HOMEOWNERS ASSOCIATION	-96.602457	32.752857	18	60	Recreation
CITY OF DALLAS	-96.865782	32.66825	32.79	475	Flood Control
CITY OF CARROLLTON;MUNICIPAL	-96.892212	32.969797	20	118	Recreation
CITY OF DALLAS PARK AND RECREATION DEPARTMENT	-96.965167	32.653697	23.1	160	-
CITY OF DALLAS PARK AND RECREATION DEPARTMENT	-96.644803	32.726765	12.8	188	-
CESWF	-96.966667	32.616669	108	642500	Water Supply
CITY OF DALLAS PARK AND RECREATION DEPARTMENT	-96.833453	32.754497	19.89	49	Recreation
CITY OF DALLAS	-96.666108	32.739228	12	35	Flood Control
CITY OF MESQUITE	-96.601794	32.761563	11.19	31.3	-

Probability of recurrence: No historical events of dam failure have been recorded in Dallas County, though the risk of dam failure is monitored closely. Due the lack of historical occurrences, the probability of a future event is unlikely, meaning an event is possible in the next ten years.

Levee Failure: Levees are earthen embankments whose primary purpose is to furnish flood protection from seasonal high water for a few days or weeks a year. Levees are broadly classified as either urban or agricultural because of the different requirements for each. Urban levees provide protection from flooding in communities, including their

industrial, commercial, and residential facilities. Agricultural levees provide protection from flooding in lands used for agricultural purposes.

Based on information contained in the Corps of Engineers reports; "Upper Trinity River Reconnaissance Report" and 1995 Information Paper – A Benefit-Cost Analysis, Upper Trinity River Basin, Texas, "Natural Disaster Procedures Under PL 84-99 (Supplement A to ER 500-1-1), and various FEMA "Flood Insurance Study" reports, The Trinity River is formed at the confluence of the West Fork and Elm Fork, just to the west of downtown Dallas, and the majority of the levees are located on these conveyances or their major tributaries. The Code of Federal Regulations, 44 CFR Section 65.10, outlines the requirements for mapping areas protected by levee systems. For the purposes of the National Flood Insurance Program (NFIP), FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection from the base flood.

Table 5.14 provides a summary of the levees in Dallas County. The City of Irving is affected by several levee systems. The table below summarizes these levee systems.

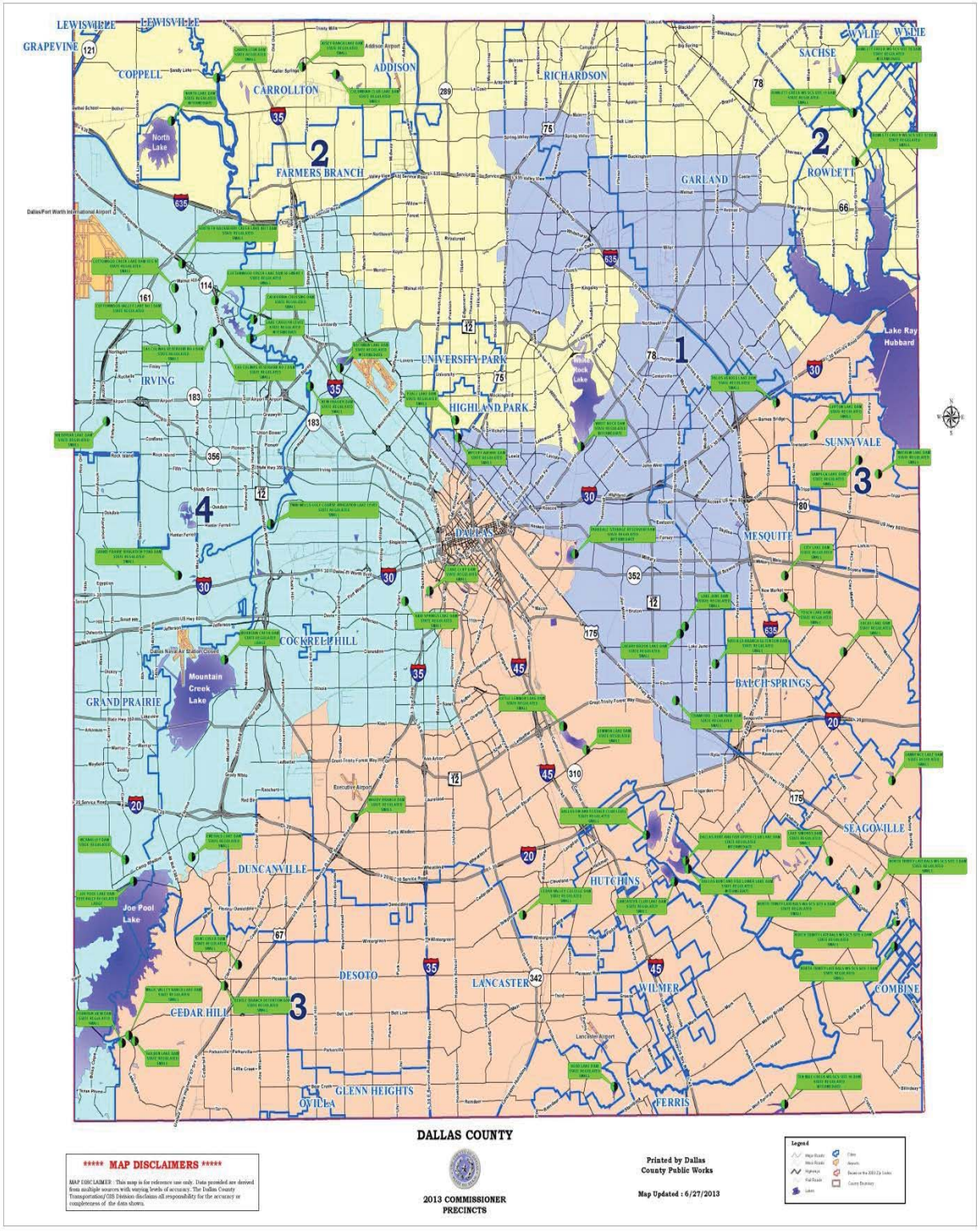
Levee District	City	Owner/Operator	Length	Certified
Trinity River				
• Dallas County FCD #1 (Bear Creek)	Irving	DCFCD #1	1.4	Yes
• Running Bear Park Levee	Irving	Irving		No
• Irving Landfill	Irving	Irving	2.2	Yes
Elm Fork-Trinity River				
• IFCD #1 (Northwest Levee)	Irving	IFCD#1/USACE	2.8	Yes, by PAL
• IFCD #3 (Valley Ranch)	Irving	IFCD#3	3.5	Yes
• DCURD (Las Colinas)	Irving	DCURD	3.4	Yes

The risk of levee failure from the base flood event is minimal for the levee systems listed above. However, there is a greater risk of levee failure or levee systems being overtopped for flood events that exceed the base flood event. The three foot freeboard required by FEMA provides a greater safety factor, but major floods of long duration such as the 1993 Mississippi River Flood can result in major damage and potential loss of life.

While no record could be found of any previous major levee failures in Dallas County the point must be made that increasing development both upstream and downstream of the city existing levees are likely to be reducing the flood protection capabilities of these levees even for the base flood event. This is an issue that may need to be studied more and at a regional level to establish the level of risk that may exist.

The extent of dam and levee failure in Dallas County is addressed in each jurisdictional annex of this plan in Section 9.

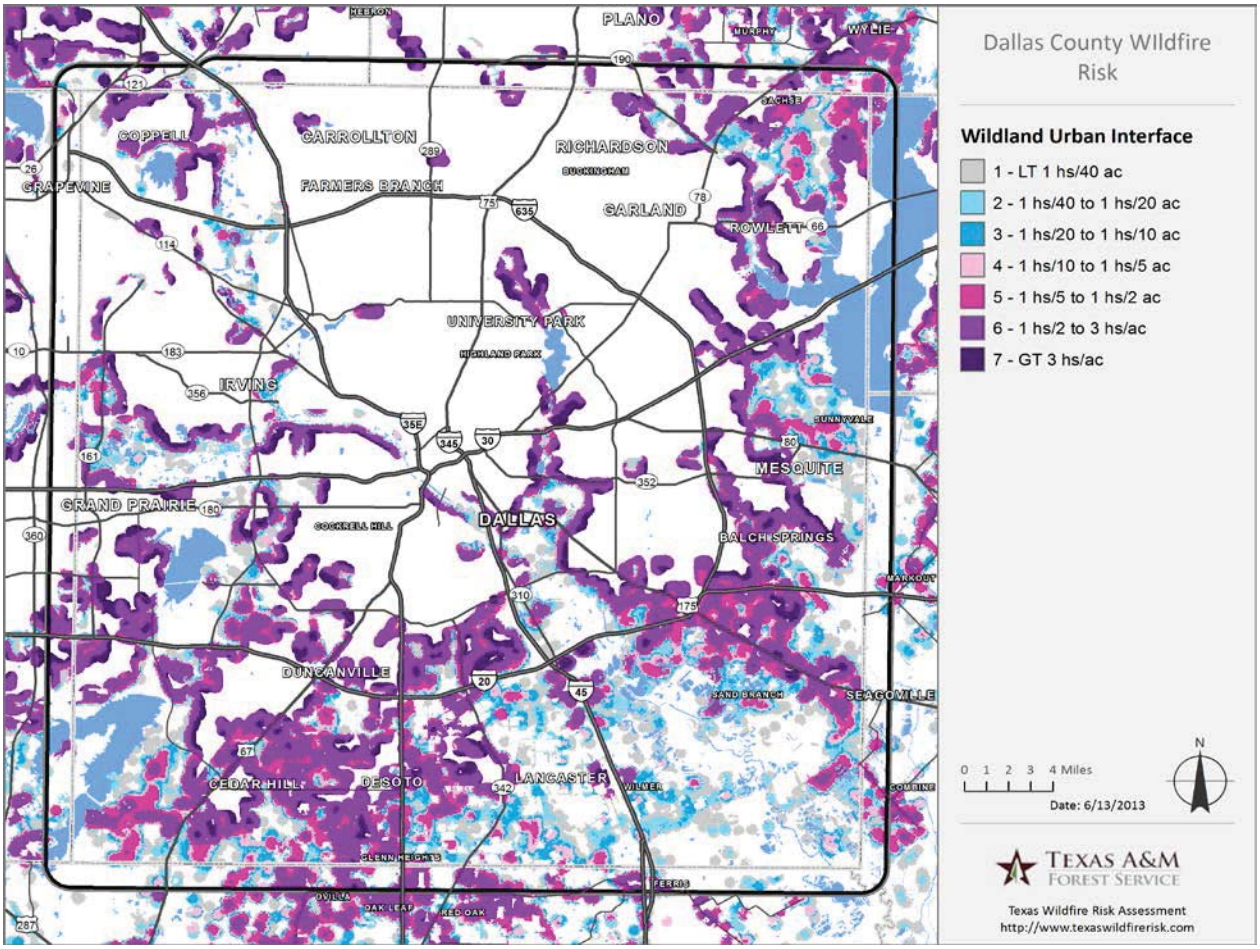
Map 5.11: Location of Dams in Dallas County



Wildfire

Definition and Types: Wildfire is defined as a sweeping and destructive conflagration, especially in a wilderness or a rural area. Wildfires within Texas can be defined as being a wildland, interface, or intermix fires. A wildland fire is any fire occurring on grassland, forest, or prairie, regardless of ignition source, damages or benefits. For the purposes of this hazard analysis, wildland fires are assessed under what is known as the Wildland Urban Interface (WUI). The WUI is an area of development that is susceptible to wildland fires due to the amount of structures located in an area with vegetation that can act a fuel for a wildland fire. The Dallas County Wildland Urban Interface (WUI) **Map 5.12** below depicts where humans and their structures meet or intermix with wildland fuels.

Map 5.12: Wildland Urban Interface Map



Source: http://www.texaswildfirerisk.com/map/Pro

Wildland fires are of one type, although wildland fire intensity revolves around three elements:

1. **Fuel:** Wildland fires are fueled almost exclusively by natural vegetation. They typically occur in national forests and parks, where Federal agencies are responsible for fire management and suppression. Interface or intermix fires are urban/wildland fires in which vegetation and the built-environment provide fuel.

2. **Weather:** Firestorms occur during extreme weather and generally burn until conditions change or the available fuel is exhausted
3. **Terrain:** With the semi-arid climate of the western, southern and panhandle counties of the State of Texas, wildland fires are most common in the spring and summer months, but can occur at any time during the year.

Location and Extent: Wildfires are a very rare occurrence in Dallas County. The Keetch-Byram Drought Index (KBDI) was designed specifically for fire potential assessment. KBDI is a stand-alone index that can be used to measure the effects of seasonal drought on fire potential. The actual numeric value of the index is an estimate of the amount of precipitation (in 100ths of inches) needed to bring the soil back to saturation (a value of 0 is complete saturation of the soil). Since the index only deals with the top eight inches of the soil profile, the maximum KBDI value is 800 or 8.00 inches of precipitation would be needed to bring the soil back to saturation. The KBDI's relationship to fire danger is that as the index value increases, the vegetation is subjected to increased stress due to moisture deficiency.

The Keetch-Byram Drought Index (KBDI)

KBDI	FIRE POTENTIAL
0 – 200	Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. Typical of spring dormant season following winter precipitation
200 – 400	Typical of late spring, early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity
400 – 600	Typical of late summer, early fall. Lower litter and duff layers contribute to fire intensity and will burn actively
600 – 800	Often associated with more severe drought with increased wildfire occurrence. Intense, deep-burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels

Source: http://ticc.tamu.edu/Documents/PredictiveServices/Drought/KBDI_Fact_Sheet.pdf

The Fire Danger Rating takes into account current and antecedent weather, fuel types and both live and dead fuel moisture to provide a measure of the relative seriousness of burning conditions.

In 1974, the Forest Service, Bureau of Land Management, and state forestry organizations established a standard adjective description for five levels of fire danger for use in public information releases and fire prevention signing. For this purpose only, fire danger is expressed using the adjective levels and color codes described below. In 2000, the NWCG Fire Danger Working Team reviewed and slightly revised these terms and definitions for adjective fire danger.

Fire Danger Ratings

Rating	Basic Description	Detailed Description
CLASS 1: Low Danger (L) COLOR CODE: Green	Fires not easily started	Fuels do not ignite readily from small firebrands. Fires in open or cured grassland may burn freely a few hours after rain, but wood fires spread slowly by creeping or smoldering and burn in irregular fingers. There is little danger of spotting.
CLASS 2: Moderate Danger (M) COLOR CODE: Blue	Fires start easily and spread at a moderate rate	Fires can start from most accidental causes. Fires in open cured grassland will burn briskly and spread rapidly on windy days. Woods fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel – especially draped fuel - may burn hot. Short distance spotting may occur, but is not persistent. Fires are not likely to become serious and control is relatively easy.
CLASS 3: High Danger (H) COLOR CODE: Yellow	Fires start easily and spread at a rapid rate	All fine dead fuels ignite readily and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High intensity burning may develop on slopes or in concentrations of fine fuel. Fires may become serious and their control difficult, unless they are hit hard and fast while small.
CLASS 4: Very High Danger (VH) COLOR CODE: Orange	Fires start very easily and spread at a very fast rate	Fires start easily from all causes and immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high-intensity characteristics - such as long-distance spotting - and fire whirlwinds, when they burn into heavier fuels. Direct attack at the head of such fires is rarely possible after they have been burning more than a few minutes.
CLASS 5: Extreme (E) COLOR CODE: Red	Fire situation is explosive and can result in extensive property damage	Fires under extreme conditions start quickly, spread furiously and burn intensely. All fires are potentially serious. Development into high-intensity burning will usually be faster and occur from smaller fires than in the Very High Danger class (4). Direct attack is rarely possible and may be dangerous, except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions, the only effective and safe control action is on the flanks, until the weather changes or the fuel supply lessens.

Source: http://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32/class-rating-fire-potential-danger-51

Occurrence: There have only been two reported wildfires in Dallas County since 01/01/1996 and at the time of writing this plan. **Table 5.15** depicts the historic occurrence of wildfires in Dallas County.

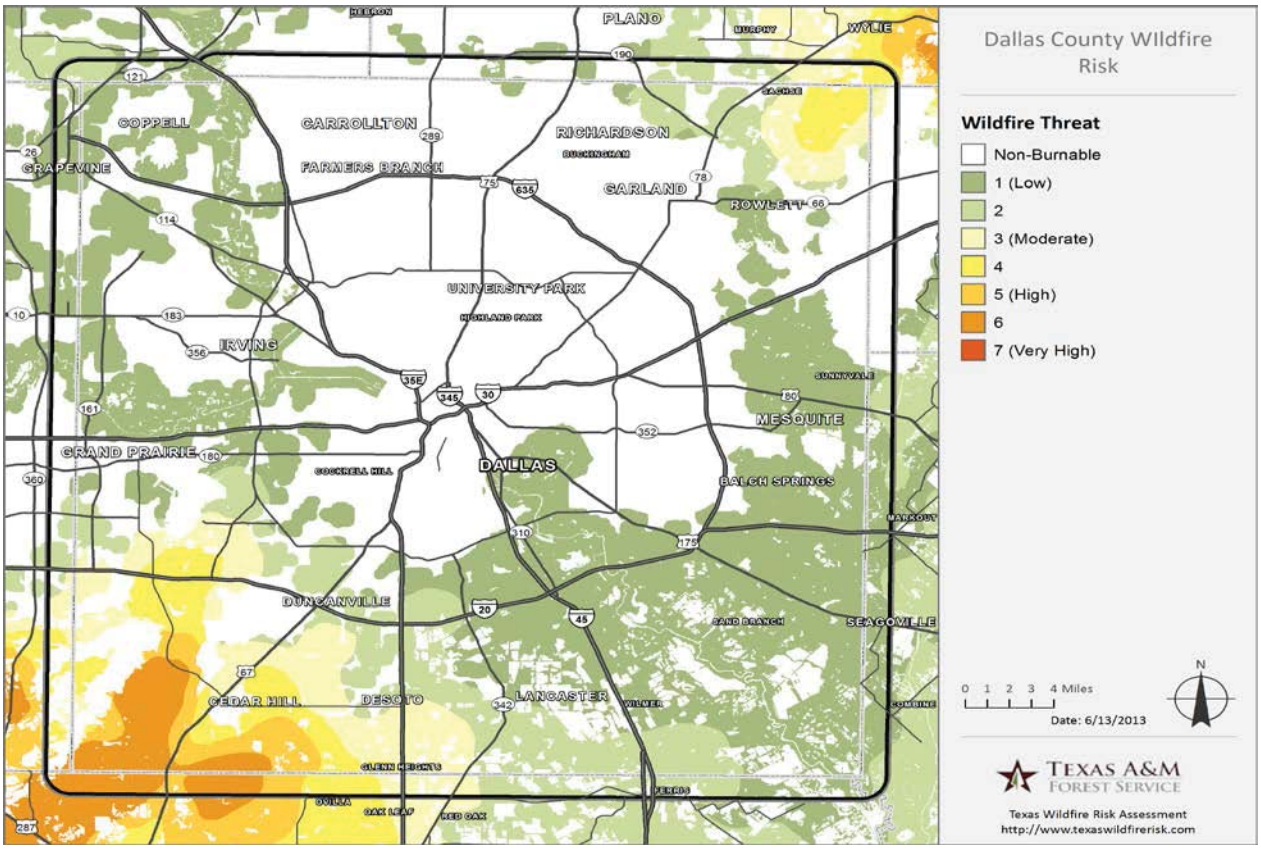
Table 5.15

Type	County	Date	Time	Death	Injuries	Property Damage	Crop Damage
Wildfire	DALLAS	8/16/2011	12:00	0	0	300.00K	0.00K
Wildfire	DALLAS	6/18/2011	14:00	0	0	0.00K	0.00K

Vulnerability: Low

Wildland fire in Dallas County is a low risk due to the well managed and readily available resources for response. The entire unincorporated county lies in a low risk zone as depicted in Wildfire Threat Map below. Dallas County contracts with city fire departments to respond to fires within the unincorporated county area, and during times of drought, burn bans, and high fire threat, automatic mutual aid between the cities is enacted.

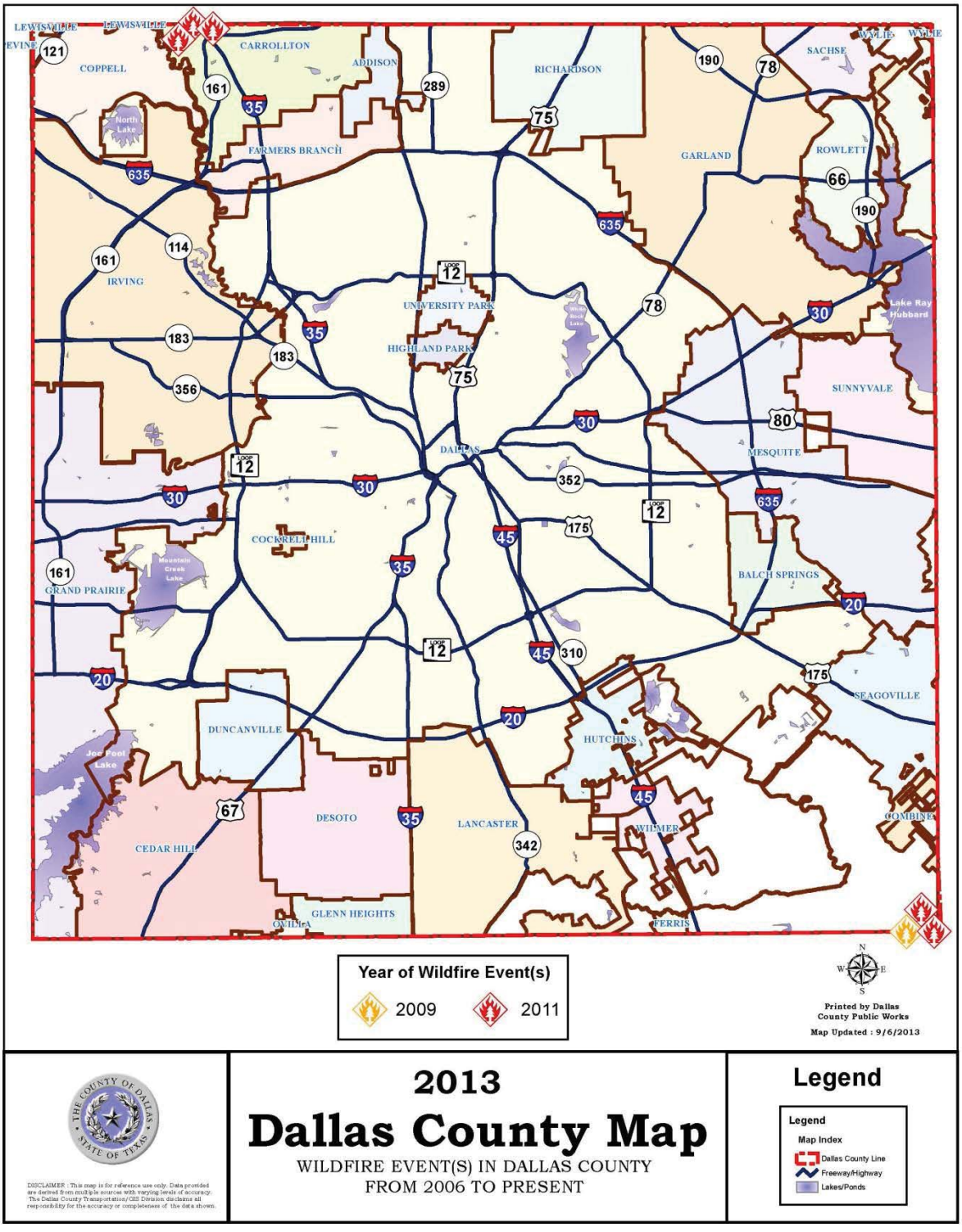
Map 5.13: Wildfire Threat Map



Source: http://www.texaswildfirerisk.com/map/Pro

Magnitude: Dallas County and participating jurisdictions experienced two wildfire events during the time period analyzed for this plan (01/01/2002-06/30/2013). These events resulted in damage to property and included an acre blaze of up to 230 acres that started in a neighboring county. It can be expected that any future wildland fire events will be similar in magnitude

Map 5.14: Wildfire Events Dallas County



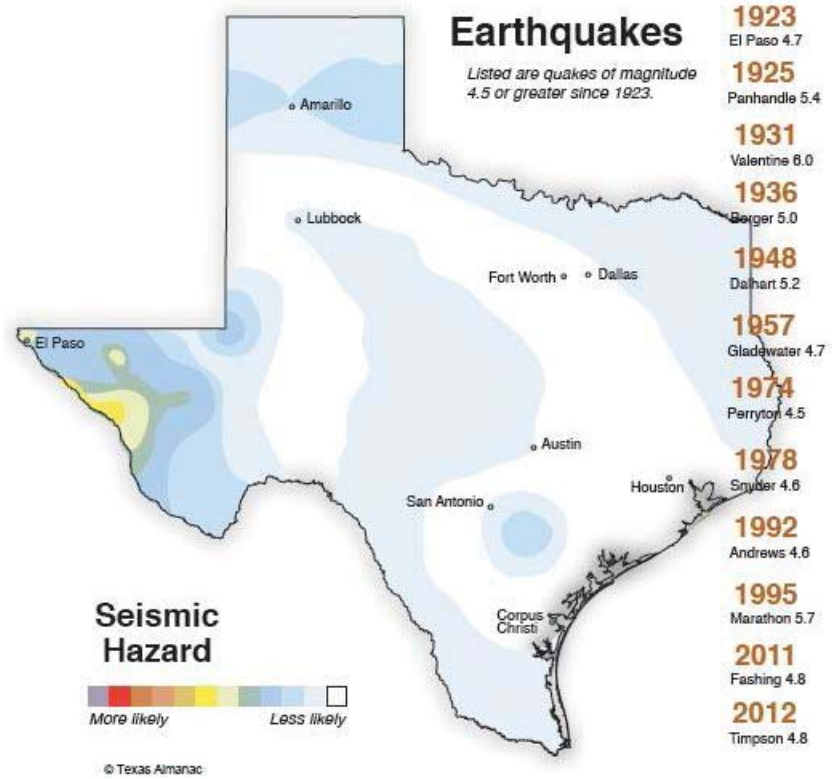
Earthquake

Definition: An earthquake is a sudden motion or trembling caused by an abrupt release of accumulated strain on the tectonic plates that comprise the Earth's crust. The theory of plate tectonics holds that the Earth's crust is broken into several major plates. These rigid, 50- to 60-mile thick plates move slowly and continuously over the interior of the earth, meeting in some areas and separating in others.

As the tectonic plates move together they bump, slide, catch, and hold. Eventually, faults along or near plate boundaries slip abruptly when the stress exceeds the elastic limit of the rock, and an earthquake occurs. The ensuring seismic activity and ground motion provoke secondary hazards: surface faulting, ground failure, and tsunamis. The vibration or shaking of the ground during an earthquake is referred to as ground motion. In general, the severity of ground motion increases with the amount of energy released and decreases with distance from the causative fault or epicenter. When a fault ruptures, seismic waves are propagated in all directions, causing the ground to vibrate at frequencies ranging from 0.1 to 30 Hz. Seismic waves are referred to as P waves, S waves, and surface waves.

Location and Extent: Several earthquakes have occurred in Texas, and within the twentieth century there have been more than 100 earthquakes large enough to be felt with their epicenters occurring in 40 of the 254 counties. Four of these earthquakes have had magnitudes between 5 and 6, making them large enough to be felt over a wide area and produce significant damage near their epicenters.

Figure 5.5: Earthquakes in Texas



Source: Texas State Historical Association – Texas Almanac http://www.texasalmanac.com/topics/environment/notable-earthquakes-shake-texas-occasion

In northeastern Texas the greatest hazard is from very large earthquakes (magnitude 7 or above) which might occur outside of Texas, particularly in Oklahoma or Missouri-Tennessee. In south-central Texas the hazard is generally low, but residents should be aware that small earthquakes can occur there, including some which are triggered by oil or gas production. Elsewhere in Texas, earthquakes are exceedingly rare. However, the hazard level is not zero anywhere in Texas; small earthquakes are possible almost anywhere, and all regions face possible ill effects from very large, distant earthquakes.

Because damaging earthquakes are rare, it should be noted that the risk depends on magnitude. The Mercalli/Richter Scale allows planners to assess the impact earthquakes have.

Vulnerability Narrative: Earthquakes in Dallas County and the participating jurisdictions is considered as a low risk threat. Large scale earthquakes are considered to be an isolated event, however will cause widespread damage due to a low risk of high magnitude earthquakes in this area.

Earthquakes have only been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. There is currently not a significant amount of data for earthquakes in Dallas County. A data deficiency has therefore been identified for earthquakes in Dallas County. An accumulation and study of data may need to be expedited at the regional and/or state level to determine whether or not changes are warranted to building codes and engineering standards for high magnitude levels that can affect buildings, transportation routes, and pipelines.

Prior to October 2008 there was no historical evidence of an earthquake occurring in Dallas County and geophysical field investigations at the Superconducting Super Collider (SCC) site in Ellis County (South East of Dallas County) revealed no unusual rock foundation properties at the site that would lead to anomalous ground motions during earthquakes. There are no known active geological faults within Dallas County. Inactive normal faults of the Balcones fault system do occur. Due the how recent the earthquakes events have been in the area there is insufficient data to determine the level of vulnerability and risk that earthquakes would have in Dallas County. More data will need to be obtained to make the appropriate determination of the way forward.

Occurrence: Table 5.16 depicts the location, extent, and historical occurrence of earthquakes in the Dallas County area. During October 31 to November 1, 2008 there were seven earthquakes ranging from 2.5 to 3.0 on the Richter Scale in Dallas County.

Earthquake: Mercalli/Richter Scale Comparison

Mercalli Scale	Richter Scale	Description / Type of Damage
I.	0 – 1.9	Not felt. Marginal and long period effects of large earthquakes.
II.	2.0 -2.9	Felt by persons at rest, on upper floors, or favorably placed.
III.	3.0 – 3.9	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV.	4.0 - 4.3	Hanging objects swing. Vibration like passing of heavy trucks. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink the upper range of IV, wooden walls and frame creak.
V.	4.4 - 4.8	Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Pendulum clocks stop, start.
VI.	4.9 - 5.4	Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Books, etc., off shelves. Pictures off walls. Furniture moved. Weak plaster and masonry D cracked. Small bells ring. Trees, bushes shaken.
VII.	5.5 - 6.1	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices. Some cracks in masonry C. Waves on ponds. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII.	6.2 - 6.5	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX.	6.6 - 6.9	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters.
X.	7.0 - 7.3	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
XI.	7.4 - 8.1	Rails bent greatly. Underground pipelines completely out of service.
XII.	> 8.1	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.
Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.
Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.
Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.
Source: http://www.abag.ca.gov/bayarea/eqmaps/doc/mmigif/m10.html

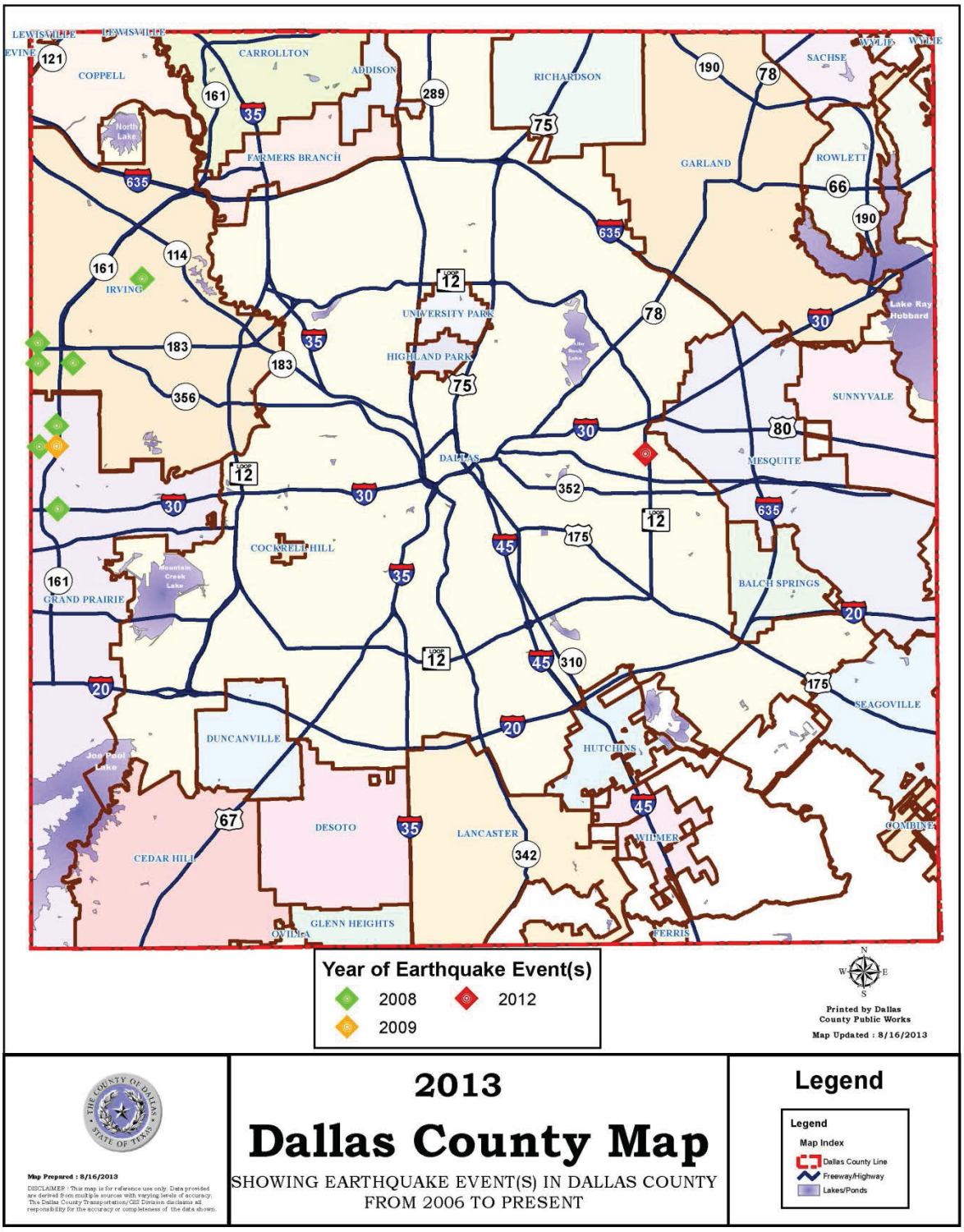
Table 5.16: Earthquake Occurrences in Dallas County

Event Date	Latitude	Longitude	Depth	Magnitude	Mag Type	Category	County
1/6/2012 6:11:00 AM	32.782	-96.685	5	2.1	PDE	PDE-W	Dallas
5/16/2009 6:02:23 PM	32.79	-97.02	5	2.6	LgGS	PDE	Dallas
5/16/2009 4:24:06 PM	32.79	-97.02	8	3.3	LgGS	PDE	Dallas
11/1/2008 11:54:30 AM	32.87	-96.97	5	2.7	LgGS	PDE	Dallas
10/31/2008 9:01:01 PM	32.79	-97.03	5	2.9	LgGS	PDE	Dallas
10/31/2008 8:54:18 PM	32.83	-97.03	5	2.9	LgGS	PDE	Dallas
10/31/2008 7:58:23 AM	32.83	-97.01	5	2.9	LgGS	PDE	Dallas
10/31/2008 5:46:31 AM	32.76	-97.02	5	2.5	LgGS	PDE	Dallas
10/31/2008 5:33:45 AM	32.87	-96.97	5	2.6	LgGS	PDE	Dallas
10/31/2008 5:01:54 AM	32.84	-97.03	5	3	LgGS	PDE	Dallas
10/31/2008 4:25:52 AM	32.8	-97.02	5	2.6	LgGS	PDE	Dallas

Source: NCTCOG Regional Hazard Assessment Tool (RHAT)

Probability of recurrence: The most likely future risk is still associated to either a distant larger quake which might occur in Missouri, Tennessee, or Oklahoma, though these earthquakes are probable to occur only once every 500 years. The second likely occurrence for earthquakes is large amount of hydrocarbon production occurring in the northwestern area of the North Central Texas region including Dallas County. It has been suggested that the natural gas extractions may be responsible for creating small earthquakes within the formations from which it is produced. In the case of the North Texas natural gas play, the primary formation is the Barnett gas play. Due to the risk being associated to a distant quake, earthquakes affect the planning area equally.

Map 5.15: Earthquake Events in Dallas County



Other Hazards

Expansive Soils: Soils and soft rock that tend to swell or shrink due to changes in moisture content are known as expansive soils. Expansive soils are often referred to as swelling clays, because clay materials are most susceptible to swelling and shrinking. Changes in soil volume present a hazard primarily to structures built on expansive soils. The most extensive damage occurs to highways and streets.

In the U.S., two major groups of rocks serve as parent materials of expansive soils and more common in the western portion of the country. The first group consists of ash, glass, and rocks of volcanic origin. The aluminum silicate minerals in these volcanic materials often decompose to form expansive clay minerals, known as montmorillonite. The second group consists of sedimentary rocks containing clay minerals, for example the shales of the semiarid west-central states.

In Texas, most expansive soils are located in a band 200 miles west from the coastline, stretching approximately from Beaumont down to Brownsville. There is another band of expansive soils stretching from Laredo northeast through San Antonio, Austin and Dallas along an area also known as the I-35 corridor. These areas receive the most moisture and are also vulnerable to droughts, which can cause the soils to expand and contract.

Location and Extent: Many of the soils found in the central and eastern portions of the NCTCOG region are clay-rich, fine-grained soils. These soils contain a class of clay minerals called “smectites”, which have the property of exaggerated bulk volume changes in the presence or absence of water. One of the best known and classic of this soil type is the Houston Black, a Blackland Prairie soil that stretches over 2 million acres of land between Dallas and Houston. This soil has been nominated by the Professional Soil Scientists of Texas to be named the State Soil of Texas due to its unique and common influence on the lives of Texans. According to the State of Texas Mitigation Plan the extent and severity of expansive soils is limited.

Occurrence: As many of our Texas communities are completely underlain by these expansive soils it is generally not feasible to completely avoid building on them. There are proven engineering solutions to building on expansive clays; foundations can be built on pilings or basement walls that extend sufficiently deep to get below the active layer‘ (that portion of the soil column that experiences significant annual changes in moisture content).

Vulnerability and Probability: The entire of Dallas County is equally exposed to expansive soils. However, the effects of expansive soils are minimal and due to its limited nature it will not be discussed on in this plan. The risk potential of this hazard will however be re-evaluated as needed.

Hurricane/Tropical Storm: Hurricanes and tropical storms are classified as cyclones and are developed by counter-clockwise circulation of winds around a low-pressure center in the Northern Hemisphere. Latent heat from condensation of warm water is the key energy source for these storms.

The ingredients for a hurricane and tropical storm to form include a pre-existing weather disturbance such as warm tropical oceans, moisture, and relatively light winds aloft. If these conditions persist long enough, they can combine to produce the violent winds, waves, torrential rains, and floods, all of which are more thoroughly addressed as separate hazards within this section. Hurricanes were identified as one of the hazards that threaten the state of Texas as a whole. Since hurricanes currently pose no risk to Dallas County, they will not be discussed further in this plan, but their risk potential will be re-evaluated as needed.

Coastal Erosion: Coastal erosion is the wearing away land and the resultant loss of beach, shoreline or dune material along a coastline. The hazard can be assessed by the rate of change in the horizontal displacement of position of a shoreline over a period of time. Hurricanes and storm surges, windstorms and flooding hazards can cause short-term erosion. The damage can be intensified by human activity, for example boat wakes, removal of dune and vegetative buffers, dredging and shoreline hardening. Multiyear impacts such as wave action, sea level rise, sediment loss, subsidence, and climate change can cause long-term erosion. An above average number of storms and high tides or the long-term effects of changes in sea level can cause increased episodic erosion events. As a response, this will cause a beach from naturally accumulating sediment, starting the erosion process.

Further damage to coastal and upland property can occur if a beach and dune system does not recover either naturally or by human action. Natural recovery can take years to decades. Human action for recovery can include beach nourishment, dune stabilization and shoreline protecting structures (sea walls, groins, jetties, etc.). These actions can mitigate the hazard but may also intensify it under some conditions.

Coastal erosion can cause enough damage to destroy buildings and infrastructure. This poses a threat to local economies of coastal communities dependent on the profits from recreational beaches. Coastal Flooding was identified as one of the hazards that threatens the state of Texas as a whole. Since coastal flooding currently poses no risk to Dallas County, it will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

Land Subsidence: According to the State of Texas Mitigation Plan, land subsidence is defined as the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface, to localized collapses. Land subsidence extent is measured by the number of feet of land loss, or sinks.

Land subsidence occurs when large amounts of ground water have been withdrawn from certain types of rocks, such as fine-grained sediments. The water is partly responsible for holding the ground up, therefore the rock gets compacted. When the water is withdrawn, the rocks fall in on themselves. Land Subsidence was identified as one of the hazards that threatens the state of Texas as a whole. Since land subsidence currently poses no risk to Dallas County, it will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

Table 5.17: Hazard Extent Chart

	High	Medium	Low
Dam	• Greater than 50% of city structures are in the inundation zone. • Greater than 50% of the city's critical infrastructure in the identified inundation zone	• 20%-50% of city structures are in the inundation zone. • 20%-50% of the city's critical infrastructure in the inundation zone	• Less than 20% of city structures are in the inundation zone. • Less than 20% of the city's critical infrastructure in the inundation zone
Drought	• PDSI 3.00- 4.00 or less • Severe to extreme drought conditions	• *PDSI 1.00- 2.99* • *Mild to moderate drought conditions*	• *PDSI 4.00 or more - 0.99* • *Extremely wet to incipient dry spells*
Earthquake	• Mercalli Scale: VIII-XII • Richter Scale: 6.2->8.1 • Driving will be difficult, increase in damage to infrastructures and objects can be thrown	• Mercalli Scale: VI-VII • Richter Scale: 4.9-6.1 • All will feel the event, walking will be difficult, glassware will break, irrigation ditches damaged	• Mercalli Scale: I-V • Richter Scale: 0-4.8 • Range of feeling the event is cannot be felt to being felt outdoors.
Extreme Heat	• Heat Index >130F Heatstroke or sunstroke likely	• Heat Index 105F-129F Sunstroke, muscle cramps, and/preheat exhaustion likely. Heatstroke possible with prolonged exposure and/or physical activity	• Heat Index 80F-105F Fatigue possible with prolonged exposure and/or physical activity, Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity
Hail	• H7-H10, 2.4"->4" There will be severe damage. Including roof and structural damage and risk of serious injuries to fatalities	• H5-H6, 1.6"-2.4" There will be a range of severe damage from well-constructed houses being destroyed to houses being swept away.	• H0-H4, 0"-1.6" There will be a variance of destruction to vegetation and slight damage to glass.
High Winds	• Force: 8-12 • Knots: 28-64+ • Whole trees moving to considerable structure damage	• Force: 4-6 • Knots: 11-27 • Dust, leaves, and loose paper lifted. Small to Large branches moving	• Force: 0-3 • Knots: <1-10 • Calm, leaves rustle, light flags extended
Tornado	• EF3-EF5 There will be a range of severe damage from well-constructed houses being destroyed to houses being swept away	• EF1-EF2 There will be a range of moderate to considerate damage. Roofs will be severely stripped, manufactured homes overturned, and cars lifted off of the ground	• EF0 There will be light damage. Roofs will be peeled off, gutters damaged, and branches broken
Wildland Fire	• KBDI 600-800 • Associated with severe drought. Intense, deep-burning fires with significant downwind spotting	• KBDI 200-400 • Ranges from lower litter and duff layers are drying and beginning to contribute to fire intensity to them causing the fire to burn actively	• KBDI 0-200 • Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity
Winter Storms	• Temperatures 15F- -45F • Wind Chill 7F- -98F • At wind chill of -19F frostbite will occur in 30 minutes increasing in severity to occurrence in 5 minutes.	• Temperatures 30F- 20F • Wind Chill 25F- -4F Bridges and roadways are at risk to ice.	• Temperatures 40F- 35F • Wind Chill 36F-17F • Vulnerable populations and agriculture at risk to lower temperatures and wind chill

Identification of Assets and Vulnerability Assessment

An inventory of Dallas County geo-referenced assets was created in order to identify and characterize property and population potentially at risk to the identified hazards. By understanding the type and number of assets that exist and where they are located in relation to known hazard areas, the relative risk and vulnerability for such assets can be assessed. For this assessment, five categories of assets were evaluated using Geographic Information System and statistical analysis. The five categories of vulnerable assets include:

- **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by
- **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

The following tables provide a breakdown by municipal jurisdiction of the geo-referenced assets that were used for the vulnerability assessment.

Population

According to the U.S. Census 2013 block data retrieved from the North Central Texas Regional Data Center, the total population of Dallas County in 2013 was 2,414,690 people, with households. The count breakdown by municipal jurisdiction is provided in *the table below*

Table 5.18: Dallas County, Texas Population Counts

Jurisdiction	Population		Households	
	Population	Population Density (Sq. Mile)	Households	Household Density (Sq. Mile)
Unincorporated Dallas County	7186	97.1	-	-
Addison	13,056	2,981.5	7,682	1,753.88
Balch Springs	23,728	2,649.1	7,263	810.60
Carrollton	119,100	3,291.3	43,800	1,206.61
Cedar Hill	45,028	1,257.1	15,552	434.17
Cockrell Hill	4,193	6,988.3	1,087	1,811.67
Coppell	38,659	2,685.5	14,056	976.11
Dallas	1,197,816	3.517.6	462,000	1,356.75
DeSoto	49,047	2,268.8	18,775	868.41
Duncanville	38,524	3,429.2	13,132	1,169.37
Farmers Branch	28,616	2,426.3	11,549	979.56
Glenn Heights	11,278	1,562.5	3,819	528.95
Highland Park	8,564	3,818.1	3,453	1,541.52
Irving	216,290	3,227.4	82,236	1,227.04
Lancaster	36,361	1,200.8	12,602	416.18
Richardson	99,223	3,473.7	38,380	1,343.84
Rowlett	56,199	2,825.5	18,490	929.61
Sachse	20,329	2,076.3	7,120	727.27
Seagoville	14,835	794.2	4,486	240.15
Sunnyvale	5,130	310.1	1,737	105.02
University Park	23,068	3,321.4	7,232	1,296.06
Wilmer	3,682	634.8	1,130	192.18

Source: 2013 North Central Texas Council of Governments Population Estimates and US Census Bureau
http://quickfacts.census.gov/qfd/states/48/48113.html

Table 5.19: Population Predictions for Dallas County

Jurisdiction	Population 2010 Census	Population 2013 Estimate	Population 2014 Estimate	Absolute Change 2013-2014	Percent (%) Change 2013-2014
Unincorporated Dallas County	7186	7,340	7,400	60	0.8
Addison	13,056	13,840	15,180	1,340	9.7
Balch Springs	23,728	24,270	24,280	10	0
Carrollton	119,097	124,400	125,250	850	0.7%
Cedar Hill	45,028	45,570	45,820	250	0.5
Cockrell Hill	4,193	4,180	4,170	-10	-0.2

Jurisdiction	Population 2010 Census	Population 2013 Estimate	Population 2014 Estimate	Absolute Change 2013-2014	Percent (%) Change 2013-2014
Coppell	38,659	39,090	39,180	90	0.2
Dallas	1,197,816	1,221,800	1,232,360	10,560	0.9
DeSoto	49,047	49,930	50,520	590	1.2
Duncanville	38,524	38,800	39,170	370	1
Farmers Branch	28,616	28,800	29,660	860	3
Glenn Heights	11,278	11,410	11,440	30	0.3
Highland Park	8,564	8,500	8,480	-20	-0.2
Irving	216,290	223,720	227,030	3,310	1.5
Lancaster	36,361	36,980	37,150	170	0.5
Richardson	99,223	100,850	101,820	970	1
Rowlett	56,199	56,430	56,450	20	0
Sachse	20,329	21,090	21,580	490	2.3
Seagoville	14,835	15,020	15,130	110	0.7
Sunnyvale	5,130	5,270	5,280	10	0.2
University Park	23,068	22,930	22,860	-70	-0.3
Wilmer	3,682	4,060	4,120	60	1.5

Source: 2010 Census Data, 2013 North Central Texas Council of Governments Population Estimates

Property

There are an estimated 805,000 parcels in Dallas County, with an estimated $ 229,252,905,570 in total assessed value. Table 5.20 lists the total number and percentage of parcels by jurisdiction.

Table 5.20: Parcel Counts and Improvements Value

Jurisdiction	Number of Parcels	% of County Total	Total Assessed Value of Improvements (Buildings)[1]
Unincorporated Dallas County	1,063	0.13%	$258,595,230
Addison	5,982	0.74%	$4,224,666,150
Balch Springs	8,488	1.05%	$798,502,870
Carrollton	17,573	2.18%	$6,227,188,690
Cedar Hill	18,622	2.31%	$3,180,698,310
Cockrell Hill	1,192	0.15%	$95,335,410
Coppell	14,340	1.78%	$6,825,915,270
Dallas	377,442	46.85%	$114,944,584,370
DeSoto	19,151	2.38%	$3,343,254,630
Duncanville	14,386	1.79%	$1,951,744,170
Farmers Branch	12,346	1.53%	$5,306,748,980
Glenn Heights	3,499	0.43%	$318,443,520
Highland Park	3,804	0.47%	$6,119,678,350
Irving	57,032	7.08%	$22,947,290,400
Lancaster	15,108	1.88%	$1,949,523,630

Jurisdiction	Number of Parcels	% of County Total	Total Assessed Value of Improvements (Buildings)[1]
Richardson	27,481	3.41%	$7,900,837,320
Rowlett	19,308	2.40%	$3,181,996,410
Sachse	5,840	0.72%	$972,085,830
Seagoville	6,089	0.76%	$569,497,090
Sunnyvale	3,335	0.41%	$1,106,311,180
University Park	7,997	0.99%	$9,462,112,780
Wilmer	1,918	0.24%	$414,490,590

Source: County Data and Regional Hazard Assessment Tool

[1] *Includes public buildings (residential, commercial, industrial, agricultural, religion, government, education)*

Based on the type of information available for analysis, Dallas County's vulnerability assessment was conducted using two distinct methodologies, a Geographic Information System-based analysis and a statistical risk assessment methodology. Each approach provides estimates for the potential impact of hazards by using a common, systematic framework for evaluation of historical occurrence information provided by National Climatic Data Center, the Texas Forest Service, and NCTCOG Regional Hazard Assessment Tool. The results of the vulnerability assessment are provided by jurisdiction for each hazard analyzed.

Of the 11 hazards evaluated for Dallas County, two were analyzed using a Geographic Information System-based analysis, seven using a statistical risk assessment methodology, and the remaining three hazards using a qualitative analysis. The qualitative analysis was limited to three of the hazards due to lack of information, the inability to define specific areas of risk, and/or inexistence of historical records. Additional information regarding these events is unattainable at the present time, but will be an objective in the five-year planning cycle update. *Table 5.21* summarizes the methodology used for each hazard.

Table 5.21: Analysis used for Vulnerability Assessment

Hazard	Geographic Information System-based Analysis	Statistical Analysis	Qualitative Analysis
Dam Failure			✓
Drought		✓	
Earthquake			✓
Stream Bank Erosion			✓
Extreme Heat		✓	
Flooding	✓		
Hail		✓	
High Winds		✓	
Lightning		✓	

Hazard	Geographic Information System-based Analysis	Statistical Analysis	Qualitative Analysis
Tornado		✓	
Wildfire	✓		
Winter Storms		✓	

Summary of Vulnerability Assessment

A summary of the Dallas County vulnerability assessment for each hazard using geographic and statistical analysis is presented below.

Drought	
Population	According to National Climatic Data Center (NCDC) zero recorded injuries or fatalities have been recorded for drought events. There are no personal losses expected from drought events.
Improved Property	According to National Climatic Data Center (NCDC), $10,000 in property damage due to drought has been reported in Dallas County between 2008 through 2014. In the same period data indicates that the crop losses amounted to $93,000. Most of these losses were due to water shortages and crop losses on agricultural lands.
Emergency Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	Because of the nature of this hazard, there are no losses or direct impacts expected on critical infrastructure due to drought events.

Hail	
Population	According to National Climatic Data Center (NCDC), 1 injury has been recorded for hailstorm events between 2008 through 2014. Dallas County and its population are exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $1.143 billion dollars in property damage was reported due to hailstorm damage. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Dallas County indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in Dallas County are exposed to this hazard.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), there were 703 injuries and 23 fatalities recorded due to extreme heat between 2008 and 2014. Dallas County and its population are exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is zero impact of extreme heat to developed areas and the improved property in Dallas County is not exposed to this hazard.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is zero impact of extreme heat to buildings and the emergency facilities in Dallas County are not exposed to this hazard.
Critical Facilities	According to National Climatic Data Center (NCDC), there is zero impact of extreme heat to buildings, and the critical facilities in Dallas County are not exposed to this hazard.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is zero impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Dallas County

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been 3 fatalities from winter storms events between 2008 through 2014. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $20.1 million dollars of property damage per was reported as a result from winter storm and related events in Dallas County. No crop losses are expected from this hazard in Dallas County.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Dallas County are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), there have been 12 injuries and 2 fatalities recorded from high wind events between 2008 through 2014. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $6.214 million dollars in property damage was reported as a result of high wind events in Dallas County. No crop losses were reported over the stated period.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Dallas County are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), lightning events have caused one injury in Dallas County. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been $578,500 dollars of recorded property losses resulting from lightning in Dallas County.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Dallas County are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been 13 recorded injuries from tornado events in Dallas County between 2008 through 2014. All the population of Dallas County is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), over $400 million dollars in property damage and $3,000 dollars of crop damage was reported due to tornado events in Dallas County.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Dallas County are exposed to this hazard.

Wildfire	
Population	Based on geographical data, approximately 15% of Dallas County is vulnerable to wildfires.
Improved Property	According to National Climatic Data Center (NCDC), $300,000 dollars of property damage was reported between 2008 through 2014 due to wildfires. No crop damage was reported. None of the reported damages was reported in the property improvement areas of Dallas County.
Emergency Facilities	Based on geographic information there are zero fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are zero bridges, zero dams, zero wastewater treatment facility, and zero water treatment facility at risk from wildfire events.

Flooding	
Population	According to National Climatic Data Center (NCDC, one death and zero injuries have been reported in Dallas County as a result of flooding events between 2008 through 2014.
Improved Property	According to National Climatic Data Center (NCDC), $2.7 million dollars in property damage have been reported due to flooding in Dallas County between 2008 and 2014.
Emergency Facilities	There are zero emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are zero critical facilities located within the 100-year storm event.
Critical Infrastructure	Critical infrastructure facilities have been identified in the jurisdictional annexes. Some of these facilities and structures are designed to traverse or be located within the floodplain due to unavoidable circumstances. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Changes in Population and Development

Dallas County has experienced growth in both development and population since the mitigation plan was adopted. Table 3.1 shows population changes within the county. Other changes include building of new neighborhoods, commercial and business facilities, as well as infrastructure including roads and bridges.

It should be important to note that these changes in development do not represent an overall change to the participating jurisdictions vulnerability. The vulnerability assessment tables in each jurisdiction's annex address the effects on population and property.

Jurisdictions that participated in the 2009 Hazard Mitigation Action Plan, address these changes in their vulnerability analysis[1]. The analysis resulted in the incorporation of mitigation action items that included expansion of existing outdoor warning systems, expansion of storm water systems to handled increased rates and volume of runoff as well as enforcing stricter building codes. It was also acknowledged that not all developments and changes that took place in Dallas County since the plan was adopted resulted in altering the vulnerability.

[1] The vulnerability analysis on changes in development and population applies to only jurisdictions that participated in the 2009 HazMAP. A list of these jurisdictions is provided in Table 1.1. These effects are included in the vulnerability assessment of the applicable jurisdiction.

This page intentionally left blank.

SECTION 6: MITIGATION STRATEGIES

Based on the discussions and recommendations of Dallas County Hazard Mitigation Action Plan Working Group members, the goals and objectives for the mitigation Plan update were developed. Most of the goals and objectives identified were derived from the 2009 HazMAP that was already in place. It was decided to leave most of the goals as they were as they were broad enough to accommodate the hazards identified in both the Hazard Identification and Risk Assessment (HIRA) and the Capabilities Assessment conducted by each participating jurisdiction.

At the second Dallas County Hazard Mitigation Action Plan Working Group Meeting in July 2013, the working group reviewed the goals and objectives of the mitigation strategy from the 2009 HazMAP. The consensus among all members present was that the strategy developed for the 2009 HazMAP should remain, as it identified overall improvements to be sought in the Plan update.

The following goals and objectives were identified:

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Update, enhance, and enforce building codes and ordinances to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Buy-out repetitive loss properties
- ✓ ***Objective 2-C:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-D:*** Expand and coordinate Early Warning Systems currently in use

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in Dallas County

- ✓ ***Objective 5-A*:** Continue partnerships within the region to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

SECTION 7: ACTION ITEMS

Past Actions

At the Dallas County Hazard Mitigation Action Plan Working Group meeting, team members were asked to review the actions submitted in the 2009 HazMAP. Jurisdictions that participated in the 2009 HazMAP reviewed the previous action and determined whether the action had been completed, should be deferred as an ongoing activity, or should be deleted from the plan. The action items from the 2009 HazMAP are included in this section as they were written in during the writing of the plan. These action items were written and developed as per the FEMA regulations at the time. For the jurisdictions that were joining in the updated plan, each was given the opportunity to review the action items identified and were asked to determine which action item they could include as part of their jurisdictional plan.

Each previous action item identified below has a status report or comment section stating whether the action items will be deleted, is completed, is ongoing or will be deferred. Any action items marked as ongoing and/or deferred will be included in the jurisdictional annexes section of this updated HazMAP.

City of Cedar Hill

Cedar Hill	**Land Use Program: Identify undeveloped land within the floodplain and assess special use for conservation or recreation (Continue to maintain special use parks and green belt)**
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Cedar Hill Parks and Recreation Department and Cedar Hill Planning Department
Implementation Schedule	1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**The Master Drainage Plan: Increase the capacity of a storm drainage system that involves detention and retention ponds, drainage easements or creek and streams**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	N/A
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Cedar Hill Public Works
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**Building Codes: Adopt and enforce new building codes for construction of storm shelters and safe rooms in existing and new construction recreational, institutional, and commercial buildings**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Cedar Hill Building Inspections Department
Implementation Schedule	Within one year of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**Public Education: Provide a community awareness campaign concerning the risks and consequences of high winds especially in regards to the education of warning sirens. By educating the public on high wind, loss of life and property may be mitigated as they take steps to secure their property and respond to warnings**
Objective(s) Addressed	3-A
Hazard(s) Addressed	High winds
Priority (High, Medium, Low):	Medium
Estimated Cost	2,000
Potential Funding Sources	Existing City budget
Lead Agency/Department Responsible	City of Cedar Hill Fire Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**Expanded CodeRED (CodeRED is an automated notification Reverse 911 system) emergency notification system that is service available for emergency and non-emergency notifications. The system has the ability to be used for non-emergency notifications as well. This will reduce the loss of life to citizens during high winds events**
Objective(s) Addressed	2-D
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	10,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Cedar Hill	**Cert Training: To expand CERT training and activities that contribute to the education of mitigation for winter storms for community, family and workplace. Specifying training/education in winter storms will allow citizens to mitigate the potential harm caused during winter storm events**
Objective(s) Addressed	3-C
Hazard(s) Addressed	Winter Storms
Priority (High, Medium, Low):	Medium
Estimated Cost	5,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Cedar Hill Building Fire Department
Implementation Schedule	Within 12 Months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Coppell

Coppell	**Limit Floodplain Development: Do not allow development into areas that are within the floodplain**
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	No real costs
Potential Funding Sources	No funding sources
Lead Agency/Department Responsible	Engineering
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Coppell	**Public Education Program: A public education program will provide the public an understanding of their risk to tornado events and the steps to take to protect themselves, their family, and their property**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	No real cost other than handout materials
Potential Funding Sources	Normal operating budget of the emergency management division.
Lead Agency/Department Responsible	Coppell Emergency Management
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Coppell	**Homeowner Tornado Awareness: Promote the use of roof tie down straps to builders and homeowners to reduce the threat from a tornado**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	No cost to the city for implementation
Potential Funding Sources	N/A
Lead Agency/Department Responsible	Emergency Management, Building Inspection, Engineering
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Coppell	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Ongoing – Project is being managed and administered by the NCTCOG	

Coppell	**Buy-out in the Floodplain: Possible buy-out of remaining structures that are in the floodplain**
Objective(s) Addressed	2-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Low
Estimated Cost	$5 million
Potential Funding Sources	Possible funding sources could include mitigation grants from the federal government.
Lead Agency/Department Responsible	Engineering, Parks and Recreation
Implementation Schedule	No schedule at present
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas

City of Dallas	**Coordinate with dam owners to attain proper inundation studies for dam safety. Establish action items which prove to be more cost efficient**
Objective(s) Addressed	2-A, 2-C, 3-B
Hazard(s) Addressed	Dam
Priority (High, Medium, Low):	Low
Estimated Cost	Unknown – To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Emergency Management Department
Implementation Schedule	Within Two Years
HazMAP Update Status / 2013 Analysis Report	
In Progress	

City of Dallas	**Implement a single point of contact for the O & M of city-owned dams. Identify inundation zone and a cost effective approach to dividing maintenance responsibility**
Objective(s) Addressed	2-A, 2-C, 3-B
Hazard(s) Addressed	Dam
Priority (High, Medium, Low):	Low
Estimated Cost	Unknown - To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Emergency Management Department
Implementation Schedule	Within Two Years
HazMAP Update Status / 2013 Analysis Report	

City of Dallas	**Improve the levee system with improvements aimed at increasing their durability and longevity**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Low
Estimated Cost	To be determined
Potential Funding Sources	Corps of Engineers
Lead Agency/Department Responsible	City of Dallas Street Operations and Public Works-Transportations Departments
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
In Progress	

City of Dallas	**Improve floodplain management through wetland restoration and land buyouts throughout the city (specifically in the Cadillac Heights area in Southwest Dallas) areas that are most affected by flooding waters**
Objective(s) Addressed	2-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	Being determined
Potential Funding Sources	HMGP, PDM, Homeowners, City Budget
Lead Agency/Department Responsible	City of Dallas Code Compliance, City of Public Works and Transportation
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**Improve the quality of the outdoor warning siren system and work closely with the National Weather Service who generally forecast tornado storms before they materialize in the region**
Objective(s) Addressed	2-D
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	$2 Million
Potential Funding Sources	Bond money and general fund expenditures
Lead Agency/Department Responsible	City of Dallas Emergency Management
Implementation Schedule	5 years
HazMAP Update Status / 2013 Analysis Report	
Completed	

City of Dallas	**Ensure stricter building codes associated with roof tie-downs**
Objective(s) Addressed	1-A
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	N/A
Potential Funding Sources	N/A
Lead Agency/Department Responsible	Code Compliance
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	Ensure stricter building codes associated with new trailer homes
Objective(s) Addressed	1-A
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	N/A
Potential Funding Sources	N/A
Lead Agency/Department Responsible	Code Compliance
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	Implement the Texas Individual Tornado Safe Room Rebate Program
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
In Progress with NCTCOG	

City of Dallas	**In order to mitigate the negative impacts of drought in the COD, the City Council passed a resolution, subsequently adopted into City Code, which restricts water use for lawn and landscape irrigation**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	High
Estimated Cost	N/A
Potential Funding Sources	N/A
Lead Agency/Department Responsible	Section 49-21.1 Dallas Water Utilities
Implementation Schedule	Ongoing during times of measurable water shortages
HazMAP Update Status / 2013 Analysis Report	
Completed	

City of Dallas	**DWU provides low-flow devices to private residences and commercial properties as a means of conserving water in Dallas. Conservation of water is the best way to mitigate the effects of drought**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$2 Million
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	DWU
Implementation Schedule	Immediately once mitigation funds become available
HazMAP Update Status / 2013 Analysis Report	
Deferred for Future Funding	

City of Dallas	**Mitigate the severe impact of extreme heat in the COD, the city intends to purchase a stockpile of portable air conditioners. This stockpile will be deployed to assist the special needs populations within the city**
Objective(s) Addressed	5-B
Hazard(s) Addressed	Extreme Heat
Priority (High, Medium, Low):	Low
Estimated Cost	10,000
Potential Funding Sources	HMGP, City Budget
Lead Agency/Department Responsible	Environmental Health Services
Implementation Schedule	Prior to Summer 2008 Heat
HazMAP Update Status / 2013 Analysis Report	
Cancelled – DCHHS is now lead for this project	

City of Dallas	**The Trinity River Corridor Project is a multi-phase development of the Trinity River basin, which runs through a significant portion of Dallas. This project will augment and strengthen the levee system along the Trinity River basin thus mitigating the potential for Levee Failure**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Levee Failure
Priority (High, Medium, Low):	Low
Estimated Cost	To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Dallas Water Utilities
Implementation Schedule	After funding, 6 months to 2 years
HazMAP Update Status / 2013 Analysis Report	
See City of Dallas Annex	

City of Dallas	**The Trinity River Corridor Project includes several improvement items to improve Dallas floodways. This project would serve to expand the areas and improvements that this project would benefit**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Dallas Water Utilities
Implementation Schedule	After funding, 3-5 years
HazMAP Update Status / 2013 Analysis Report	
See City of Dallas Annex	

City of Dallas	**Dallas is purchasing 117 new outdoor, severe weather sirens to ensure 100% coverage over the entire city. These sirens will be used in alerting the people who live and work in Dallas of impending severe weather situations**
Objective(s) Addressed	2-D
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	$3.4 Million
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	OEM
Implementation Schedule	2 years
HazMAP Update Status / 2013 Analysis Report	
Project Completed 2012	

City of Dallas	**Earthquake Vulnerability Study: The COD is concerned with the potential devastating impacts of an earthquake within the city. Two fault lines run through Dallas and lie beneath many of the city's critical infrastructure. To better understand the potential impact of this hazard, Dallas intends to use mitigation grant funds to conduct a study of the city's risk to earthquake. From this study, future mitigation action items will be identified**
Objective(s) Addressed	5-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	City Manager's Office
Implementation Schedule	3 years
HazMAP Update Status / 2013 Analysis Report	
Deferred for Future Funding	

City of Dallas	**Earthquake Vulnerability Study: Following the Earthquake Vulnerability Study projects will be identified and a cost-benefit review conducted and projects implemented as appropriate**
Objective(s) Addressed	5-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	City Manager's Office
Implementation Schedule	3 years
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	**Purchase a series of lightning prediction devices to be deployed citywide. Not only would these provide advance warning to those in the area but the cumulative data collected by these devices will allow Dallas to identify additional action items tailored to mitigating the lightning hazard**
Objective(s) Addressed	5-A
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	Medium
Estimated Cost	$300,000
Potential Funding Sources	HMGP, City Budget
Lead Agency/Department Responsible	Communication and Information Services and Equipment and Building Services
Implementation Schedule	Within One year of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	**Mitigate harmful effects from lightning strikes occurred during tornadoes by installing lightning rods on the city's radio communications sites. These are integral to the city's ability to effectively communicate before, during, and after any major disaster. Mitigating this hazard will ensure their proper functioning**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	$60,000
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	CIS
Implementation Schedule	Immediately after funding
HazMAP Update Status / 2013 Analysis Report	
Deleted – Project not viable	

City of Dallas	**Dallas has identified those elevated roadways in the city that regularly freeze during winter storms. Dallas intends purchase and install several devices to monitor the surface temperatures of these elevated roadways. This information will allow the city to respond in advance of the worst icing on the critical thoroughfares**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Winter Storms
Priority (High, Medium, Low):	Low
Estimated Cost	$250,000
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	Streets
Implementation Schedule	Once funds available, STS will immediately begin purchasing and installing these devices throughout the city
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	**CIP Erosion Control 28-pb1111 The construction of a 500 LF, 20 Ft Gabion Wall to mitigate the effects of erosion and provide flood protection and storm drainage to properties located at 11655 and 11601 Audelia**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$638,150
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Dallas	**CIP Erosion Control 28-pb1112 The construction of a 2-site 300 total LF, 20 ft. Gabion Wall to mitigate the effects of erosion and provide flood protection and storm drainage to property located at 9730 Whitehurst**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$459,468
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 29-pb1607 The construction of a 130 LF, 30Ft Gabion wall to protect a Type II structure and mitigate the further effects of erosion located at 218 11th Street in Corinth**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$232,286
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Erosion Control 29-pb170976 The construction of a 320 LF, 25ft Gabion wall to protect several structures at 2671, 2675, 2679 and 2683 Deep Hill Circle and mitigate the further effects of erosion
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$571,782
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Erosion Control 30-pb1942 Protect a Type I Apartment building at 8849 Fair Oaks Crossing from the effects of erosion through design and construction projects
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$122,525
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 31-pb172765 Protect a Type I house at 9226 Greenville Ave and mitigate the effects of erosion by constructing a 70 LF, 20 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$107,209
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2424 Protect a Type I apartment building at 9222 Church Road and mitigate the effects of erosion by constructing a 280 LF, 12 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$285,891
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2425 Protect a Type I apartment building at 9750 Church Road and mitigate the effects of erosion by constructing a 280 LF, 12 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$285,891
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2426 Protect a type 1 building (Oak Wood Creek Condos) and mitigate the effects of erosion by constructing a 350 LF, 25 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$536,046
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2427 Protect a type 1 building (Oak hollow Condos) at 8109 Skillman and mitigate the effects of erosion by constructing a 300 LF, 18 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$459,468
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2428 Protect a type 1 building (Town Creek Condos) at 9727,9737,9747 Whithurst and mitigate the effects of erosion by constructing a 200 LF, 30 Ft Gabion Wall**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$357,364
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 32-pb2430 Protect a type 1 bridge at Jackson Branch & Fair Oaks Crossing and mitigate the effects of erosion by constructing a full Gabion slope protection system, Grout injection and the removal of existing construction materials**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$223,353
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 33-pb2643 Protect a type 1 home at 8668 Langdale from the effects of erosion and mitigate the further effects through design and construction projects**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$153,156
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 35-pb174098 Construction of two 40 LF, 15 ft. Gabion retaining walls to abut an existing wall, or remove wall to build one structure**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$81,683
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Erosion Control 36-pb1088 Design and Construction of Channel Improvements at South Fork Ash creek at John West**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$430,947
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 37-pb3618 Construction of a bridge Ash Creek Tributary & Province**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$153,156
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 38-pb1413 Design and Construction for Channel Improvement in 100 year floodplain at Cedar Creek bridge & Clarendon – may combine with Ewing to enclose channel between bridges**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,011,091
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 38-pb1415 Replace Bridge in 25 year floodplain at Cedar Creek Bridge & Moore
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,149,194
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 38-pb1416 Replace Bridge at Cedar Creek Bridge & Tyler
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,298,390
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 38-pb1417 Design and Construction – Channel Improvement (ATSF RR to Ewing)
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,580,143
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 38-pb1418 Design and construction - Addition of 2 culverts at Cedar Creek Culvert & Polk
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$646,421
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 38-pb1419 Design and construction - Addition of 3 culverts at Cedar Creek Culvert & Winnetka
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,221,019
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 39-pb1586 Design and construction – Installation of Bridge in 100 year floodplain at Coombs Creek Bridge & Brooklyndell
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$229,838
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 40-pb1592 Design and construction – Voluntary purchase of apartment site, road raised and bridge installed at Coombs Creek Bridge & Plymouth**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,335,938
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 41-pb1790 Mitigate the effect of flooding to 97 homes located in a Floodplain. Proposed channel improvements were rejected by the neighborhood during design. About 50 homes were flooded on 3/19/2006**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$15,514,135
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 42-pb1893 Design and construction - Addition of 1 culvert at Elmwood Branch Culvert & Edgefield
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$272,934
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 42-pb1912 Design and construction – Install bridge and channel improvement at Estes Branch Bridge & Bluffcreek
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,235,384
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 42-pb2361 Design and construction – possible voluntary buyout – 3 detention basins upstream of Seaton, Linfield & Prosperity to eliminate flooding of 7 homes
Objective(s) Addressed	2-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$4,301,131
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 43-pb2423 Design and Construction for improvements to the Church Road Bridge and Jackson Branch (Raise Bridge and Widen Span)
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,436,493
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 43-pb2429 Channel improvements to Jackson Branch from Kingsley to Church**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$861,896
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 43-pb2458 Design and construction – Channel improvements to relive flooding of approximately 38 structures at Joes Creek – W Fork Channel and Walnut Hill**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$3,591,235
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 44-pb2557 Design and construction – Addition of a culvert and raising of road at Knights branch and Dallas Drive
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,551,414
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 44-pb2688 Flood Retarding basin at confluence with Five Mile Creek. Protects 47 structures in a 100 year floodplain
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$5,027,728
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 44-pb171004 Analysis to consider elevating Colorado Blvd. to increase storage and reduce overtopping of road at Lake Cliff & Colorado Blvd**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$51,052
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 47-pb3204 Design and construction – Make improvements to levee, bridge and channel at Prairie Creek Bridge & Dowdy Ferry**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$15,083,187
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 47-pb3205 Design and construction – Install Bridge at Prairie Creek Bridge & Fireside
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,585,689
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 47-pb3260 Voluntary Purchase of property
Objective(s) Addressed	2-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$158,014
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 48-pb170975 Design and construction – Evaluation – Channel improvements at Richards Branch Channel and Joe Field. Channel is partially improved, inadequate and difficult to maintain**
Objective(s) Addressed	2-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$4,722,310
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 48-pb3539 Design and construction – Addition of 1 culvert and raise road at South Branch Culvert & Louisiana**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$143,648
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 50-pb3728 Design and construction – Raise Road and replace existing dam with 7ft collapsible dam at Turtle Creek & Blackburn
-Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,872,988
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	CIP Flood Management 50-pb3731 Design and construction – Replace bridge at Turtle Creek & Hall
Objective(s) Addressed	1-A
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,154,741
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Flood Management 50-pb3732 Design and construction – Channel improvements to relive flooding of approximately 38 structures**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Erosion/Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$3,591,235
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 Years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Storm Drainage 57-PB2905 Phase II – Engineering and construction for completion of pressure sewer, lower basin relief, and begin purchase of ROW for creek restoration In the Mill Creek Drainage Relief System**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$54,115,120
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Storm Drainage 57-PB2906 Phase III – Engineering and construction for remainder of creek area ROW, creek restoration, upper basin relief and re-routing of existing system In the Mill Creek Drainage Relief System**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$52,328,300
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Dallas	**CIP Storm Drainage 58-PB3037 Addition of 2 - 10x6 box culverts to mitigate the effects of flooding on Several structures and streets at Northwest Highway and Tulane**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$4,120,000
Potential Funding Sources	Capital Improvement Bond Program, HMGP, PDM
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2-5 years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Unincorporated Dallas County

Dallas County	**Dallas County Weatherization Assistance Program (WAP) – Heat Wave**
Objective(s) Addressed	5-B
Hazard(s) Addressed	Extreme Heat
Priority (High, Medium, Low):	High
Estimated Cost	$400,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Dallas County Health and Human Services
Implementation Schedule	Currently in progress and will continue indefinitely
HazMAP Update Status / 2013 Analysis Report	
In progress and on going	

Dallas County	**Dallas County Earthquake Study: Conduct a study to identify the vulnerability and potential for an earthquake. Identify cost-effective action items**
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$30,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Dallas County Department of Planning and Development
Implementation Schedule	Within 24 months of approval and receipt of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Dallas County	**Surge Protectors and Lightning Protection. Install Surge Protectors in County facilities to mitigate the damage from power outages to County services**
Objective(s) Addressed	2-C
Hazard(s) Addressed	High Wind, Tornado, Severe Weather
Priority (High, Medium, Low):	High
Estimated Cost	$150,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Dallas County IT Services and Department of Communication and Central Services
Implementation Schedule	Within 24 months of approval and receipt of funding
HazMAP Update Status / 2013 Analysis Report	
Project Completed	

Dallas County	**Flood Plain Management**
Objective(s) Addressed	2-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$1,000,000
Potential Funding Sources	Federal and state grant funds
Lead Agency/Department Responsible	Planning
Implementation Schedule	This project would begin upon receipt of grant funds and continue indefinitely or until all grant funds are exhausted
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Dallas County	**Water-Saving**
Objective(s) Addressed	1A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$150,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Facilities Management
Implementation Schedule	Within 24 months of approval and receipt of funding
HazMAP Update Status / 2013 Analysis Report	
In progress	

Dallas County	**Warning System**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	High
Estimated Cost	$650,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Office of Security and Emergency Management
Implementation Schedule	Within 24 months of approval and receipt of funding
HazMAP Update Status / 2013 Analysis Report	
In progress	

Dallas County	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
In progress – Working with NCTCOG to implement the program	

City of Desoto

Desoto	**CodeRED Maintain CodeRED emergency notification system that is available for emergency and non-emergency notifications. This will reduce the loss of life to citizens during hail events**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Hail
Priority (High, Medium, Low):	Medium
Estimated Cost	10,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Desoto Fire Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**(1) The City Engineer will annually identify drainage projects for inclusion in the City's Drainage Master Plan. These projects will improve or correct current drainage problems** **(2) The City Engineer will review all new development projects and require detention and retention ponds to reduce additional run off into local creeks and streams**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	City Budget and Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Desoto Development Services Department
Implementation Schedule	1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**(1) Adopt an amendment to the building code requiring installation of safe rooms in new single family construction, recreational, institutional, and commercial structures** **(2) Promote through public information bulletins and materials the installation of safe rooms or storm shelters**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	High
Estimated Cost	To be determined
Potential Funding Sources	City Budget and Mitigation Grant
Lead Agency/Department Responsible	City of Desoto Code enforcement Department
Implementation Schedule	Within 1 year of approval /funding
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**CERT Training and Public Education: Expand CERT training activities to include the public education of mitigation for hail events. By utilizing CERT teams citizens will be enabled to mitigate their properties from the damage caused by hail events**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Hail
Priority (High, Medium, Low):	High
Estimated Cost	5,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Desoto Fire Department
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**Enhance community awareness concerning the risks and consequences of hazards and educate the public on warning sirens during high wind events**
Objective(s) Addressed	3-A
Hazard(s) Addressed	High Wind
Priority (High, Medium, Low):	Medium
Estimated Cost	8,000
Potential Funding Sources	Hazard Mitigation Grant and City Budget
Lead Agency/Department Responsible	City of Desoto Fire Department
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**Enforce Building Regulations and ordinances that limit and prohibit development in the floodplain and require that floodplains be kept as open space**
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Desoto Engineering and Building Code Depts.
Implementation Schedule	1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**Increased participation in the National Flood Insurance Program and Community Rating System (CRS) program for homeowners within the floodplain, in order to reduce flood losses by notifying home owners within flood plain areas of available insurance programs**
Objective(s) Addressed	4-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	National flood Insurance Program
Lead Agency/Department Responsible	Homeowner's and Neighborhood Association
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**Adopt and then enforce building codes for construction of storm shelters and safe rooms in existing recreational, institutional and commercial buildings**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	City Budget and Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Desoto Building Inspections Departments
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

Desoto	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred - Funding	

City of Duncanville

Duncanville	**Reduce loss of life and or property damage due to severe weather through the CodeRED alerting systems**
Objective(s) Addressed	6-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	$7,000
Potential Funding Sources	Existing City Budget
Lead Agency/Department Responsible	Duncanville Fire Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Adopt and enforce building codes for construction of storm shelters and safe rooms in existing and new construction recreational, institutional and commercial buildings**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	HMGP
Lead Agency/Department Responsible	City of Duncanville Building Inspections Department
Implementation Schedule	Within 1 year of approval /funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work-in-kind
Lead Agency/Department Responsible	Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Retrofitting existing construction and implement design and construction for community shelters or public facilities**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	High
Estimated Cost	N/A
Potential Funding Sources	HMGP
Lead Agency/Department Responsible	City of Duncanville Building Inspections Department
Implementation Schedule	1-2 years of approval/funding
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Identify roads or utilities that need strengthening for inclusion in the Capital Improvement Program to reduce/eliminate the effects of flooding**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$70,000
Potential Funding Sources	Existing City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within 12 months of approval/funding and ongoing
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Adopt a Post-Disaster Recovery Ordinance to respond effective to a disaster event and regulate repair activity**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	Existing City Budget and Pre-Disaster Mitigation
Lead Agency/Department Responsible	City of Duncanville Public Works Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Review and update Master Drainage Plan annually to reduce the effects of flooding due to storm water run-off into Ten Mile Creek**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Duncanville Public Works Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Enhance community awareness concerning the risks and consequences of hazards and educate the public on warning sirens**
Objective(s) Addressed	3-D
Hazard(s) Addressed	Hail
Priority (High, Medium, Low):	High
Estimated Cost	$2,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Duncanville Fire Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**CERT Training and Public Education: Expand CERT training activities to include the public education of mitigation for hail events. By utilizing CERT teams citizens will be enabled to mitigate the effects of extreme heat can have on their health**
Objective(s) Addressed	3-C
Hazard(s) Addressed	Extreme Heat
Priority (High, Medium, Low):	High
Estimated Cost	$ 6, 000.00
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Duncanville Fire Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Duncanville	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Building Inspections Department
Implementation Schedule	Within one year of funding.
HazMAP Update Status / 2013 Analysis Report	
Deferred	

City of Farmers Branch

Farmers Branch	**Lightning Prediction: Mitigate harmful effects from lightning strikes by installing lightning rods on the city's radio communications sites. These are integral to the city's ability to effectively communicate before, during, and after any major disaster. Mitigating this hazard will ensure their proper functioning**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	High
Estimated Cost	$60,000
Potential Funding Sources	City Budget or grant funds
Lead Agency/Department Responsible	CIS
Implementation Schedule	Immediately after funding
HazMAP Update Status / 2013 Analysis Report	
Lightning protection was designed into the 2013-14 800 MHz P-25 compliant public safety radio system upgrade	

Farmers Branch	**Mitigate power outages caused by high winds or lightning during tornado and severe weather by installing lightning rods on the city's radio communications sites. These are integral to the city's ability to effectively communicate before, during, and after any major disaster. Mitigating this hazard will ensure their proper functioning**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornado, High Winds, Severe Weather
Priority (High, Medium, Low):	High
Estimated Cost	$60,000
Potential Funding Sources	City Budget or grant funds
Lead Agency/Department Responsible	CIS
Implementation Schedule	Immediately after funding
HazMAP Update Status / 2013 Analysis Report	
Lightning protection was designed into the 2013-14 800 MHz P-25 compliant public safety radio system upgrade.	

Farmers Branch	**Reduce loss of life and or property damage due to high winds through the implementation of the CodeRED alerting systems**
Objective(s) Addressed	2-D
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	$7,000
Potential Funding Sources	Existing City Budget
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Included but deferred due to funding in FY 2013-14 budgets. Will be requested in the FY 2014-15 Fire Department operating budget	

Farmers Branch	**EOC Enhancement: Provide greater protection of the Farmers Branch Emergency Operation Center by hardening exteriors and providing storm shutters**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	$100,000
Potential Funding Sources	CIP and Mitigation Grants
Lead Agency/Department Responsible	Police Department
Implementation Schedule	1-2 years or when funds are available
HazMAP Update Status / 2013 Analysis Report	
Included but deferred due to funding in FY 2013-14 budgets. Will be requested in the FY 2014-15 Fire Department operating budget.	

Farmers Branch	**Sandbagging Program: Develop a sandbagging program to protect the Valwood Improvement Authority Levees in the case of diminishing structural integrity during periods of heavy rain**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Levee Failure
Priority (High, Medium, Low):	Medium
Estimated Cost	$25,000
Potential Funding Sources	City's General Fund, Federal Grants and Valwood Improvement Authority
Lead Agency/Department Responsible	Farmers Branch Fire Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Deferred	

Farmers Branch	**Public Education: Develop a comprehensive public education and planning program for tornado safety and other hazardous conditions**
Objective(s) Addressed	3-D
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	High
Estimated Cost	$40,000
Potential Funding Sources	General Fund and Mitigation Grants
Lead Agency/Department Responsible	Fire Department
Implementation Schedule	1-2 Years
HazMAP Update Status / 2013 Analysis Report	
The Fire Department and City has adopted and been awarded National Weather Service "Storm Ready" designation.	

Farmers Branch	**Install an automatic barrier at the low-water bridge on southbound Marsh Ln. over Farmers Branch Creek**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$75,000
Potential Funding Sources	City of Farmers Branch Capital Improvement Fund or Federal grants.
Lead Agency/Department Responsible	City of Farmers Branch Engineering Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Deferred due to funding in FY 2013-14.	

Farmers Branch	**Replace low-water bridge at southbound Marsh Ln. and Farmers Branch Creek**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$805,000
Potential Funding Sources	City of Farmers Branch Capital Improvement Fund or Federal grants.
Lead Agency/Department Responsible	City of Farmers Branch Engineering Department
Implementation Schedule	3-5 Years or when funds are available
HazMAP Update Status / 2013 Analysis Report	
Ongoing-Currently working with Dallas County and FEMA to receive funding on this project.	

Farmers Branch	**Individual Safe Room Program Provide individual safe room program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Building Inspections Department
Implementation Schedule	Within one year of funding.
HazMAP Update Status / 2013 Analysis Report	
Ongoing-The City participated and was awarded Safe Room funding from a 2013 Mitigation award that was coordinated through the North Central Texas Council of Governments.	

City of Irving

Irving	Reinforce the Irving Flood Control District #1 levee system to meet existing design criteria for a FEMA Certified Levee
Objective(s) Addressed	1A, 2C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$5,500,000
Potential Funding Sources	General Revenue, Capital Improvement Bond Funds, HMGP
Lead Agency/Department Responsible	Public Works and Transportation
Implementation Schedule	Within two years
HazMAP Update Status / 2013 Analysis Report	
Mitigation project is still in progress. Objectives have been changed to meet current standards.	

Irving	Coordinate with Dam owners to attain proper Inundation Studies for Dam Safety. Establish action items which prove to be more cost efficient
Objective(s) Addressed	2-A, 2-C, 3-B
Hazard(s) Addressed	Dam
Priority (High, Medium, Low):	Low
Estimated Cost	Unknown - To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Emergency Management Department
Implementation Schedule	Within Two Years
HazMAP Update Status / 2013 Analysis Report	
Mitigation project is ongoing.	

Irving	**Flood Plain: Complete a review of the area in the four levee districts that would be inundated by a levee failure during a 100 year, 500 year, and standard project flood. Analyze all available routes out of the Levee Districts and any new streets that would not be flooded**
Objective(s) Addressed	2-A
Hazard(s) Addressed	Levee Failure
Priority (High, Medium, Low):	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Agency/Department Responsible	Public Works and Transportation
Implementation Schedule	Short Term
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Irving	**An LOMR will remove 56 homes and 90 manufactured homes from the floodplain as well as excavation of a long linear pond on West Irving Creek from Rogers Road to MacArthur Blvd. through Tim Markwood Park**
Objective(s) Addressed	2-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$888,000
Potential Funding Sources	Capital Improvement Bond fund, Water Utility Bond Fund
Lead Agency/Department Responsible	Public Works and Transportation
Implementation Schedule	Short Term
HazMAP Update Status / 2013 Analysis Report	
Mitigation project has not commenced.	

Irving	**Channel improvement on Delaware Creek from Live Oak to Cripple Creek and reconstruction of the Cripple Creek Bridge**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$1,100,000
Potential Funding Sources	Capital Improvement Bond Fund, Water Utility Bond Fund
Lead Agency/Department Responsible	Public Works and Transportation
Implementation Schedule	Long Term
HazMAP Update Status / 2013 Analysis Report	
Mitigation project is still in progress. The area of reconstruction and cost has increased.	

Irving	**Improve wind engineering measures and construction techniques. This can include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, window shutters, or interlocking roof shingles**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within 2 years of funding
HazMAP Update Status / 2013 Analysis Report	
Mitigation project has not commenced.	

Irving	**Strengthen Warning Systems Applying enhancements additional equipment to sirens, and/or acquiring NOAA weather radios for city owned building and/or department heads**
Objective(s) Addressed	6-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	To Be Determined
Potential Funding Sources	HMGP, City Budget
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	Within two years after funding
HazMAP Update Status / 2013 Analysis Report	
Mitigation project is ongoing. Objectives have been changed to meet current standards.	

Irving	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Low
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Building Inspections Department
Implementation Schedule	Within one year of funding.
HazMAP Update Status / 2013 Analysis Report	
Mitigation project is ongoing.	

City of Lancaster

Lancaster	**Enhance Storm Water Draining Capabilities: Enhance the storm drainage system capacity**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$60,000
Potential Funding Sources	City Budget, Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Lancaster Public Works Department
Implementation Schedule	1 Year
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Adoption and enforcement of building codes for the construction of storm shelters/safe rooms in existing buildings**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	High
Estimated Cost	Staff Time
Potential Funding Sources	City budget, Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Lancaster Building
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Completed	

Lancaster	**Reduce loss of life and or property damage due to high winds through outdoor through the CodeRED alerting systems**
Objective(s) Addressed	2-D
Hazard(s) Addressed	High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	$7,000
Potential Funding Sources	City budget
Lead Agency/Department Responsible	Lancaster Fire Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Promote land use program, identify undeveloped land within the floodplain and assess uses for conservation or recreation**
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	TBD
Potential Funding Sources	Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Lancaster Community Development Department
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Develop a comprehensive loss reduction program involving acquisition and relocation in areas along Ten Mile Creek to reduce loss and repetitive damage**
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	TBD
Potential Funding Sources	City Budget, Community Development Block grant, HMGP and Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Lancaster Community Development Department and Public Works Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Enhance Community Awareness: Enhance community awareness concerning the risks and consequences of hazards and educate the public on warning systems and NOAA radios**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Hail
Priority (High, Medium, Low):	Medium
Estimated Cost	$2,000
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Lancaster Fire Department
Implementation Schedule	1-2 years
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Participation in the NFIP and CRS: Increase participation in the National Flood Insurance Program and Community Rating System program for homeowners within in the floodplain to reduce losses**
Objective(s) Addressed	4-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	TBD
Potential Funding Sources	Flood Mitigation Assistance Program Grant
Lead Agency/Department Responsible	Lancaster Public Works Department
Implementation Schedule	Within 1 year
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Road and Utility Strengthening Identify roads and utilities that need strengthening for inclusion in the Capital Improvement Program to reduce the effects of flooding**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$55,000
Potential Funding Sources	City Budget, Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Lancaster Public Works
Implementation Schedule	Within 12 months
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

Lancaster	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Lancaster Building Inspections Department
Implementation Schedule	Within one year of funding.
HazMAP Update Status / 2013 Analysis Report	
Ongoing	

City of Rowlett

Rowlett	**Maintain "Storm Ready Community" Status**
Objective(s) Addressed	5-A
Hazard(s) Addressed	Hail
Priority (High, Medium, Low):	High
Estimated Cost	Minimum
Potential Funding Sources	Annual Budget
Lead Agency/Department Responsible	Emergency Management Office
Implementation Schedule	Ongoing
HazMAP Update Status / 2013 Analysis Report	
Completed	

Rowlett	**Public Awareness campaigns: Educate the residents about how to protect themselves from extreme heat**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Extreme Heat
Priority (High, Medium, Low):	High
Estimated Cost	$5,000-$10,000
Potential Funding Sources	Annual Budget and potential use of Federal Grant funding to produce education materials.
Lead Agency/Department Responsible	Emergency Management Office
Implementation Schedule	On going
HazMAP Update Status / 2013 Analysis Report	
Completed	

Rowlett	**Public Education: Increase emphasis on citizens and businesses awareness in dam failure areas about how to be prepared and what to expect in a dam failure event**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Dam Failure
Priority (High, Medium, Low):	High
Estimated Cost	$5,000-$15,000
Potential Funding Sources	Some funding from Federal Grants, other funding from City budget and donations to Volunteer programs (CERT, VIPS, Fire Corps).
Lead Agency/Department Responsible	Emergency Management Office
Implementation Schedule	On going
HazMAP Update Status / 2013 Analysis Report	
Completed	

Rowlett	**Reduce the impact of storms and related weather phenomena (tornadoes, hail, high winds) ensuring that city ordinances reflect compliance with International Code Council (ICC) 2000 standards**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	High
Estimated Cost	None
Potential Funding Sources	None needed
Lead Agency/Department Responsible	Planning
Implementation Schedule	On Going
HazMAP Update Status / 2013 Analysis Report	
Completed	

Rowlett	**Construct a new Public Safety Complex (Police, Courts, Fire Administration and Information Technology) built to withstand an E3 Tornado**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	High
Estimated Cost	35 Million
Potential Funding Sources	Proposed future Capital Improvement Plan, request mitigation grant funding to expire this objective.
Lead Agency/Department Responsible	City Manager
Implementation Schedule	2009
HazMAP Update Status / 2013 Analysis Report	
Ongoing - Partial completion (carryover). Tornado Safe Room for EOC was completed in 2006. Technology still vulnerable (i.e. lack of backup site and generators). Expanded siren system to ten sirens. Added black board as a notification system to the public. Looking at Retention Bond Issue for FY2015-16	

Rowlett	**Through effective land use, establish city parks along low-lying adjacent to Lake Ray Hubbard Capital Improvement Plan, City of Rowlett Park and Open Space Master Plan and Building Restrictions to reduce losses and repetitive damage**
Objective(s) Addressed	5-C
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	Unknown - To be determined
Potential Funding Sources	Currently some Capital Improvement Programs funding has been allocated to these projects.
Lead Agency/Department Responsible	Public Works, Parks and Recreation and Emergency Management
Implementation Schedule	On Going
HazMAP Update Status / 2013 Analysis Report	
Ongoing (carryover). Lake assessment done (Dam on Merritt Rd.)	

Rowlett	**Increase participation in National Flood Insurance Program by becoming a member of Community Rating System (CRS) program**
Objective(s) Addressed	4-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$15,000
Potential Funding Sources	Funding to be sourced through, operation budget, grant funding, and potential capital improvement funding.
Lead Agency/Department Responsible	Emergency Management, Public Works, and Public Information Officer
Implementation Schedule	FY 08
HazMAP Update Status / 2013 Analysis Report	
Carryover - NFIP (Yes); CRS (No)	

Rowlett	**Storm drain systems need to be redirected and improved on. Gardner Rd, Chiesa Stream and Waynes Way (228)**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Stream Bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$1.1M
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Not completed. Carryover. Other improvements were made that provide more significant improvement	

Rowlett	**Installation of grouted rip rock and regaining of bank areas in Lakecrest II, Meadowlark, Blue Quail, and Bob White Streets along Chiesa Stream (227)**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Stream Bank Erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	$700,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Not completed, Carryover	

Rowlett	**Storm drain system upsizing Miller Road from Rowlett Rd. to Rowlett Creek (123)**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$500,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Completed in 2007 with the Dallas County Miller Road Reconstruction Project	

Rowlett	**New storm drain system at Liberty Grove upsizing box culvert and piping on Pinehurst (160)**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$1.6M
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Completed	

Rowlett	**New storm drain system Lakeview Meadows Phase I and II. New storm drain system through Harvest Hill and Bobbie and new storm drain system through Lakeshore Drive (192)**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	$500,000
Estimated Cost	Medium
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Completed. However, there were drainage improvements completed in the alleys instead of the storm drain being placed in the street	

Rowlett	**Construction of a new Senior Center to include a storm shelter. Reinforced room for short term sheltering of Community Center, Wet Zone, and Senior Center**
Objective(s) Addressed	2-C
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Low
Estimated Cost	$2.0M
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Parks and Recreation Department
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Complete	

Rowlett	**Establish an AM radio station to broadcast road conditions, hazards, and closures. Additional capabilities would include additional watches and warnings, evacuation routes and shelter information**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Winter Storms
Priority (High, Medium, Low):	Medium
Estimated Cost	$10,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Cancel. Rowlett is using RTN 16 TV channel and blackboard	

Rowlett	**Water Wise Program. Install low water usage fixtures in all new / updated city facilities. Setting example for businesses and residents**
Objective(s) Addressed	1-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$10,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Completed. Added two new fire stations and enhanced 9-11 center	

Rowlett	**Purchase Lightning Prediction Systems for Wet Zone (water park), Community Park (baseball and golfing facilities), and Springfield Park**
Objective(s) Addressed	2-D
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	High
Estimated Cost	$25,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Parks and Recreation
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
Partial completion. Carryover. Completed LPS for Wet Zone, but not for Community and Springfield Parks	

Rowlett	**Individual Safe Room Program Provide individual safe room program**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	Within one year of funding.
HazMAP Update Status / 2013 Analysis Report	
Delete. COG has taken responsibility for grant and rebate administration. Rowlett will conduct post-installation inspections on the five safe rooms that were approved for Rowlett residents	

City of Sachse

Sachse	Through effective land use, establish city parks along low-lying areas Capital Improvement Plan, City of Sachse Park and Open Space Master Plan and Building Restrictions to reduce losses and repetitive damage
Objective(s) Addressed	1-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	Unknown - To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Agency/Department Responsible	Public Works
Implementation Schedule	2 Years after funding
HazMAP Update Status / 2013 Analysis Report	
The CIP has been updated this year to include flooding. We have added the Parks Department and the Fire Department to the Lead Agency and we have added on-going to the implementation schedule	

Sachse	Increase participation in National Flood Insurance Program and Community Rating System (CRS) program
Objective(s) Addressed	4-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$15,000
Potential Funding Sources	Funding to be sourced through, operational budget, grant funding, and potential capital improvement funding.
Lead Agency/Department Responsible	Emergency Management, Public Works, and Public Information.
Implementation Schedule	FY 08
HazMAP Update Status / 2013 Analysis Report	
We are now participating in the NFIP	

Sachse	**Address building codes and construction activities**
Objective(s) Addressed	1-B
Hazard(s) Addressed	Tornado
Priority (High, Medium, Low):	Medium
Estimated Cost	None
Potential Funding Sources	None
Lead Agency/Department Responsible	Planning Department
Implementation Schedule	On going
HazMAP Update Status / 2013 Analysis Report	
We have adopted the 2009 IBC and the 2008 NEC	

Sachse	**Coordinate with dam owners to attain proper inundation studies for dam safety. Establish action items which prove to be more cost efficient**
Objective(s) Addressed	2-A, 2-C, 3-B
Hazard(s) Addressed	Dam
Priority (High, Medium, Low):	Low
Estimated Cost	Unknown - To be determined
Potential Funding Sources	City Funds
Lead Agency/Department Responsible	Emergency Management Department
Implementation Schedule	Within Two Years
HazMAP Update Status / 2013 Analysis Report	
We have submitted the 2012 Dam Mitigation Plan to Dallas County	

Sachse	**Replace the 8 outdoor severe weather sirens to ensure 100% coverage over the entire city. These sirens will be used in alerting the people who live and work in Sachse of impending severe weather situations**
Objective(s) Addressed	2D
Hazard(s) Addressed	Tornado/High Winds
Priority (High, Medium, Low):	Medium
Estimated Cost	$500 Thousand
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	OEM
Implementation Schedule	2 years
HazMAP Update Status / 2013 Analysis Report	
Ongoing - Have replaced 3 and are on track to replace the remainder by 2016	

Sachse	**Purchase a series of lightning prediction devices to be deployed around parks and schools. Not only would these provide advance warning to those in the area, but the cumulative data collected by these devices will allow Sachse to identify additional action items tailored to mitigating the lightning hazard**
Objective(s) Addressed	5A
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	Medium
Estimated Cost	$30,000
Potential Funding Sources	HMGP, City Budget
Lead Agency/Department Responsible	OEM
Implementation Schedule	Within One year of funding
HazMAP Update Status / 2013 Analysis Report	
No Change	

Sachse	**Update the city's Drainage Master Plan to include new George Bush Turnpike build out**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$200,000
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
The city has drainage ordinances and detention requirements in place for all new construction. All future development in the PGBT corridor will be required to adhere to these ordinances	

Sachse	**Engineering analysis to consider elevating State HWY 78 to reduce overtopping of road**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream Bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$100,000
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within One year of funding
HazMAP Update Status / 2013 Analysis Report	
SH 78 was reconstructed in 2009-10, which included a drainage study. TXDOT will handle any further improvements	

Sachse	**Dam Break Analysis of city's Soil and Water Conservation District flood control dams**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within One year of funding
HazMAP Update Status / 2013 Analysis Report	
A mitigation plan was submitted to Dallas County in 2012	

Sachse	**Flood Protection Study: To reduce inundation of multiple arterial though fares near Long Branch of Muddy Creek**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$150,000
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
As arterial thoroughfares are improved from 2 lane asphalt to 4 lane divided, a drainage study will be completed as a part of the engineering design	

Sachse	**Make improvements to levee, channel and construct culvert improvements on Merritt Road near Willow Lake to reduce overtopping of road**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$1 Million
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
A drainage analysis of this area will be included in the future engineering design of the Merritt road widening project	

Sachse	**Voluntary purchase of property Woodbridge Parkway, Sachse and Merritt Roads**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$1 Million
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
The consideration of right-of-way acquisition is a part of all roadway improvement projects, and will be considered for Sachse road, Merritt road, and Woodbridge Pkwy	

Sachse	**Channel improvements to Long Branch of Muddy Creek at Woodbridge Parkway, Sachse and Merritt Roads**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$3 Million
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
As these thoroughfares are improved, drainage improvements will be part of the engineering	

Sachse	**Culvert and roadway improvements to Long Branch of Muddy Creek at Sachse and Bailey Roads**
Objective(s) Addressed	2A
Hazard(s) Addressed	Flooding/Stream bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$1 Million
Potential Funding Sources	HMPG, City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within Two years of funding
HazMAP Update Status / 2013 Analysis Report	
As these thoroughfares are improved in the future, drainage improvements will be a part of the engineering analysis, design, and construction	

Sachse	**Implement the Texas Individual Tornado Safe Room Rebate Program**
Objective(s) Addressed	3A
Hazard(s) Addressed	Tornadoes
Priority (High, Medium, Low):	Low
Estimated Cost	50% of (up to) $3,000 per shelter. Number of shelters to be determined
Potential Funding Sources	City Budget, HMGP, PDM, Homeowner, Work in kind
Lead Agency/Department Responsible	Responsible Building Inspections Department, Emergency Management, HMC
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
We participated in the NCTCOG program in 2013 and plan on future participation	

Sachse	**Develop a Public Education Program which will inform and educate citizens concerning the potential risks from an earthquake event and how to mitigate their homes and business**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$3,000
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
On going	

Sachse	**Develop a Public Education Program which will inform and educate citizens concerning the effects of drought. Provide information on home and business water conservation methods as a means to reduce the severity of drought.**
Objective(s) Addressed	3-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Low
Estimated Cost	$3,000
Potential Funding Sources	City Budget, HMGP
Lead Agency/Department Responsible	Emergency Management
Implementation Schedule	Within two years of funding
HazMAP Update Status / 2013 Analysis Report	
On going	

New Action Items

The Dallas County HazMAP Working Group recommended using the STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. However, each participating jurisdiction was free to use any methodology that was best suited to their needs in determining the priority of action items to include in this plan.

The planning team evaluated each action in terms of the overall costs, measuring whether the potential benefit to be gained from the action outweighed all costs associated with it. As a result of this exercise an overall priority was assigned to each mitigation action. The overall priority was denoted within each action by team members identifying actions as High (H), Moderate (M), or Low (L). An action that is ranked as “High” indicates that the action will be implemented as soon as funding is received. A “Moderate” action is one that may not be implemented right away depending on the cost and number of citizens served by the action. Actions ranked as “Low” indicate that they will not be implemented without first seeking grant funding and after “High” and “Moderate” actions have been completed. Note that these priorities are subject to change as funding becomes available to Dallas County and the jurisdictions therein.

In addition each of the past action items identified in the 2009 HazMAP plan, an analysis is included after each providing the status of the action item. The status states whether the action item is going to be deleted, is completed or will be deferred. Any actions that are marked as “deferred” or ongoing have been carried over and included in the respective jurisdictions annex in Section 9 of this plan update.

SECTION 8: PLAN MAINTENANCE

This section addresses Element A of the Local Mitigation Plan Review Tool.

REGULATION (44 CFR 201.6 LOCAL MITIGATION PLANS) ELEMENT A. PLANNING PROCESS
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

Since the last hazard mitigation plan written for the county in 2009, there has not been an official monitoring or maintenance program set in place. Even so, the county was very successful in implementing several mitigation actions. Numerous mitigation actions set forth in the 2009 plan were in progress or completed by the time of this update. This section sets forth the intended process for monitoring, tracking, and maintaining this Hazard Mitigation Action Plan (HazMAP).

Dallas County HSEM and each participating jurisdiction through the Dallas County Hazard Mitigation Action Plan (HazMAP) Working Group will be responsible for ensuring that this plan is monitored on an ongoing basis. Dallas County HSEM will be available to assist participating jurisdictions in facilitating reviews of the mitigation actions set forth in this plan and discuss progress. Each jurisdiction will be responsible to develop a list of items to be updated/added in future revisions of this plan.

The following is an explanation of how the participating jurisdictions will implement the updated plan, and continue to evaluate and enhance it over time. In order to ensure that the plan is current and relevant the following plan maintenance procedures will be addressed:

- ✓ Monitoring and evaluating the plan
- ✓ Updating the plan
- ✓ Incorporating the plan into other planning mechanisms
- ✓ Continued public involvement

Monitoring and Evaluation

Periodic revisions of the updated plan are required to ensure that the goals, objectives, and mitigation action plans are kept current. In addition, revisions may be necessary to ensure that the updated plan remains in full compliance with state and federal standards.

Plan Monitoring

Monitoring the plan update will be the responsibility of all of the jurisdictions, Dallas County, and additional planning team members. Each jurisdiction has designated one person or department responsible for the development and implementation of the plan. This team member's title is listed in **each jurisdictions respective annex**. The holder of the position

title provided in the table below will be responsible for leading the monitoring, evaluation and update efforts of the plan. This is also listed in **each jurisdiction's annex.**

The plan will be monitored by each jurisdiction annually. The department responsible will review mitigation actions submitted and develop a brief report if any changes are needed, such as recommending an action for funding.

Participating Jurisdiction	Department	Title
Dallas County (Unincorporated)	Office of Homeland Security and Emergency Management	Chief of Emergency Services/Emergency Management Coordinator
Town of Addison	Fire Department	Emergency Management Coordinator
City of Balch Springs	Emergency Management	Emergency Management Coordinator
City of Carrollton	Fire Department	Emergency Management Coordinator
City of Cedar Hill	Fire Department	Fire Chief, EMC
City of Cockrell Hill	Fire Department	Fire Chief & Emergency Management Coordinator
City of Coppell	Fire Department	Emergency Management Coordinator
City of Dallas	Office of Emergency Management	Senior Emergency Management Specialist
City of DeSoto	Fire Department	Fire Chief Emergency Management Administrator
City of Duncanville	Fire Department	Emergency Management Coordinator
City of Farmers Branch	Fire Department	Emergency Management Coordinator
City of Glenn Heights	Public Safety	Public Safety Director
Town of Highland Park	Public Safety	Assistant Police Chief
City of Irving	Office of Emergency Management	Emergency Management Coordinator
City of Lancaster	Fire Department	Fire Chief
City of Richardson	Office of Emergency Management	Emergency Management Coordinator Preparedness and Mitigation Coordinator
City of Rowlett	Fire Department	Fire Chief, Emergency Management Coordinator
City of Sachse	Fire Department	Fire Chief, Emergency Management Coordinator
City of Seagoville	Fire Department	Fire Chief , Emergency Management Coordinator
City of Sunnyvale	Fire Department	Fire Chief

Participating Jurisdiction	Department	Title
City of University Park	Fire Department	Fire Chief, Emergency Management Coordinator
City of Wilmer	Fire Department	Fire Chief, Emergency Management Coordinator

Plan Evaluation

As part of the evaluation process, team members from each jurisdiction will meet bi-annually. The first meeting will be held among those involved in the planning process for the specific jurisdiction. The second meeting will be held at the county level so that each county and the communities therein can assess any changes in risk, determine whether implementation of mitigation actions is on schedule or if there are any implementation problems (such as technical, political, legal or coordination issues), and reflect changes in land development or programs that affect mitigation priorities in their respective jurisdictions.

Updating

Plan Amendments

At any time, minor technical changes may be made to the plan to keep it current. However, any changes by a participating jurisdiction to the mitigation actions or modifications in the overall direction of the plan will be subject to formal adoption by the governing body of that jurisdiction. Once the amendment is approved it will be transmitted to the Texas Division of Emergency Management (TDEM).

In determining whether to recommend approval or denial of a plan amendment request, the following factors will be considered:

- ✓ Errors or omissions made in the identification of issues or needs during the preparation of the plan;
- ✓ New issues or needs that were not adequately addressed in the plan; and
- ✓ Changes in information, data or assumptions from those on which the plan was based.

Five (5) Year Review

Dallas County is committed to reviewing and updating this plan at least once every five years, as required by the Disaster Mitigation Act of 2000. Each participating jurisdiction in this plan update should continue to work together on updating this multi-jurisdictional plan. At the time of review, the plan will be thoroughly reviewed by each planning team member to determine whether there have been any significant changes that necessitate changes in the types of mitigation actions proposed. New development in identified hazard areas, an increased exposure to hazards, disaster declarations, the increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the content of the updated plan.

This plan review will provide Dallas County and participating jurisdictions with an opportunity to evaluate successful actions and document potential losses avoided due to the

implementation of specific mitigation measures. The plan review also provides the opportunity to address mitigation actions that may not have been successfully implemented as assigned. It is recommended that the planning team meet to review the plan at the end of three years, as grant funds may be necessary for the development of a five-year update. Due to the timelines for grant cycles, it is wise planning to begin the review process in advance of the five-year deadline.

Following the review, any revisions deemed necessary will be summarized and utilized according to the reporting procedures and plan amendment process outlined herein. Upon completion of the review and update/amendment process and after being approved by the local governing body, the revised plan will be submitted to the TDEM for final review and approval in coordination with FEMA.

Incorporation

At the beginning of the planning process, each team member was given a capability assessment survey to complete for their jurisdiction. The purpose of this survey was to identify the plans available for the incorporation of the plan update by inventorying each jurisdiction's relevant plans, programs and ordinances; identifying shortfalls or weaknesses that could hinder the incorporation or implementation of mitigation actions; identifying opportunities for establishing or enhancing mitigation policies, programs or projects; and establishing goals based on an understanding of the organizational capacity and technical capability of each community.

During meetings to create, adopt, update, or otherwise change any plan that has an effect on vulnerability to natural hazards, Dallas County and all participating jurisdictions will provide a copy of the most recent version of the HazMAP to appropriate parties. It will be recommended that the goals and strategies of new and updated planning documents are consistent with and support the goals of the Dallas County HazMAP as applicable. Provided there is sufficient political, fiscal, and administrative capability (see jurisdictional annexes), requirements and actions detailed in the HazMAP will be integrated into the appropriate plans, such as identified below, whenever appropriate.

The acting emergency management coordinator, in coordination with responsible plan personnel identified below, will recommend HazMAP components applicable to new or existing plans be integrated into the appropriate new or existing plan. Formal integration will be completed through the Dallas County Commissioner's Court or City Council for participating municipalities, following presentation of recommended integrations, discussion and vote to approve.

The table in each annex describes existing plans, personnel responsible for plan oversight, integration or review schedules, and applications for integration (see jurisdictional annexes for formal process authority).

Local and regional planning committees currently use comprehensive land use planning, capital improvements planning, and building code ordinances to guide development. The mitigation strategy, goals, objectives and actions outlined in this plan will be integrated into these existing mechanisms as applicable. Those mechanisms include the following:

- ✓ Floodplain ordinances

- ✓ Capital improvement plans
- ✓ Building codes and subdivision development (requirements for soils stabilization, siren requirements, drainage requirements, warning siren systems, etc.)
- ✓ Burn ban ordinances
- ✓ Water restriction plans
- ✓ Watershed plans
- ✓ FEMA floodplain mapping

**Each jurisdiction's individual integration plan can be found in their respective annex.

Once the plan is adopted, the HMPT will coordinate implementation with the appropriate departments and/or agencies within each jurisdiction.

Incorporation of the 2009 Plan

The capability survey distributed not only provided an assessment of current planning capabilities, but also served as a critical component in obtaining information on how the 2009 plan had been incorporated into various planning mechanisms.
It is the intention that with this plan update, revisions will be made and the plan incorporated into other mechanisms as there continues to be developments throughout Dallas County. These planning mechanisms include:

- ✓ Grant applications through FEMA, including the Pre-Disaster Mitigation (PDM) cycle and when there is a Disaster Declaration for Texas triggering Hazard Mitigation Grant Program (HMGP) funds
- ✓ Annual Budget Reviews
- ✓ Emergency Planning
- ✓ Capital Improvements Plans
- ✓ Floodplain Management and Fire Protection Plans

Continued Public Participation Involvement

Throughout the past five years, the Dallas County Hazard Mitigation Action Plan has been available to the public at the North Central Texas Council of Governments Emergency Preparedness Department's website since FEMA approval. Citizens and stakeholders have been able to access the plan for review and comment.

This plan will be posted on the Dallas County Office of Homeland Security and Emergency Management (HSEM) website, and the website of participating jurisdictions, where available, so that officials and the public will be able to provide ongoing feedback.

This page intentionally left blank.

.

SECTION 9: JURISDICTION ANNEXES

This section of the update plan discusses the internal planning processes, reviews the capability assessment as well as addresses the unique and/or geographic specific hazards that affect each of the participating jurisdictions. It will also discuss the mitigation strategies that the jurisdiction will employ to mitigate the unique and/or geographic specific hazards. Reference FEMA Crosswalk: Element A: Planning Process A1 through A6; Element B: Hazard Identification and Risk Assessment; B1 through B4; Element C: Mitigation Strategy; C1 through C6 of the Local Mitigation Plan Review Tool

In this section of the 2013 plan update, information was gathered from each jurisdiction on their planning and regulatory, administrative and technical, financial capacity, and educational and outreach capabilities, to carry out hazard mitigation activities. The findings were evaluated and attention was given to state, regional or local plans, regulations and development requirements. These included, but were not limited to, local plans, zoning laws, sub-division and site-specific regulations, building codes, flood insurance programs, natural resources and conservation statutes. Emergency Management, as required by Annex P, information was also gathered to help evaluate the effectiveness of existing mitigation measures, policies, plans, practices and programs. This section was previous included in the Chapter 2 of the original plan and developed into a standalone section of this updated plan to provide a better content flow.

Town of Addison Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The Town of Addison participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the Town of Addison. In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the Town of Addison. It contains capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Addison is located at latitude 32.9578 and longitude 96.8350. It sits at the Northern Dallas County line, bordering Farmer's Branch to the North, Carrolton to the Southeast, and Richardson to the West.



The Town of Addison, originally known as Peter's colony, was first settled in 1846 when Preston Witt built his first house on White Rock Creek. The town's name was changed to Addison after Addison Robertson, the second postmaster. Addison's first industrial breakthrough began in 1902 when the first cotton gin was built on Addison Road.

According to the North Central Texas Council of Governments (NCTCOG), the population of Addison is estimated to be about 16,000. The town has a total area of 4.4 square miles with all of it being land. According to the United States Census Bureau (2010) there are approximately 8419 housing units in the town consisting of single-family, multi-family, and other semi-permanent structure (i.e. manufactured homes, manufactured housing, boats, and RVs) units.

The Town of Addison operates under a system of local government called Council - Manager, wherein all powers of the Town are vested in the Town Council.



Addison consists of a plethora of small start-up businesses to large corporations, some of which include Mary Kay Cosmetics, United Surgical Partners, Hilton International, USAA, Zurich America, Behringer Harvard, Mohr Partners, Holt Lunsford, and Glazer's Family of Companies (addisontx.gov). The daytime population of this Town averages around 100,000, making this an ideal to establish a business.

Internal Planning Process:

The Town of Addison elected to become a participant in the Dallas County Multi-Jurisdictional Hazard Mitigation Plan. The town's staff fully participated in the regional planning processes and assessed the town's hazards and vulnerabilities.

The table below lists members of the town of Addison's Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the Town's critical facilities, provide relevant plans, report on progress of mitigation actions, and provide suggestion for mitigation actions for the town of Addison.

Name	Department	Position	Role
John O'Neal	Fire Department	Fire Chief/EMC	HMPT Coordinator, Hazard Identification, Plan Developer, Town Critical Infrastructure,
Lisa Pyles	Infrastructure, Operations & Development Services (Public Works)	Director	Submission of Flood Plain Documentation, Building Codes, Land Use, Hazard Identification, Town Critical Infrastructure,
Jason Shroyer	Infrastructure, Operations & Development Services (Public Works)	Deputy Director	Submission of Flood Plain Documentation, Building Codes, Land Use, Hazard Identification, Town Critical Infrastructure, GIS
David Jones	Fire Department	Deputy Director	Hazard Identification
Mark Acevedo	General Services	Director	Town Critical Infrastructure, Hazard Identification
Lynn Chandler	Development Services	Building Official	Flood Plain Documentation, Building Codes, Land Use

The Hazard Mitigation Planning Team (HMPT) met regularly during the planning process to assess data needs and to organize data collection. During the planning process, held on August 5, 2013, the hazard mitigation planning committee staff developed the jurisdiction specific hazard identification and risk assessment document and agreed upon the regional mitigation strategies.

Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, International Building Codes, 2009, Texas A&M Forest Services Wildfire Assessment Portal. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
Town and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards

International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Date	Meeting Summary
04/30/2013	Hazard Mitigation kick-off meeting with Dallas County
07/29/13	FD staff prepared for HIRA meeting and data compilation, provide IT Dept. with online survey information
07/30/13	Public Involvement survey made available on Town's website, promoted participation on website, Mayor's newsletter and social media page
08/05/13	Reviewed the Dallas County HIRA and conducted a risk assessment for Addison in respect to the Dallas County HIRA
08/05/13	Identified hazards and estimated potential losses from future hazard events.
08/05/13	Developed and prioritized mitigation actions to address the identified risks
08/20/13	EMC key staff competed documentation from HIRA meeting
10/02/13	Hazard Mitigation Planning Group conference call on strategies/updates
10/09/13	Key town stakeholders drafted mitigation strategies and activities, identified flood prone areas
10/15/13	Key town stakeholders and engineering consultant researched historical occurrences of flooding and flood prone areas, provided GIS mapping
10/22/13	Key staff completed draft capabilities assessment
10/31/2013	Public input survey closed
12/17/13	Key staff reviewed first draft Addison annex
12/27/13	Key staff reviewed final draft Addison annex
01/27/14	Invited public comment during 14-day review and comment period for Dallas County HazMAP
02/07/14	Key staff updated Addison action plans
03/27/15	EMC staff participated in Dallas Co. hazard mitigation planning group meeting to discuss plan revisions
04/14/15	Key staff worked on FEMA required revisions, submitted to Dallas Co.

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The town sought public input on hazards and mitigation strategies by participating in the Dallas County hosted internet survey. The town encouraged citizen participation in the survey by posting the link on the town's main webpage and in the mayor's weekly newsletter. The survey was made available through the town's website from July 30, 2013 through October 7, 2013. Copies of town's outreach materials are included in Appendix Section.

Public Review Period

On December 26, 2013 the town of Addison announced the availability of the Town of Addison Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the town's website inviting the public

to provide input into the draft plan. A public announcement was made through the town's website and town bulletins inviting the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period. Invitations were also made to various external stakeholders via email; these included the Emergency Management Coordinator for the Dallas-Fort Worth Airport and the Director of Risk Management with Dallas County Community College District. The public were encouraged to submit comments prior to November 29, 2013 for consideration and possible incorporation into this draft.

Survey Results

The Town of Addison made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the town's website and public outreach program was implemented to solicit public input.

A total of 21 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:
1) Solicit public input during the planning process, and
2) Help the Town to identify any potential actions or problem areas.

The majority of the survey respondents from the Town of Addison identified six hazards that were deemed as most likely to occur in their jurisdiction. Extreme heat, hail, high winds, drought, tornados and winter storms were the hazards that were rated the most likely to occur (had an average rating of above 3.00). In terms of impact the residents of Addison identified tornado, hail and extreme heat as potentially having the most impact on the community. Overall the Addison Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the town improve messaging and outreach efforts regarding realistic risk of these hazards. A significant number of Addison respondents indicated they would like to see an increase in public outreach programs (i.e. CERT) and better enforcement of building codes.

The results of the survey provide valuable information for the Town of Addison hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the town may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the town an opportunity to expand the list of stakeholders. As the town continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

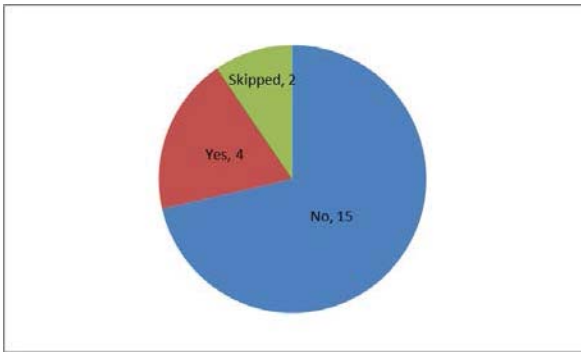
The Town of Addison will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix ADS C-2 of this annex.

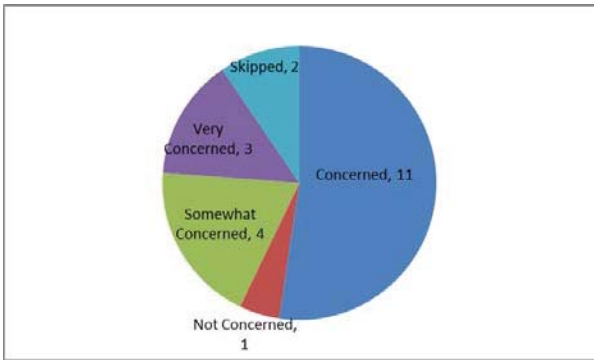
Survey Overview

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ Total number of responses submitted from the citizens of the Town of Addison - 21

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



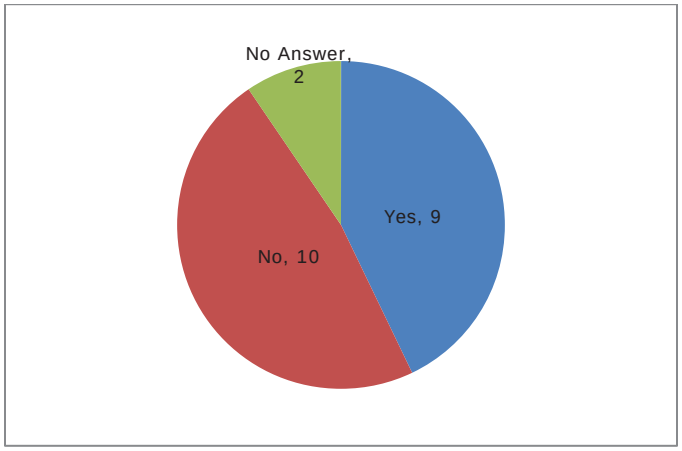
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.
    - ✓ Unlikely
    - ✓ Occasional
    - ✓ Likely
    - ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	No Answer	Total	Average Rating
Summer Heat	1	0	4	14	2	19	3.63
Hail	1	1	4	13	2	19	3.53
High Winds	1	2	4	12	2	19	3.42
Drought	1	2	4	12	2	19	3.42
Tornado	1	3	7	8	2	19	3.16
Winter Storms	2	4	4	8	3	18	3.00
Flooding	6	7	3	2	3	18	2.06
Stream Bank Erosion	9	5	3	1	3	18	1.78
Earthquake	10	2	2	0	7	14	1.43
Levee Failure	14	1	1	1	4	17	1.35
Dam Failure	15	1	1	1	3	18	1.33

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.
    - ✓ Limited
    - ✓ Minor
    - ✓ Major
    - ✓ Substantial

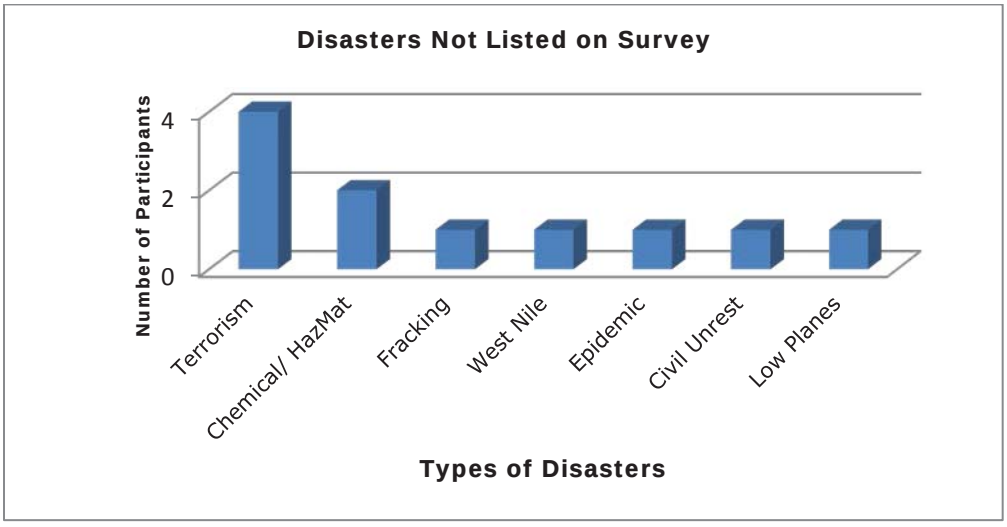
	Limited	Minor	Major	Substantial	No Answer	Total
Tornado	1	1	10	6	3	18
Hail	1	1	10	6	3	18
Summer Heat	1	4	8	5	3	18
Earthquake	10	6	0	1	4	17
High Winds	1	1	11	4	4	17
Winter Storms	2	5	8	2	4	17
Drought	1	4	6	6	4	17
Flooding	8	6	3	0	4	17
Dam Failure	15	1	1	0	4	17
Stream Bank Erosion	11	3	2	0	5	16
Levee Failure	13	1	1	0	5	16

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

Type of Hazard	Amount
Chemical/ HazMat	2
Terrorism	4
Fracking	1
West Nile	1
Epidemic	1
Civil Unrest	1
Low Planes	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	16
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	13
Improve, adopt and enforce building codes:	10
Implement the Texas Individual Tornado Safe Room Rebate Program:	9
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	8
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	6
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Improve on Land Use Program:	5
Purchase and improve on the Weatherization Assistance Program (WAP):	5
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	4
Structural Retrofitting of Existing Buildings:	4
Conduct an earthquake vulnerability study:	3
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Coordinate with Dam owners to conduct inundation studies of dams:	1
Total Respondents:	**17**

8. List any other strategies you think should be included in the plan:
   - ✓ Public education and outreach to increase public awareness
   - ✓ Monitoring and exercising of emergency plans so as to improve on them.

9. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ Continued public education and awareness.

Public Review Period

On December 26, 2013 the Town of Addison announced the availability of the Town of Addison Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the town's website inviting the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period.

The public were encouraged to submit comments prior to January 10, 2014 for consideration and possible incorporation into this draft. Figure AD1, provides a screen shot of the announcement.

The public comments were directed to the John O'Neal, Fire Chief and EMC for the Town of Addison. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Figure AD1: Screen Shot of Public Review Announcement



Capability Assessment:

The Town of Addison identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The Town council of Addison, including the councilmembers and mayor, have the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments

1. Fire Department

The 53 members of the Addison Fire Department proudly protect lives and property of people living, working and playing in Addison. Operating from two stations, the department provides fire protection and emergency services for the town, and aircraft rescue and firefighting protection for the Addison Airport. All members of the department are certified in emergency medicine and all vehicles are staffed with highly trained paramedics who can provide advanced life support services within minutes. Fire Department equipment includes two engines, two mobile intensive care unit (MICU) ambulances, a ladder truck, and an aircraft rescue fire fighting vehicle, a utility squad, a backup engine and a backup MICU ambulance. The department offers additional services such as residential smoke detector battery changes, home and business fire inspections, fire safety training classes, CPR training, and more.

The Addison Fire Department's vision statement is: "To achieve a level of service to our community and dedication to our employees that is second to none".

The vision includes a fully integrated Fire Department that provides for the administration, management and operations of the entire department. This fully integrated fire department will provide a diverse range of high quality and cost effective programs designed to protect the lives and property of those who live and work in Addison.

VALUES
The Addison Fire Department values are as follows:

TO OUR COMMUNITY

- ✓ The lives of our members and customers are our highest priority.
- ✓ We strive to be fiscally responsible in all we do.

- ✓ We will strive to earn the respect of our community by providing the best possible service based upon concern, compassion and professionalism in all endeavors.

TO OUR ORGANIZATION

- ✓ We work as a team to accomplish the Department and Town's mission and goals through open communication, cooperation and recognition of shared successes.
- ✓ We encourage and promote pride, loyalty and a sense of ownership in our department and our community.

TO EACH OTHER

- ✓ We are committed to openness and honesty in all situations.
- ✓ We value each member of the department and treat their diverse contributions with dignity, fairness and respect.
- ✓ We are accountable to those we serve and each other.

The Fire following are the divisions under the Addison Fire Department:

- ✓ Emergency Medical Services: The EMS/Training Division conducts all activities related to emergency medical services. This includes training, safety, employee development, and record maintenance, as well as seeing that supplies are kept up to date and equipment is state-of-the-art.
- ✓ Emergency Management: The Town of Addison has adopted a "multi-hazards" Emergency Management Plan that provides guidance on handling various emergencies and, should it become necessary, on accessing additional help from other resources (municipalities, counties, the State of Texas and the Federal Government, and private businesses). In the case of a large scale emergency, an Emergency Operating Center allows decision makers to work side by side at a specified location thus maximizing communication and effective responses. An outdoor emergency warning siren system includes three siren locations: Fire Station One, Fire Station Two, and the Village on the Parkway Shopping Center. Sirens are tested on the first Wednesday of every month at 1:00 p.m. (Sirens will not be tested if there is threatening weather in the area).
- ✓ Fire Operations Division: The Fire Operations Division is responsible for the daily work required to run an effective and efficient Fire Department: budgeting; hiring; developing personnel performance standards; regularly assessing personnel; maintaining vehicles, equipment, and facilities; and designing procedures and programs to respond to service requests. As personnel are cross-trained to provide both EMS and Fire related services, the Department maintains a constant state of readiness for emergencies. The Addison Fire Department answers approximately 2,600 calls for service each year of which 2/3's are EMS related. The Fire Operations Division comprises of the following:
    a. Personnel (48 professionals): Administration, Operations
    b. Apparatus (2 ambulances, 2 paramedic fire engines, an aerial ladder truck, a command vehicle and specialized equipment for response to airport emergencies and rescues
    c. Fire Stations (2 strategically located stations)
    d. EMS / Training
    e. Live Fire Drills

2. General Services

The General Services Department is the behind-the-scenes manager of the town's facilities, vehicles, and support services, and serves as the town's liaison to Addison Airport. Facilities are kept attractive, comfortable, and stocked with the day-to-day supplies needed to conduct business in a pleasant environment. Facilities include:

- ✓ Town Hall
- ✓ Finance Building
- ✓ Service Center
- ✓ Conference Center
- ✓ Theatre Center
- ✓ Stone Cottage
- ✓ Police Station
- ✓ Police Substation
- ✓ Fire Station
- ✓ Athletic Center
- ✓ Addison Circle Park Pavilion
- ✓ Water Tower
- ✓ Kellway Lift Station
- ✓ Celestial Pump Station
- ✓ Surveyor Pump Station

Fleet Services - Fleet Services maintains over 200 vehicles and other equipment: police cars, fire trucks, Air Rescue Fire Fighting vehicle, ambulances, motorcycles, dump trucks, aerial trucks, street sweeper, chipper, backhoes, vector truck, arrows/message boards, and trailers. Three ASE and/or EVT certified technicians are on staff to service vehicles. An extensive parts warehouse ensures cost efficient and timely repairs.

3. Infrastructure Operations and Services Department

The Infrastructure Operations and Services Department provides services for Addison's streets, ensures traffic signals are operated safely and efficiently, provides utility services such as water and wastewater, and is responsible for residential recycling and trash pick-up. The department also oversees implementation of capital improvements and provides engineering review of all new developments and inspections. The Infrastructure Operations and Services Department is comprised of the following programs:

- ✓ Engineering: The Engineering Division provides planning, engineering, and maintenance services for Addison's infrastructure including streets, traffic signals, drainage, water and wastewater. We oversee implementation of capital improvements, and provide thorough engineering review of all new developments and inspection services for construction projects.
- ✓ Streets/Traffic Signals/Railroad: Provides status information on traffic, problems on the roads as well as maintains street cleanliness and signal equipment on the streets.
- ✓ Trash & Recycling
- ✓ Utility Division: The Utility Division's mission is to provide a continuous delivery of potable and palatable water supply with adequate volume and pressure to all residential, commercial, industrial and public water consumers. Maintain the quality of wastewater for public health enjoyment, protecting wildlife, operating industries and for economic development. To protect consumers and to promote economic development, the Utility Division's mission is to provide superior-rated water with adequate volume and pressure to all residential and commercial consumers, and to maintain the quality of wastewater in order to protect public health and the environment.

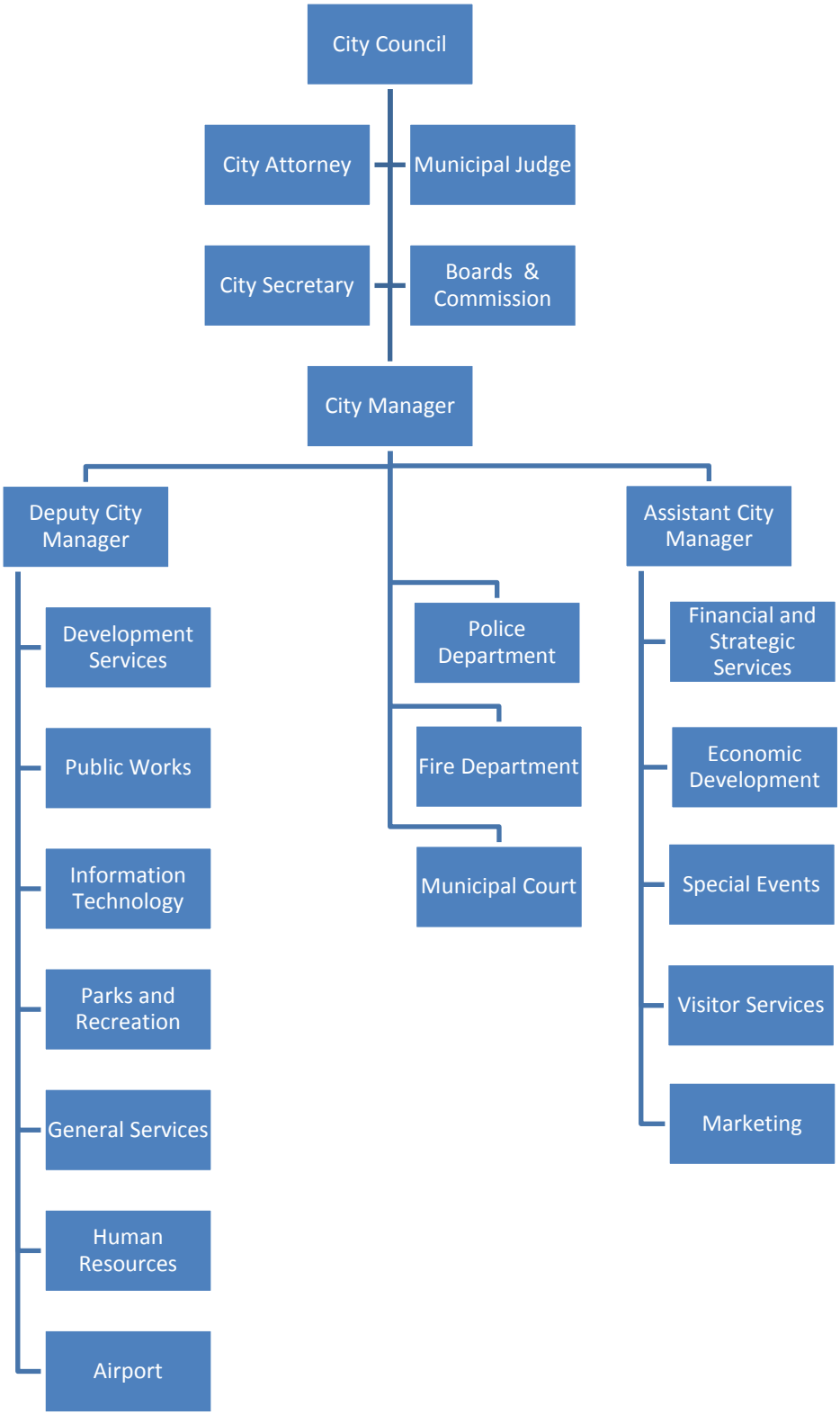
- ✓ Storm water Utility Fee & Pollution Prevention: Programs included in the program are as follows:
    a. Household Hazardous Waste Program
    b. Pet Waste Management
    c. Recycling
    d. Water Conservation
    e. Mulching Program
    f. After the Storm
    g. Texas Smartscape

4. Development Services Department

Development Services is responsible for the planning, development, and growth of Addison. The department is charged with protecting the public's health and welfare through enforcement of construction and maintenance codes; through inspections of restaurants and public facilities; and enforcing Environmental Protection Agency regulations. Development Services is composed of the following divisions:

- ✓ Building Inspection: Protects the public's safety through inspections of all new construction and remodeling projects. The building inspection division inspects to see that new construction meets nationally accepted standards for structural, plumbing, electrical, and fire safety.
- ✓ Code Enforcement: Maintains the safety and attractiveness of the Town by handling nuisance issues such as high weeds and grass, dumping on undeveloped property, graffiti, and illegal signs. Code enforcement also maintains neighborhood integrity by assuring that both residential and commercial properties are kept clean and maintained. Code enforcement also helps maintain the visual attractiveness of the community by the enforcement of Addison's sign ordinance. The Town of Addison inspects property for compliance with the International Property Maintenance Code.
- ✓ Environmental Services: Protects residents, businesses, visitors and guests from potential environmental hazards by monitoring and regulating situations that can impact public health such as West Nile abatement and traffic and air quality programs
- ✓ Planning and Zoning
- ✓ Signs

Figure 9.1: Town of Addison Organizational Chart



Summary of Capabilities Assessment

The tables below identify the current capabilities in the Town of Addison.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2013	No, No, Yes – Land Use
Capital Improvements Plan	Yes 2012	Yes – Storm water management, Yes – Enhance Storm Water Management Yes
Economic Development Plan	No	
Local Emergency Operations Plan	Yes 2012	Yes Yes – Outreach & Notifications Yes
Continuity of Operations Plan	No	N/A
Transportation Plan	No	N/A
Storm water Management Plan	Yes 2013	Yes – Urban Flash Flooding Yes -Strom Waster Management Yes
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	N/A
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** 2009 IBC
Building Code Effectiveness Grading Schedule (BGEGS) Score	-	**Score:**
Fire Department ISO rating	Yes	**Rating:** 2
Site Plan review requirements	Yes	

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	Yes Yes
Subdivision ordinance	Yes	Yes Yes
Floodplain ordinance	Yes	Yes Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Storm water
Flood insurance rate maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
How can these capabilities be expanded and improved to reduce risk?		
Adopt 2012 IBC & IFC to be current, increase funding and hire more staff		

Administrative and Technical

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Meet as needed
Mitigation Planning Committee	Yes	Meet as needed
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	As budgeted
Mutual aid agreements	Yes	Very comprehensive
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes	Yes Yes Yes
Floodplain Administrator	Yes	Yes, Yes, Yes
Emergency Manager	Yes	Collateral duty for the Fire Chief
Community Planner	Yes	Yes Yes
Civil Engineer	Yes	Third party contractor
GIS Coordinator	No	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	CodeRED Notification, Storm Siren System Yes
Hazard data and information	Yes	Limited
Grant writing	No	
HAZUS analysis	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Bond Funding for drainage and storm water management
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas or electric services	Yes	
Impact fees for new development	No	
Storm water utility fee	Yes	Yes, future storm water management projects
Incur debt through general obligation bonds and/or special tax bonds	Yes	Future capital improvements
Incur debt through private activities	No	
Community Development Block Grant	No	
Other federal funding programs	No	
State funding programs	Yes	TxDOT for airport projects
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Finance and Strategic Services Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire and disaster preparedness program
Natural disaster or safety related school programs	Yes	Fire Safety
StormReady certification	Yes	Public Outreach and Emergency Notifications
Firewise Communities Certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	X	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	X	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	X	
Transportation		
1. Does the transportation plan limit access to hazard areas?	X	
2. Is transportation policy used to guide growth to safe locations?	X	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	X	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?		X
2. Do environmental policies maintain and restore protective ecosystems?		X
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		X

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	X	
2. Is safety explicitly included in the plan's growth and development policies?		X
3. Does the monitoring and implementation section of the plan cover safe growth objectives?		X

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	X	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	X	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	X	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	X	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	X	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	X	
3. Do the regulations allow density transfers where hazard areas exist?		X

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		X
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	X	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		X
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		X
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	X	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		X
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	X	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	There are 17 policies in the town of Addison with a total of $16,541 in premiums being made as of January 2015
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial	FEMA NFIP or Insurance Specialist	There have been no claims made in the community
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	It is estimated that about 42 properties are within the floodplain in the town of Addison
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	There are not limited policy coverage in the community
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	Yes, ; The director of public works is the floodplain administrator
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Reviewing permit applications to determine whether proposed building sites, including the placement of manufactured homes, will be reasonably safe from flooding. Review all applications for development permits to determine that all permit requirements have been satisfied. Reviewing permits for proposed development to determine that all necessary permits have been obtained from those federal, state or local governmental agencies
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?	None	None

NFIP Topic	Source of Information	Comments
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Unknown - To be determined	The community has not had a CAV
Is a CAV or CAC scheduled or needed?	No	No
Regulation		
When did the community enter the NFIP?	Community Status Book	07/1980
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Yes, they exceed
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	A development permit must be obtained before construction or development begins within any area of special flood hazard to ensure compliance. Copies of plans need to submitted, drawn to scale showing the location, dimensions, and elevation of proposed landscape alterations, existing and proposed structures, including the placement of manufactured homes, and the location of the foregoing in relation to areas of special flood hazard
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?	N/A	N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by Town of Addison HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for the Town of Addison are as follows:

High Risk (over 65% on HIRA)	High Winds
Moderate Risk (41%- 65% on HIRA)	Hail Lightning Tornado Winter Storms Extreme Heat
Low Risk (12 %-40% on HIRA)	Drought Wildfire Flooding Earthquake Stream Bank Erosion Tornado
No Risk (Below 12% on HIRA)	Dam/Levee Failure

The three hazards that were deemed to have specific or unique vulnerability and impact for Dallas County included flooding, wildfire and dam/levee failure. Dam/Levee failure was not considered a risk as there are no dams within the town. The town is not within any inundation area of any dam in an adjacent jurisdiction.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the Town of Addison. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Addison**.**

The Hazard Mitigation Planning Team (HMPT) for the Town of Addison identified several natural hazards and man-made hazards that could affect the Town. The HMPT decided to focus on the natural hazards identified in Section 5 of this Update. This was done after reviewing and analyzing the 2009 HazMAP, the State of Texas Hazard Mitigation Plan, as well as other sources such as federal and state agencies. The hazards identified are provided in the Town of Addison's Hazard Identification and Risk Assessment (HIRA) as provided in Appendix A-1 of this annex.

The natural hazards identified that were rated of low risk were not included in this plan. This annex therefore focuses on specific geographical hazards that are unique the Town of Addison. These hazards include flooding' wildfire urban interface and dam and levee failure have been discussed below.

A. Flooding: As discussed in the earlier plan flooding is the most prevalent and costly disaster in the United States. Floods have the ability to roll boulders the size of cars, uproot trees, and transport building. Floods occur any time and are typically the result of dam failures, rains, or melting snows exceeding the absorptive capacity of the soil and the flow capacity of rivers, streams or coastal areas. At the point the water concentration hyper extends the capacity of the flood way, the water enters the floodplain. Floods are most common in seasons of rain and thunderstorms. Floods can be associated with other natural phenomenon such as rainstorms, thunderstorms, hurricanes, earthquakes, tsunamis and rapidly melting snow.

The Town of Addison can be affected by two types of floods though in limited areas. These include:

- ✓ Riverine Flood – Occurs in the floodplain of a river or stream when the amount of water and the rate at which the moving increases. This type generally can be forecast in advance, and proper precautions taken to save lives.
- ✓ Flash Flood – A type of Riverine flood that occurs after a heavy storm, when the ground cannot absorb the high amount of precipitation. This can occur when heavy precipitation falls on already-saturated soils. Flash floods occur rapidly with little warning.

Locations: The maps below depict areas in the Town of Addison that are potentially at risk of flooding as they lie in the 100 and 500 year floodplains.

- ✓ 12 properties with buildings potentially affected by 100yr floodplains (3 commercial / 9 residential)
- ✓ 29 properties with buildings potentially affected by 500yr floodplains (16 commercial / 13 residential)

There are three areas in the Town of Addison with properties in the floodplain. Green parcels are properties with buildings potentially affected by the 500Yr. Blue parcels are properties potentially affected by the 100Yr. A vulnerability report of the properties depicted in the maps below is provided in Table ADS.3. The table provides the total value of the structures in the properties represented.

National Flood Insurance Program (NFIP): The Town of Addison does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis. The town has no repetitive loss properties.

Beltline and Marsh



Spring Valley / Midway

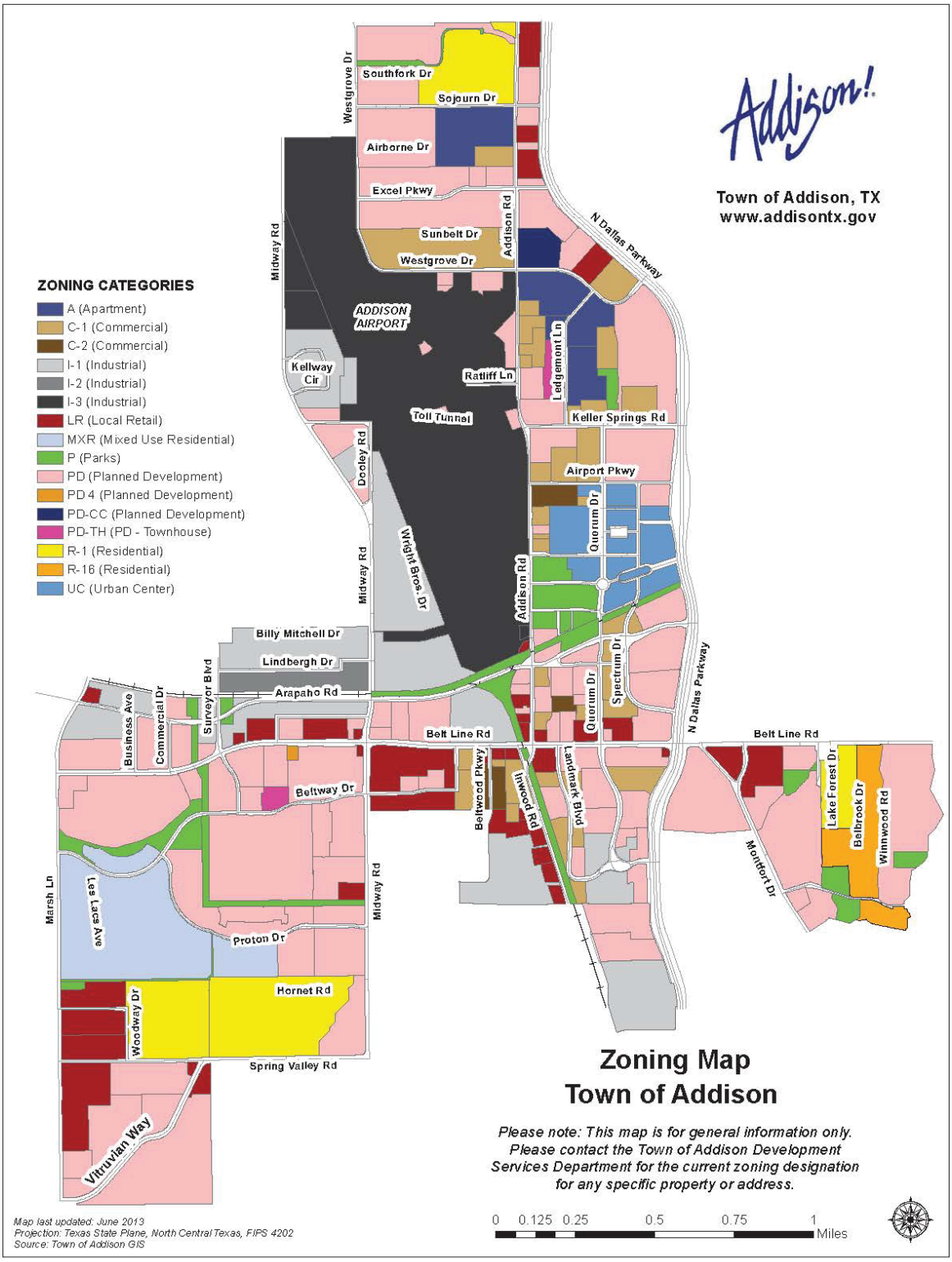


Beltline Rd / White Rock Creek / Winnwood



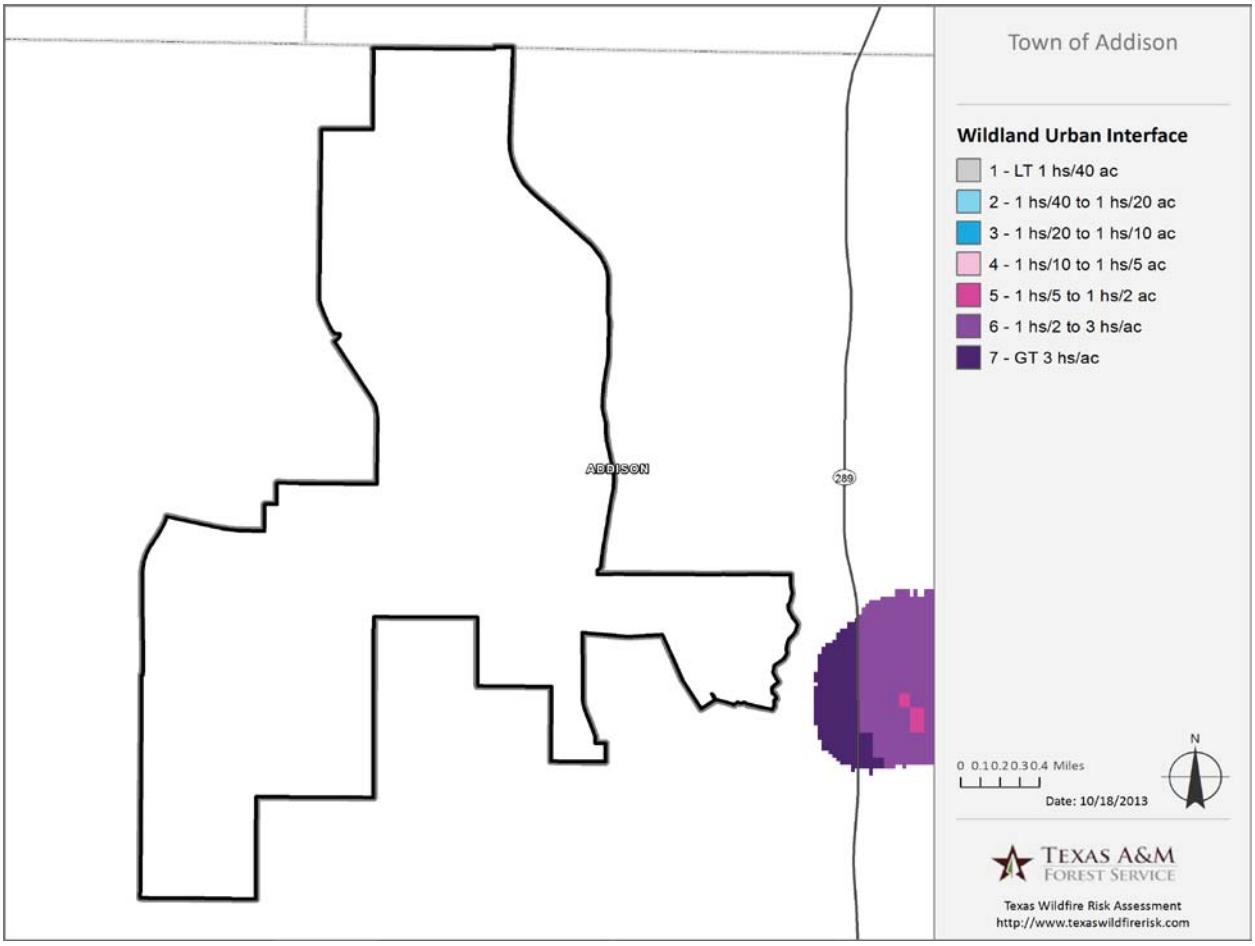
Zoning: Zoning is a form of land use control permitted by both the federal and state governments. According to the Texas Local Government Code, there is a requirement that zoning be in conformance with the comprehensive plan. When a zoning change is requested, the first step in considering the change is to determine what the Future Land Use Plan indicates as the appropriate use of the property. If the use differs substantially, the request should be denied. To grant the requested change would require that the Future Land Use plan be amended before the zoning change could occur. This requires careful consideration to be sure that the change is in accordance with the principles, goals and objectives of the Future Land Use Element of the comprehensive plan. The use of the Future Land Use plan in decision-making relating to zoning and subdivision approvals is to ensure that development and redevelopment are consistent with the Town's comprehensive plan. Each new development or redevelopment should be reviewed for general compliance to the comprehensive plan. **Map ADS.1** depicts the Zoning Map for the Town of Addison.

Map ADS.1: Zoning Map Town of Addison

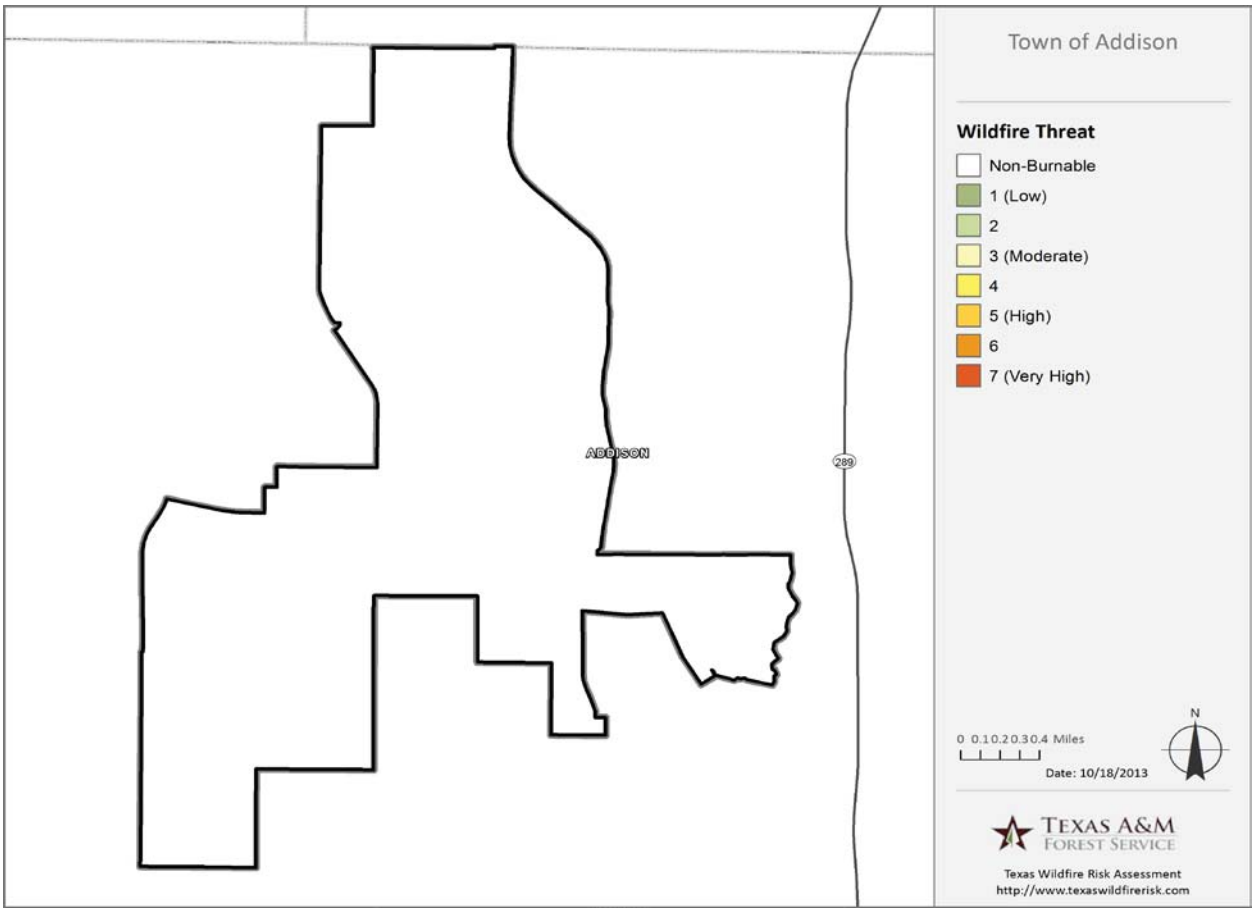


B. Wildland Urban Interface (WUI): According to the Texas A&M Forest Service none of the population of the Town of Addison lives within the WUI. **Map ADS.2** reflects the WUI for the Town of Addison., while **Map ADS.3** depicts the Wildfire Threat rating for the Town of Addison. As such WUI is not considered as a hazard that affects the Town of Addison and will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

Map ADS.2: Town of Addison Wildfire urban Interface



Map ADS.3: Town of Addison Wildfire Threat



C. Dam and Levee Failure: Dam/levee failure is not a threat to the Town of Addison as there are no dams within the Town and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the Town are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults within Addison and there is no historical data of earthquakes in the Town of Addison exists. However due to recent increase in earthquakes in the county and the lack for data, a data deficiency has been noted for this hazard. This hazard will need to be researched and studied in order to obtain data to address mitigation strategies.

E. Stream Bank Erosion: The Town of Addison is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the town of Addison. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Based on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the Town of Addison. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Addison. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Addison.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Addison.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Addison.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events. All emergency facilities are exposed to this hazard
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events. All critical facilities are exposed to this hazard
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events. All critical infrastructure is exposed to this hazard

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in Town of Addison due to winter storm events. All improved property is exposed to this hazard
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Addison are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Addison are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Addison are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of Town of Addison is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $3,000 of property damage has been reported due to high wind events in the Town of Addison between January 2008 through September 2013. All improved property is exposed to this hazard
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Addison are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Addison are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Addison are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in Town of Addison have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the Town of Addison. All improved property is exposed to this hazard
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Addison are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Addison are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Addison are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the Town of Addison. All the population of Town of Addison is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the Town of Addison. All improved property is exposed to this hazard
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Addison are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Addison are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Addison are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events.
Improved Property	According to National Climatic Data Center (NCDC), $75,000 of property damage was reported for Town of Addison. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Addison indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Addison are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Addison are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the Town of Addison are exposed to this hazard.

Wildfire	
Population	Based on geographical data 0 % of the population in Town of Addison lives within WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	According to National Climatic Data Center (NCDC), no property damage has been reported due to flash flooding.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	There is no critical infrastructure located within the 100-year storm event.

The tables below provide a summary inventory of the critical and essential infrastructure for the Town of Addison

Table ADS.1: Essential Infrastructure Summary Report for the Addison

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	17101 N. Dallas Parkway	1
Schools	4141 Spring Valley Rd. (private)	3
Schools	3939 Spring Valley Rd. (public)	
Schools	17001 Addison Rd. (private)	
Police Stations	4799 Airport Parkway	1
Fire Stations	4798 Airport Parkway	2
Fire Stations	3950 Beltway Drive	
Emergency Operations Facilities	4798 Airport Parkway	1
Addison Airport	Lat. 32° 58′ 06.81″ N Lon. 96° 50′ 11.21″ W	1

Table ADS.2: Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	$24,121,120.00	22	Within
Commercial	$100,476,960.00	19	Within
Industrial	N/A	0	N/A
Government / Public	N/A	0	N/A

Table ADS.3: List of Properties in the Floodplain – Town of Addison

Commercial / Residential	Street	Value
COMMERCIAL	MIDWAY RD	$19,611,010.00
COMMERCIAL	MIDWAY RD	$12,524,510.00
COMMERCIAL	SPRING VALLEY RD	$33,024,900.00
COMMERCIAL	BELT LINE RD	$5,026,460.00
COMMERCIAL	MARSH LN	$8,154,330.00
COMMERCIAL	BELT LINE RD	$1,266,000.00
COMMERCIAL	BELT LINE RD	$1,435,000.00
COMMERCIAL	BELT LINE RD	$830,000.00
COMMERCIAL	BELT LINE RD	$1,200,000.00
COMMERCIAL	BELT LINE RD	$907,500.00
COMMERCIAL	BELT LINE RD	$5,454,460.00
COMMERCIAL	BELT LINE RD	$1,176,640.00
COMMERCIAL	BELT LINE RD	$1,725,000.00
COMMERCIAL	BELT LINE RD	$1,151,990.00
COMMERCIAL	BELT LINE RD	$2,550,000.00
COMMERCIAL	BELT LINE RD	$904,200.00
COMMERCIAL	MARSH LN	$1,850,000.00
COMMERCIAL	MARSH LN	$739,170.00
COMMERCIAL	MARSH LN	$945,790.00
TOTAL		**$100,476,960.00**
RESIDENTIAL	WINNWOOD RD	$778,720.00
RESIDENTIAL	BELLBROOK DR	$380,960.00
RESIDENTIAL	WINNWOOD RD	$1,877,480.00
RESIDENTIAL	WINNWOOD RD	$1,243,570.00
RESIDENTIAL	WINNWOOD RD	$866,710.00

Commercial / Residential	Street	Value
RESIDENTIAL	WINNWOOD RD	$1,210,660.00
RESIDENTIAL	WINNWOOD RD	$1,232,800.00
RESIDENTIAL	WINNWOOD RD	$1,398,640.00
RESIDENTIAL	WINNWOOD RD	$1,153,200.00
RESIDENTIAL	BELLBROOK DR	$688,390.00
RESIDENTIAL	WINNWOOD RD	$899,580.00
RESIDENTIAL	BELLBROOK DR	$1,235,690.00
RESIDENTIAL	WINNWOOD RD	$805,810.00
RESIDENTIAL	WINNWOOD RD	$1,238,810.00
RESIDENTIAL	WINNWOOD RD	$794,900.00
RESIDENTIAL	WINNWOOD RD	$814,910.00
RESIDENTIAL	WINNWOOD RD	$880,910.00
RESIDENTIAL	WINNWOOD RD	$691,670.00
RESIDENTIAL	WINNWOOD RD	$942,790.00
RESIDENTIAL	WINNWOOD RD	$1,891,420.00
RESIDENTIAL	WINNWOOD RD	$1,377,760.00
RESIDENTIAL	CELESTIAL RD	$1,715,740.00
TOTAL		**$24,121,120.00**

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events..

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation ***efforts***
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the Town of Addison

- ✓ ***Objective 5-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*****:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Addison Action Item	Implement the Texas Safe Room Rebate Program for resident of the Town of Addison
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	3-A
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs.
Potential Matching Sources	Business donations.
Lead Department	Emergency Management
Implementation Schedule	Within one year of funds being approved.
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather.
Effect on New Buildings	Provides safe shelter in new building during severe weather.
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the North Central Texas Council of Governments.

Addison Action Item	Tree trimming program to minimize debris and protect power lines and infrastructure
Hazard(s) Addressed	High winds, winter storms, tornado and lightning
Goal/Objective	2-A, 3-A, 1-A
Priority	High
Estimated Cost	$100,000
Potential Funding Sources	Town of Addison
Lead Department	Town of Addison Parks Department
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than having to deal with the effects that debris can cause following a sever event
Discussion	This program will help prevent wind damage. Possible strategies include establishing standards for all utilities regarding tree pruning around lines and incorporating inspection and management of hazardous trees into the drainage system maintenance process

Town of Addison	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	Town of Addison Fire Department
Implementation Schedule	2 Years
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Addison Action Item	Retrofit Public Buildings and Critical Facilities to protect against natural hazards
Hazard(s) Addressed	High winds, winter storms, lightning, hail, extreme heat, tornados, flooding
Goal/Objective	2-B
Priority	Low
Estimated Cost	$500,000
Potential Funding Sources	HMGP, PDM, state and federal grants, Town budget
Lead Department	Town of Addison Facilities & Fleet Division
Implementation Schedule	2 years after the receipt of funding
Effect on Old Buildings	Old building that house critical facilities and equipment will be retrofitted to higher standards
Effect on New Buildings	New Town facilities will be built to FEMA 361 standards
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Public buildings and critical facilities can be retrofitted to reduce future severe weather events with action that can include improving roof coverings, anchoring roof-mounted heating, ventilation, and air conditioning units, retrofitting buildings with load-path connectors to strengthen the structural frames, retrofitting or constructing the emergency operations center to FEMA 361 standards, avoiding placing flag poles or antennas near buildings, implement lightning protection systems to prevent roof cover damage, requiring upgrading of reused buildings that will house critical facilities, protecting traffic lights and other traffic controls from high winds and winter weather

Town of Addison Action Item	Implement water-wise program for the Town of Addison. This program will include purchasing water saving equipment and fixtures in all Town facilities such as low flow fixtures
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$200,000
Potential Funding Sources	General Budget
Lead Department Responsible	Permits and Inspection Department
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

Town of Addison Action Item	Develop and Implement a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	3-D
Hazard(s) Addressed	Extreme heat and winter weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	General fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Town of Addison Fleet & Facilities Division in collaboration with Dallas County Health & Human Services
Implementation Schedule	AS funding is available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Town of Addison Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings.
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a data deficiency with earthquake hazard in Dallas County as they have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Addison Action Item	Lightning protection/alarms: These systems protect citizens and employees who utilize outdoor recreation and sports facilities during weather events that produce cloud to ground lightning
Hazard(s) Addressed	Lightning
Goal/Objective	2-C
Priority	Medium
Estimated Cost	$6,000/each
Potential Funding Sources	Town Budget & Hazard Mitigation Grants
Lead Department	Parks & Recreation Department
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Installing such systems will help warn staff and other users of Town outdoor facilities to seek shelter

Town of Addison	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted hazard assessment section of this annex, there is a data deficiency with stream bank erosion in Dallas County. Conducting studies will help develop a database to track the vulnerability to stream bank erosion in Dallas County including the Town of Addison

Town of Addison Action Item	Install an automatic barrier at the low-water bridge on Marsh Lane
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$75,000
Potential Funding Sources	Town of Addison Capital Improvement Fund or Federal grants.
Lead Agency/Department Responsible	Town of Addison Engineering Department
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of installing this automatic barriers will save lives
Discussion	Mitigation will be implemented by protecting bridge using stabilizing and armoring techniques to prevent the vulnerable areas of the bridge. In addition the barriers will also prevent bridge users from accessing the bridge during flood events

Plan Maintenance

This section sets the intention for the Town of Addison to monitor, evaluate, and update this plan on a regular basis.

The Addison Fire Department will be responsible for ensuring that this annex section is monitored on an on-going basis. The Emergency Management Coordinator/Fire Chief will also be responsible for leading the monitoring, evaluation and update efforts of the plan.

The town is actively involved in the Dallas County Emergency Management Coordinators (EMC) meetings and this will be the venue for revisiting the Dallas County HazMAP. Addison Fire Department will call the Addison Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Addison Fire Department will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Addison Town Council. The Addison Hazard Mitigation Team will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the Town of Addison or its communities, legal changes, and other events may trigger a meeting of the Addison Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The Town of Addison is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Town of Addison will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the town will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the Town of Addison will engage stakeholders in community emergency planning.

Plan Integration: The Town of Addison will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
Town of Addison	Town Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	Town Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Manager	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

c. Survey Results

Appendix ADS - A1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Town of Addison
Hazard Identification and Risk Assessment (HIRA)
Date: August 05, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4.00	1	2	2	5	80%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	1	2	1	4	50%
Winter Storms	2	3	2	1.33	1	1	1	3	44%
Tornado	4	4	4	4	2	3	2	7	57%
Flooding	2	2	2	2	1	2	2	5	40%
Extreme Temperatures/Heat	4	4	2	2	2	1	1	4	50%
Wildfire	1	1	1	1	1	1	1	3	33%
Urban Fire	2	1	2	4	2	2	1	5	80%
Earthquake	1	1	3	3	3	3	3	9	33%
Levee/Dam Failure	1	1	1	1	3	3	3	9	11%
Drought	4	4	2	2	2	2	2	6	33%
Stream Bank Erosion	1	1	1	1	1	1	1	3	33%

Note: The Town of Addison HIRA only considered natural hazards that were discussed in the Base Section of the plan, i.e. Section% of this plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix ADS –B1: Supporting Documentation

Welcome to the Town of Addison Official Website

- West Nile Awareness and Information
- The Town of Addison in collaboration with the Dallas County Office of Homeland Security and Emergency Management (HSEM) is facilitating and coordinating an update to the Dallas County Hazard Mitigation Action Plan (HazMAP). The purpose of this Plan Update is to meet the FEMA requirements to provide updated hazard mitigations plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants. The Town of Addison and Dallas County is encouraging residents to provide input and thoughts on natural hazards that may impact the region. Please click here to complete the survey. Thank you.
- They've done it again! Congratulations to the Town of Addison Finance Department for receiving the Government Finance Officers Association "Distinguished Budget Presentation" Award for its FY 2012-2013 budget! Check out the press release and official award letter from GFOA here
- **The Town of Addison has earned a "GOLD" Leadership Circle Award for implementing financial transparency**

Texas Comptroller
Leadership Circle
Gold Member

- **For regular updates on road closures and traffic impacts related to the LBJ reconstruction project, please visit the LBJ Express website**
- **The Town of Addison has established a Stormwater Utility** - this will begin to address a number of capital projects and maintenance items related to stormwater (drainage) that are not currently funded through the General Fund. Monthly charges for stormwater (drainage) service will be included in utility bills beginning in January 2013. Please click on following links for more information: **Stormwater Credit Policy**, **Stormwater Utility Fee Credit Application**, **Stormwater Utility FAQ**
- **Addison Legacy Foundation**
- **Addison Citizens Assisting Police (ACAP)** - For more information on this program click here
- **New Business Registration Ordinance** - Addison is always striving to provide optimal services to our business community which is why public safety is a top priority for the Town of Addison. To that end, Addison has adopted a **Business Registration Ordinance, No. 011-073**, which begins January 1, 2012. All businesses in the Town of Addison who occupy commercial, retail, office and industrial space will be required to register annually with the Town by completing a **Business Registration** and submitting it to the Town along with a $50 processing and administration fee. **Click here for Frequently Asked Questions**
- The Town of Addison is implementing **Stage 1** of our **Drought Contingency Plan**. Please limit lawn watering and car washing to the hours between 8:00pm and 9:00am and call 972-450-2871 to report any suspected leaks immediately.
- **Addison Airport Receives Excellence in Construction Safety Award**
- **Tree Planting Campaign for George Herbert Walker Bush Elementary *Addison, Texas***
- **Mayor's Newsletter Signup** - To receive periodic email notifications from the Town regarding the Addison Accolade, special events, items of interest, messages from the Mayor and more please sign up!
- **Dallas I.S.D George H.W. Bush Elementary in Addison**
- **Access Mayor's, City Council Members' and Department Directors' Blogs**
- **FY 2011-2012 Comprehensive Annual Financial Report**
- **Financial Review 2nd Quarter 2013**
- **Watch Public Meetings Live** - Watch live webcasts and/or on-demand videos of Addison public meetings
- **Have you heard about the Access Addison ® program?** - Access Addison ® is an internet-based membership program that contacts its members with special offers from great Addison restaurants, hotels and information on up-coming events. You will receive, via email, special offers and discounts available only to Access Addison ® Members!
- **Take a Tour of Addison Circle** - One of the most innovative urban plazas in the country
- **Vitruvian Park is located in the Town of Addison** - Conveniently located just north and west of two of the most important arterials in the Dallas metropolitan area, LBJ Freeway and the Dallas North Toll Road, Vitruvian Park offers convenience and easy accessibility to world class amenities, renowned shopping including the Dallas Galleria Mall and recognized schools
- **Join Addison Addvocates Volunteers** - Interested in giving back to the community and receiving the many benefits of volunteering?
- **Addison Non-smoking Restaurants** - (Updated March 2013) The Town of Addison believes that private establishments should set their own individual smoking policies and that such policies should be consumer-driven, rather than mandated through government action. Over 100 Addison establishments have chosen to ban smoking inside their restaurants. For a listing of restaurants allowing smoking indoors, click here.

- **Coffee with the Mayor 1st Wednesday of the month at 10am - Dunn Bros Coffee**
3725 Belt Line Rd, (972) 406-9711
- **Coffee with the Mayor 3rd Thursday of the month at 6pm - Astoria Caffe**
15701 Quorum Dr, (972) 239-5853
- Make Addison Your Destination!
- The Town of Addison website is a Sunny Award winner!



About Addison



Addison is a bustling town alive with entrepreneurial spirit where small start-ups to major corporations are headquartered including Mary Kay and Palm Harbor Homes. Within a compact urban center, Addison has a unique combination of towering office buildings, upscale shopping, beautifully landscaped residential communities, award-winning parks, 22 hotels and over 170 restaurants, all within a 5 minute drive from anywhere in town. Addison is located 13 miles north of downtown Dallas, 16 miles northeast of DFW airport, 11 miles north of Love Field airport and about a mile from The Dallas Galleria. The Addison Airport is a convenient way to arrive for charter and private planes. World-class shopping, excellent restaurants, friendly people and beautiful spaces make Addison a fun place to live, work, play and visit.

Vision Statement -
To be an attractive, thriving community that delivers the 'Addison Way' with superior services, enhanced sense of community, and a safe, high-quality experience for residents, businesses, visitors, and all other stakeholders. Addison will lead the way in creativity, innovation and fiscal responsibility within a culture of excellence and kindness.

© 2013 Town of Addison, TX Sitemap Privacy Policy Accessibility News Feed

Addison Annex to the Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update

The Addison Fire Department and the Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

The Addison Fire Department, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.

This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

Click here to access the Addison Annex.
Click here to access the County Draft Base Plan.

This comment period will give the public the opportunity to review the draft and make comments regarding the draft base plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft base plan and Addison Annex. Any comments or suggestions can be emailed to Michael Gaciri at OSEMPlanning@dallascounty.org or joneal@addisontx.gov

You may also print, fill out and forward the Public Comment Form to:

John O'Neal, Fire Chief/EMC
Town of Addison
4798 Airport Parkway, Addison, TX 75001

© 2013 Town of Addison, TX Sitemap Privacy Policy Accessibility News Feed

Outreach Materials

Addison TX Blog » 8.16.13 Weekly Update from Mayor Todd Meier

Addison! Blog Social Network

The Town
Public Safety
City Happenings

Events
Special Events

Business
Conference Centre
Economic Development

All Categories

Search

Home / City Happenings / 8.16.13 Weekly Update from Mayor Todd Meier

8.16.13 Weekly Update from Mayor Todd Meier

August 16, 2013 | by Todd Meier, Mayor | 0 Comments (add yours)

Dear Neighbor,

The clouds, rain and cooler temperatures have been a nice respite from the intense heat of last week and maybe the hint of fall and the beginning of the new school year. In fact, Kinder and New student registration began today and continues next week at our George H. W. Bush Elementary School. Congratulations to principal Shay Dash and her outstanding team of educators at Bush Elementary for being one of only 41 schools in DISD to earn "distinction" in all three categories of reading, math, and top 25%. As principal Dash said, "Our kids are smarter and better for having come to Bush and our test results show it".

Council News

This is absolutely the most important time of the year for Council. The decisions we make will not only affect us this next year but for many years to come. During the last couple of years we have made great strides improving our level of transparency and letting you know exactly what we are doing in local government; with this newsletter, open forums at our semiannual Town Meetings, award winning publications from our Finance team, luncheon forums and open coffees around Town and countless public hearings. All in addition to the intense and obvious commitment from my colleagues on the Council and our staff to be available to you and to listen to you. Our purpose and intent is hopefully very clear to you; we want you to know exactly what we are doing with your money.

On Monday August 12, Council met along with our staff in an open meeting work session as we continued our process of gathering information. We also began processing and analyzing the information we do have with a discussion to establish the range of tax rates we are willing to consider for our General Fund. We established that the top tax rate would be the 57.3995 rate proposed by our City Manager that also coincides with the top rate possible before a tax rollback vote could be triggered. As reported last week this rate would increase the tax levy by 10.2% over 2013 and raise $1,826,220 more than last year, 70% of which will come from tax payers whose property values have increased.

To establish the low end of our tax rate range, we went thru an exercise that made several important assumptions. We subtracted the one time expenditures that were included in last year's budget, we assumed the Hotel Fund would pay the General Fund back the entire amount of money it borrowed last

Also from this Author(s)

Dec 27, 2013
12.27.13 Weekly Update from Mayor Todd Meier

Dec 20, 2013
12.20.13 Weekly Update from Mayor Todd Meier

Nov 15, 2013
11.15.13 Weekly Update from Mayor Todd Meier

Suggested Reading

Nov 02, 2011
10-23-2011 thru 10-29-2011 POLICE ACTIVITY REPORT

Jan 03, 2013
December 2012 Fire Department Operations Report

Nov 10, 2010
Addison Arbor Foundation

As I explained to Debbie my concern was not with any of their residents, in fact I know from the campaign trail that there are at least 11 nice voters living at Budget Suites. My concern that I shared with Debbie was that according to our zoning ordinances they could not have any "residents" simply because that site was not zoned residential or multi-family but rather for a hotel. I explained that there are significant code differences and requirements placed on apartment owners with respect to specific housing and building code requirements that are different from a hotel. If it is clear that they are operating as an apartment then all of their residents should be accorded the full benefits and access to all of the Addison amenities just as any other resident or their "residents" are hotel guests in which case they are not eligible to have free access to those amenities like our Athletic club. In which case if they are "hotel guests", Addison should also be receiving our fair share of the hotel taxes they are required to be paying.

I also shared with Debbie that undoubtedly the reputation of Budget Suites may come from activities that occurred before her tenure as General Manager and certainly precede our Addison Police Department's stepped up enforcement activity. Debbie offered, and I encouraged her, to visit some of the area businesses that have expressed concern to me about Budget Suites and the activities of some of their "residents" to try to reassure them and hopefully improve the reputation of Budget Suites.

Stay tuned for more on this later...this is a long saga that deserves more follow up.

Around Town

A huge congratulations goes out to our Addison Fire Department for earning accreditation by the Commission on Fire Accreditation International! Of the roughly 30,000 to 35,000 fire departments across the U.S., Addison is now part of an elite accredited club of only 150 departments–of which, only five are in the state of Texas. This was a huge undertaking by the Fire Department, led by Chief John O'Neal. Chief O'Neal and several of his team were in Chicago this week to await the final decision. The accreditation process is a lengthy one, about two years or so, and we couldn't be prouder of our guys. This is a true honor and a testament to their dedication and professionalism.



Speaking of our Addison Fire Department, the Town of Addison, in collaboration with the Dallas County Office of Homeland Security and Emergency Management, is facilitating and coordinating an update to the Dallas County Hazard Mitigation Action Plan (HazMAP). The purpose of this Plan Update is to meet the FEMA requirements to provide updated hazard mitigations plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants. The Town of Addison and Dallas County is encouraging residents to provide input

http://www.blog-addisontx.info/2013/08/special-events/8-16-13-weekly-update-from-mayor-todd-meier[12/30/2013 10:56:28 AM]

Addison TX Blog » 8.16.13 Weekly Update from Mayor Todd Meier

and thoughts on natural hazards that may impact the region. We would love to have Addison residents provide their thoughts. Please click here to complete the survey.

1/2/14 Welcome to the Town of Addison Official Website

Welcome to the Town of Addison Official Website

- **Notice of Deadline to File Application for Place on the Ballot for the Regular City Council Election**
- **Addison Annex to the Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update** - The Addison Fire Department and the Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP)
- Applications are now being accepted for the the **2014 Addison Citizen Academy**. Click **here** for more information. The cutoff date for applications is Friday, February 14, 2014. Please contact Matt McCombs at mmccombs@addisontx.gov or 972-450-7090 if you have any questions.
- **Click here to register for our CodeRED emergency alert system**

CODE RED Emergency Notification System REGISTER NOW! **Click here to find out more about CodeRED**

- They've done it again! Congratulations to the Town of Addison Finance Department for receiving the Government Finance Officers Association "Distinguished Budget Presentation" Award for its FY 2012-2013 budget! Check out the press release and official award letter from GFOA **here**
- **The Town of Addison has earned a "GOLD" Leadership Circle Award for implementing financial transparency**

Texas Comptroller Leadership Circle Gold Member

- **For regular updates on road closures and traffic impacts related to the LBJ reconstruction project, please visit the LBJ Express website**
- **Addison Legacy Foundation**
- **Addison Citizens Assisting Police (ACAP)** - For more information on this program **click here**
- The Town of Addison is implementing **Stage 1** of our **Drought Contingency Plan**. Please limit lawn watering and car washing to the hours between 8:00pm and 9:00am and call 972-450-2871 to report any suspected leaks immediately.
- **Tree Planting Campaign for George Herbert Walker Bush Elementary *Addison, Texas***
- **Mayor's Newsletter Signup** - To receive periodic email notifications from the Town regarding the Addison Accolade, special events, items of interest, messages from the Mayor and more please sign up!
- **Take a Tour of Addison Circle** - One of the most innovative urban plazas in the country
- **Vitruvian Park is located in the Town of Addison** - Conveniently located just north and west of two of the most important arterials in the Dallas metropolitan area, LBJ Freeway and the Dallas North Toll Road, Vitruvian Park offers convenience and easy accessibility to world class amenities, renowned shopping including the Dallas Galleria Mall and recognized schools
- **Join Addison Addvocates Volunteers** - Interested in giving back to the community and receiving the many benefits of volunteering?
- **Addison Non-smoking Restaurants** - (Updated March 2013) The Town of Addison believes that private establishments should set their own individual smoking policies and that such policies should be consumer-driven, rather than mandated through government action. Over 100 Addison establishments have chosen to ban smoking inside their restaurants. For a listing of restaurants allowing smoking indoors, click here.
- **Coffee with the Mayor 1st Wednesday of the month at 10am** - Dunn Bros Coffee
3725 Belt Line Rd, (972) 406-9711
- **Coffee with the Mayor 3rd Thursday of the month at 6pm** - Astoria Caffe
15701 Quorum Dr, (972) 239-5853
- **Make Addison Your Destination!**

About Addison

www.addisontx.gov 1/2

1/2/14

Welcome to the Town of Addison Official Website



Addison is a bustling town alive with entrepreneurial spirit where small start-ups to major corporations are headquartered including Mary Kay and Palm Harbor Homes. Within a compact urban center, Addison has a unique combination of towering office buildings, upscale shopping, beautifully landscaped residential communities, award-winning parks, 22 hotels and over 170 restaurants, all within a 5 minute drive from anywhere in town. Addison is located 13 miles north of downtown Dallas, 16 miles northeast of DFW airport, 11 miles north of Love Field airport and about a mile from The Dallas Galleria. The Addison Airport is a convenient way to arrive for charter and private planes. World-class shopping, excellent restaurants, friendly people and beautiful spaces make Addison a fun place to live, work, play and visit.

Vision Statement -

To be an attractive, thriving community that delivers the 'Addison Way' with superior services, enhanced sense of community, and a safe, high-quality experience for residents, businesses, visitors, and all other stakeholders. Addison will lead the way in creativity, innovation and fiscal responsibility within a culture of excellence and kindness.

© 2013 Town of Addison, TX Sitemap Privacy Policy Accessibility News Feed

Appendix ADS-C2: Town of Addison Survey Reponses

Survey Results

The Town of Addison made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the town's website and public outreach program was implemented to solicit public input.

A total of 21 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

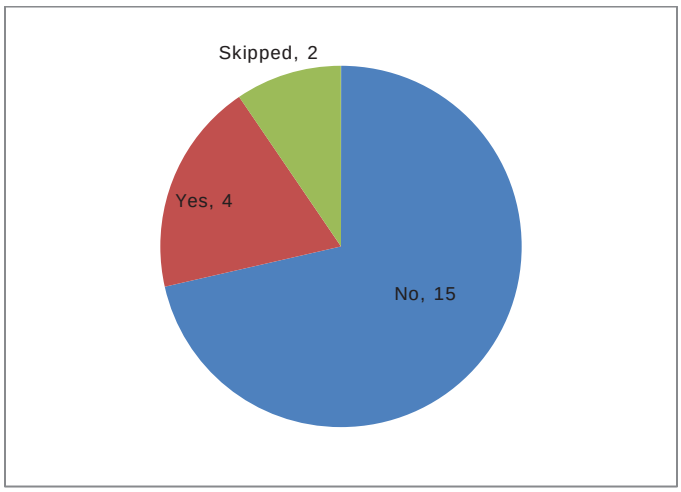
1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Survey results are depicted below showing the responses and the number of respondents for each answer

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

   - ✓ Town of Addison (21 responses)

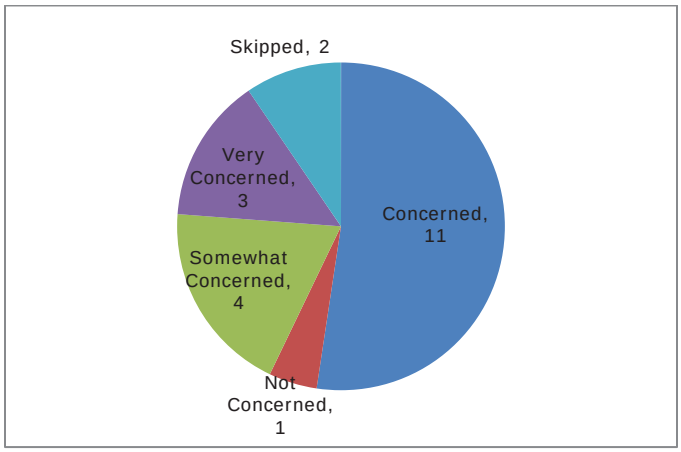
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

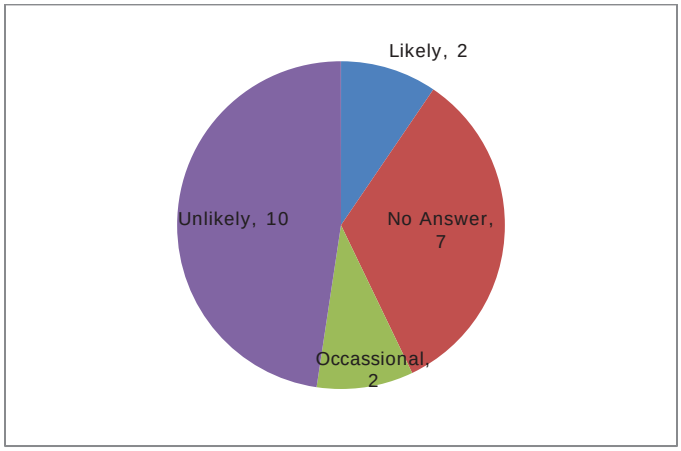
- ✓ "Straight line winds, Addison 2009"
- ✓ "9/11, my husband was on a subsequent flight with a "note" on it and got re-routed. Eventually he was home safe, but the scare was not fun, and it was real"
- ✓ "Hurricane in OKC - '68 or '69"
- ✓ "Hail 2011, Addison TX"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

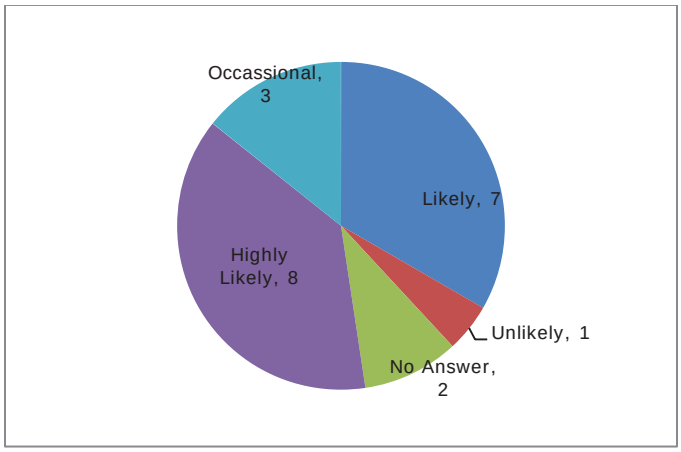


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

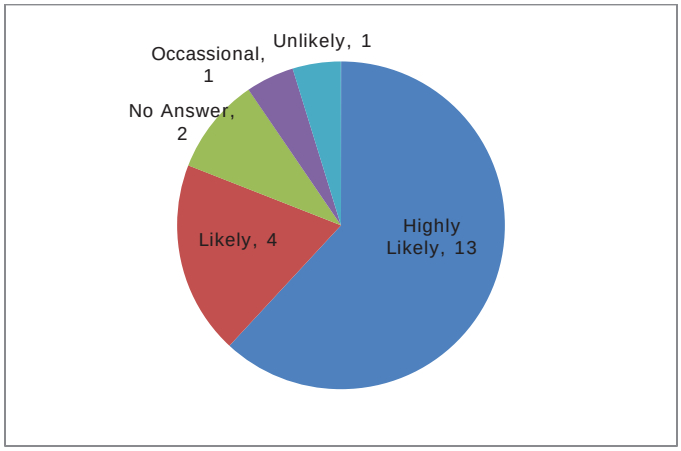
Earthquake



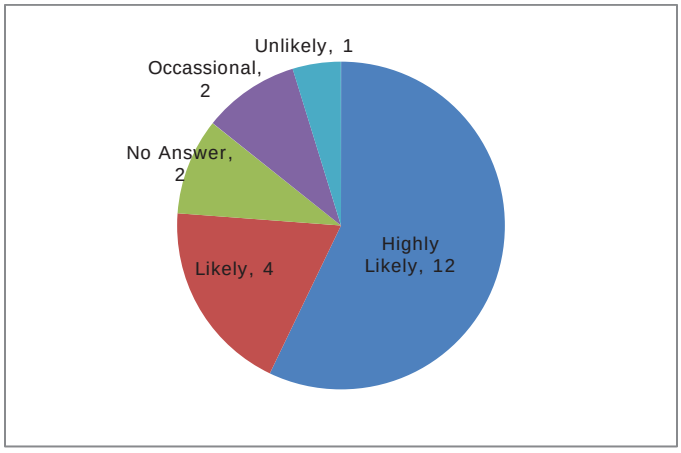
Tornado



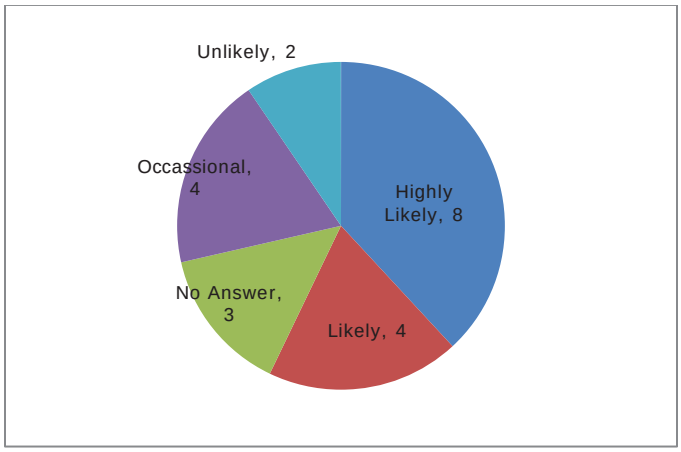
Hail



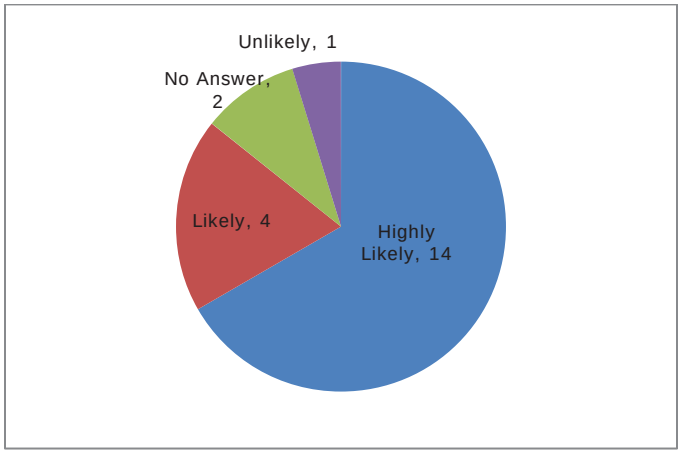
High Winds



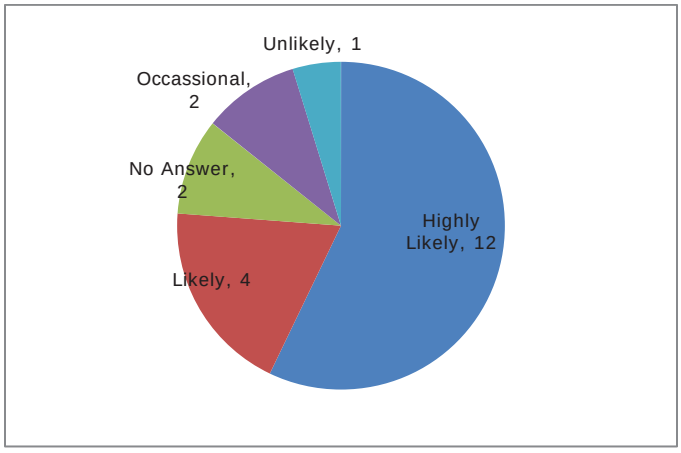
Winter Storms



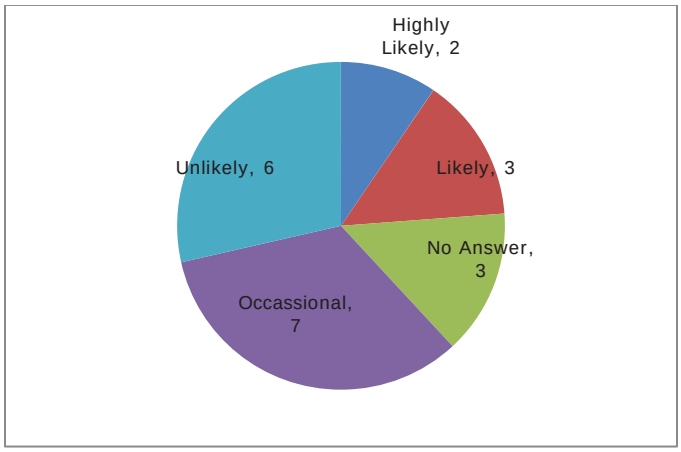
Extreme Heat



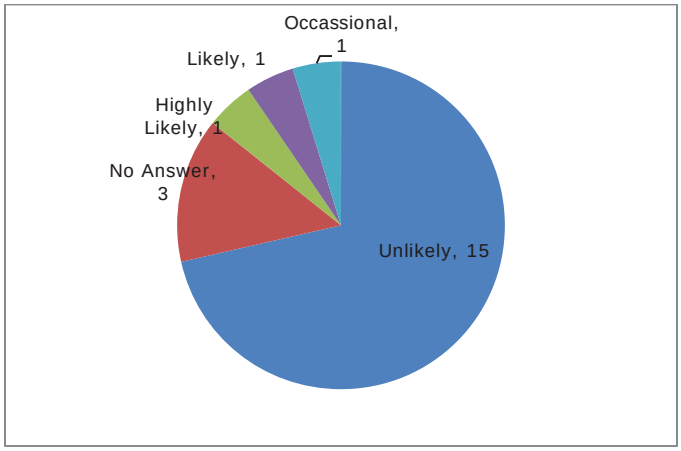
Drought



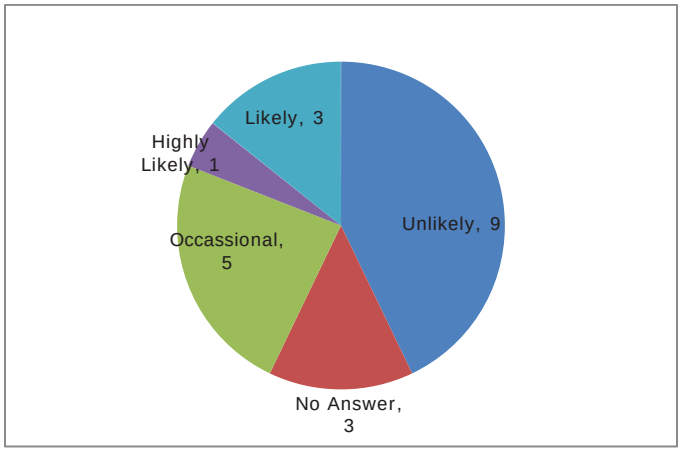
Flooding



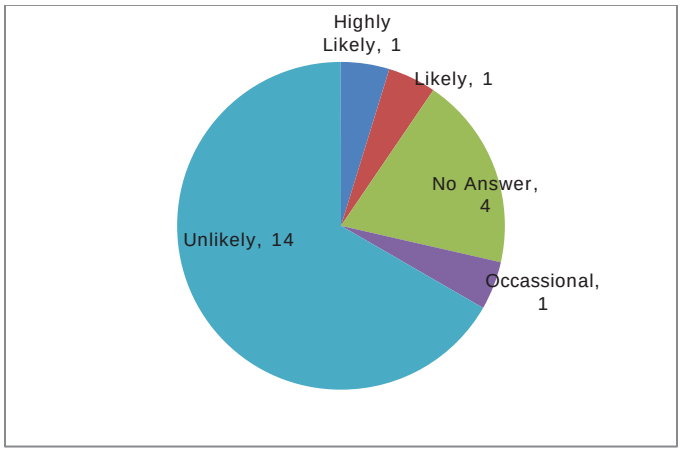
Dam Failure



Stream Bank Erosion

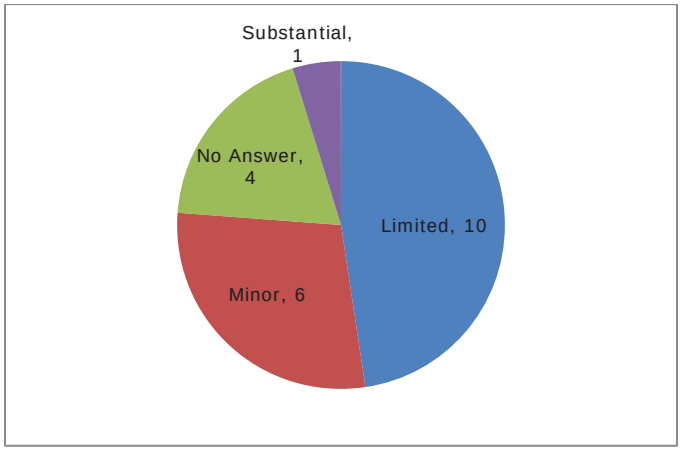


Levee Failure

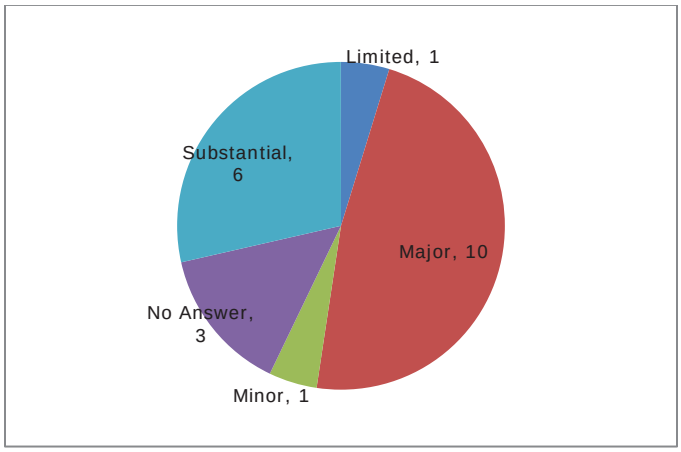


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

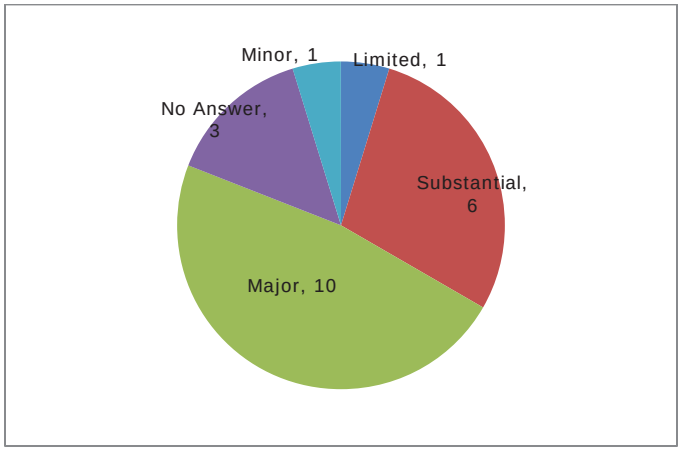
Earthquakes



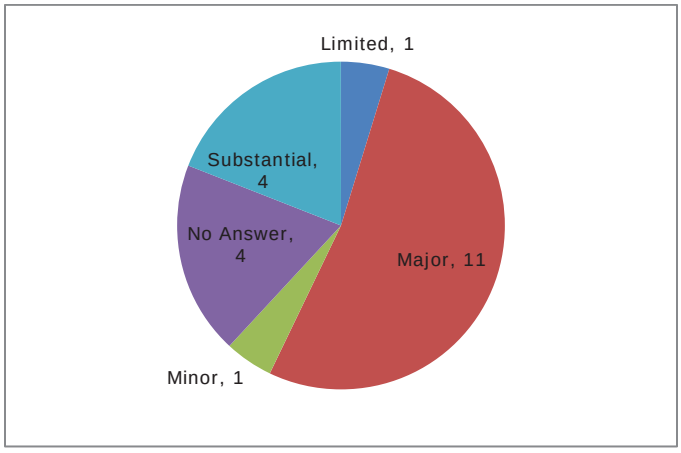
Tornado



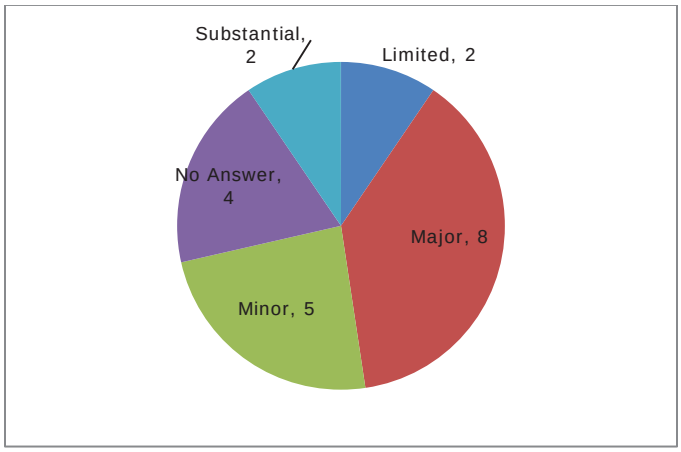
Hail



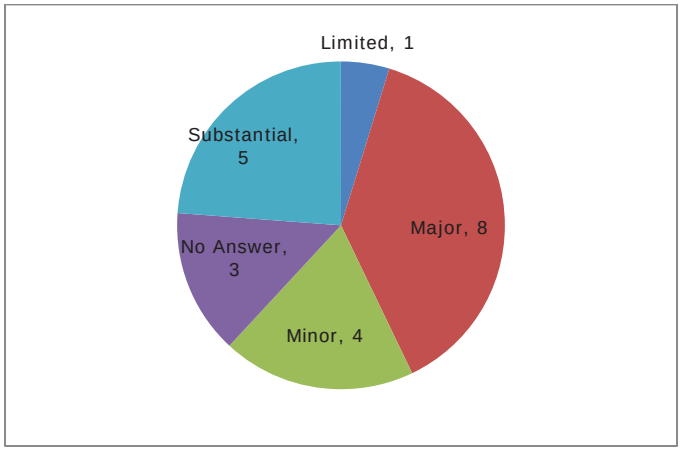
High Winds



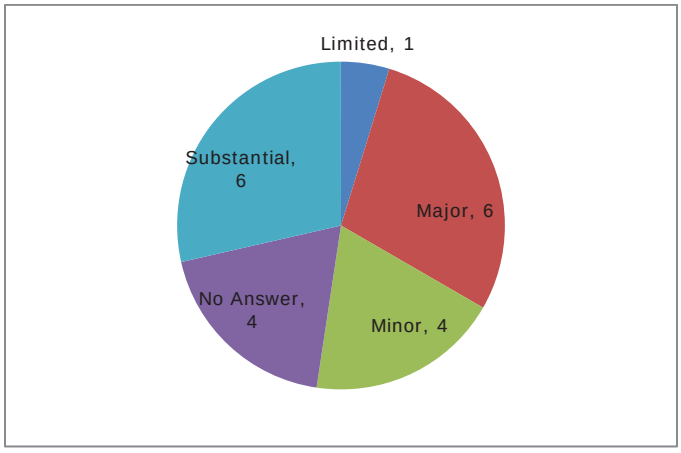
Winter Storms



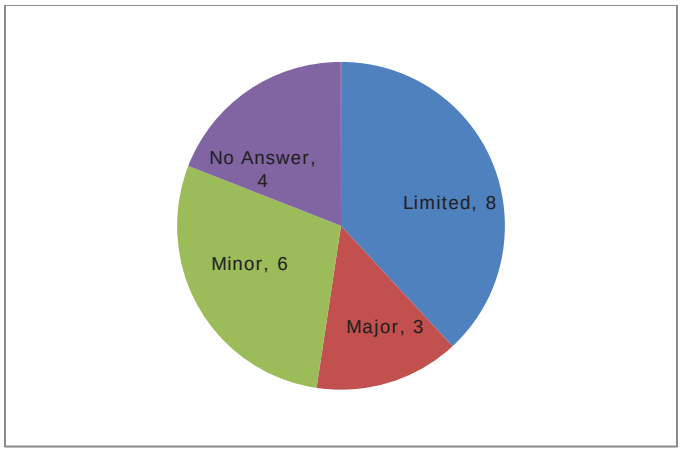
Extreme Heat



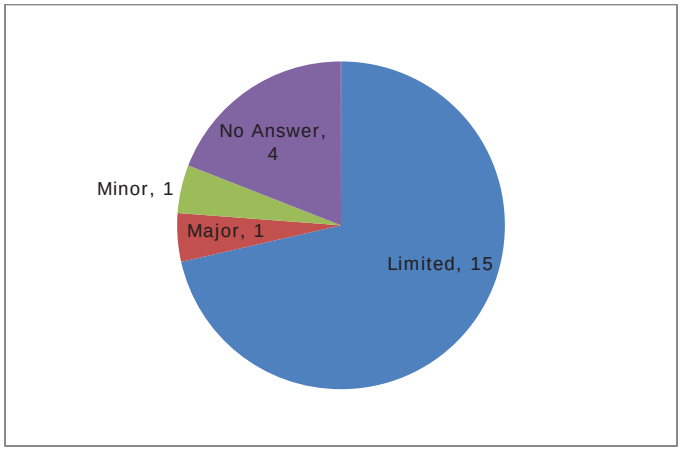
Drought



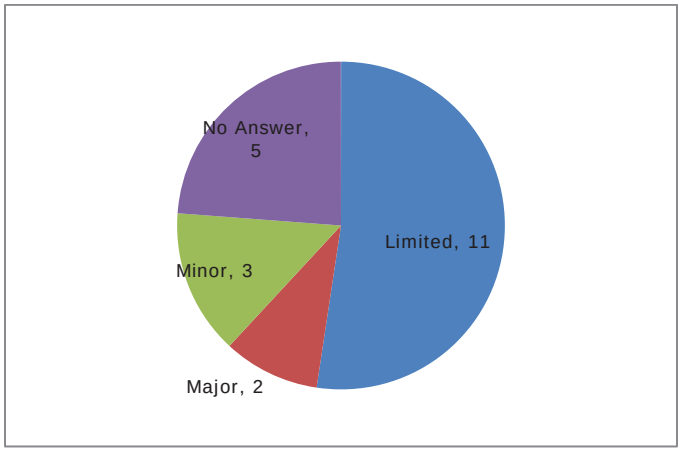
Flooding



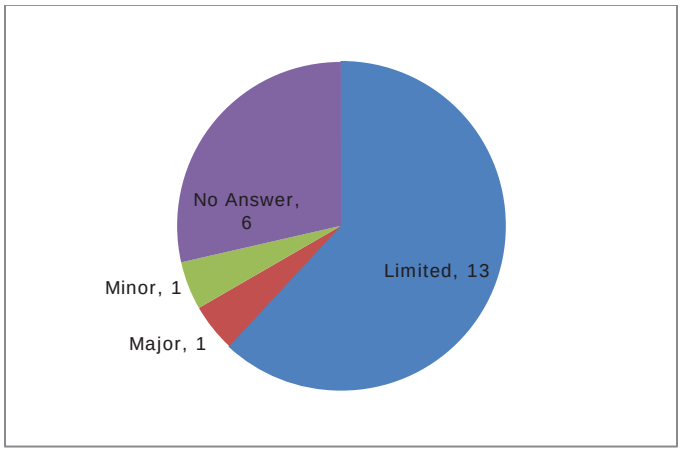
Dam Failure



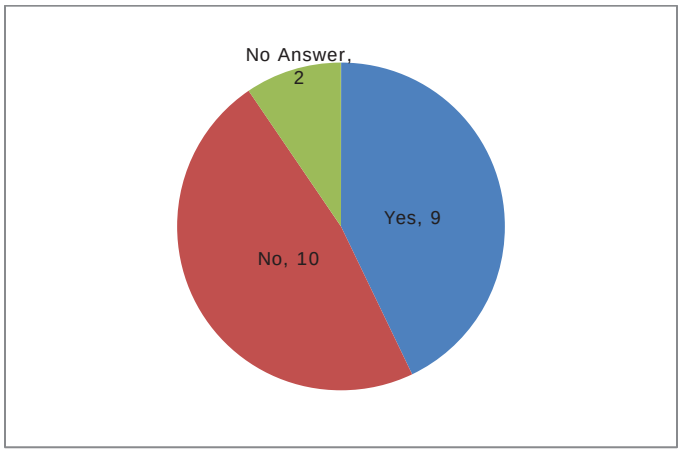
Stream Bank Erosion



Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

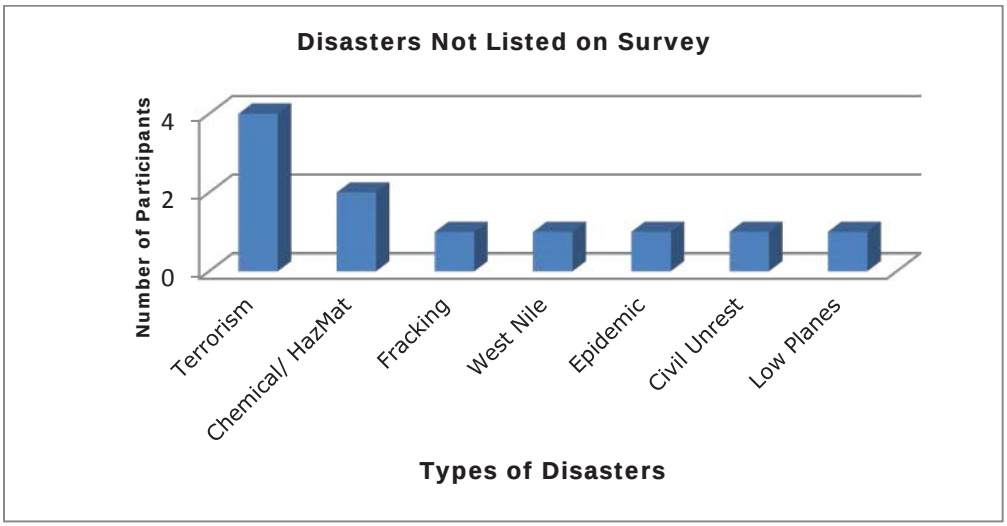


If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ "occurrence unlikely Impact high radioactive incident at Glen Rose Power Plant"
- ✓ "earthquakes, natural or due to fracking, that may endanger the safety of the nuclear facility west of Ft. Worth thereby affecting everyone downwind of said facility (the entire metroplex): catastrophic"
- ✓ "Ancillary (to Addison) terrorism related to DFW - medium."
- ✓ "Addison is going green. At Addison gym, products that are toxic are currently in use. Transportation and delivery of ALL these products and the MANY plastic containers cluttering the earth are creating more havoc. Children breathe these fumes in the nursery area. They use more oxygen as their small brains and cells are growing. There are increases in allergies, asthma and cancer as a result."
- ✓ "Terrorism, rioting"

- ✓ "West Nile Virus, Likely"
- ✓ "Food borne infection likely occurrence with high catastrophe natural gas or other explosion occasional occurrence with high catastrophe terrorist activity e.g. kaboom town, sporting event (race, stadium, etc.) LIKELY and High catastrophe"
- ✓ "Low plane approaches into Love Field. Highly Likely."
- ✓ "Terrorism-unlikely, high, catastrophic"

Type of Hazard	Amount
Chemical/ HazMat	2
Terrorism	4
Fracking	1
West Nile	1
Epidemic	1
Civil Unrest	1
Low Planes	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	5
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	4
Improve, adopt and enforce building codes:	10
Implement the Texas Individual Tornado Safe Room Rebate Program:	9
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	13
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	16
Coordinate with Dam owners to conduct inundation studies of dams:	1
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	6
Purchase and improve on the Weatherization Assistance Program (WAP):	5
Conduct an earthquake vulnerability study:	3
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	8
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Structural Retrofitting of Existing Buildings:	4
Total Respondents:	**17**

List any other strategies you think should be included in the plan:

- ✓ "Sharing knowledge - and making sure people understand - is the most important thing. People tend to panic unless they are prepared."
- ✓ "Mandatory fire drills for all businesses in Addison, especially those in high-rise office buildings. This should be done under the supervision of Addison fire inspectors to make sure that all exits are clearly marked and all fire equipment in the buildings are in proper order. Information should be sent to Addison residents on how to conduct family evacuation drills and how to prepare for any emergency. This could be done once a year when the fire department comes to homeowners to check fire alarms and change batteries. Residents should also be instructed on safe operation of gas grills, especially in the case of those on

balconies in multiple resident housing. Information should also be passed out as to the safe operation of fireplaces and dryers and the need to clean vents at least every 2-3 years, depending on usage."

- ✓ "First responder programs offered on a regular basis at no or little cost to participant. Immediate location points for those wanting to help in a disaster...know now, not later or when disaster strikes. Area wide discounts on purchase of emergency supplies now...batteries, flashlights, radios etc. Where to get information during a disaster? Local TV stations are in to ratings! They often inflame the situation rather that help. A central information "officer" !!! Not anyone who can be interviewed for sensationalism."
- ✓ "Low plane approaches into Love Field."

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:

- ✓ "Thank you for caring."
- ✓ "monthly or biweekly columns in all local newspapers with emergency preparedness ideas, protocols, contacts, training programs, etc. thanks for asking my opinion!"

This page intentionally left blank.

City of Balch Springs Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Balch Springs participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of Balch Springs.

In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of Balch Springs It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction



Balch Springs is located at 32.7175 N and 96.6153 W. The city is bordered by Mesquite to the north and east, and Dallas to the south and west and it is approximately 16 miles east of Downtown Dallas. Interstate 635 cleaves the city into two equal halves and Interstate 20 and U.S. highway 175 run along its southern border.

The city of Balch Springs was settled around 1879 by Jon M. Balch. Mr. Balch discovered several springs on his land and residents began to refer to the springs as Balch Springs. The name stuck even after Mr. Springs left the area. In 1885, a county school was named after the springs. During the early 1900s, the community was dotted with small farms and did not start to grow until electricity was introduced in 1939.

According to the United States Census Bureau (2011) the total population of Balch Springs is approximately 24,211. The racial makeup of the city is 27.7% White, 23.7% African American, 1.4% Native American, 0.9% Asian, 0.1% from other races, 3.3% reporting two or more races, and 45.8% Hispanic or Latino of any race. The city has a total area of 8.996 square miles. There are approximately 6,492 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. manufactured homes, manufactured housing, boats and RVs) units.

The City of Balch Springs operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

Balch Springs' economic development is attributed to its close proximity to surrounding cities and businesses. Interstate 635, Interstate 20 and U.S. Highway 175 are run through the city limits. Union Pacific Railroad, with its 360-acre state-of-art intermodal facility, and Mesquite Metro Airport are just minutes away. Balch Springs is also less than a 40 minute drive from Dallas Fort Worth International and Dallas Love Field Airports.

Internal Planning Process

The table below lists members of the City of Balch Springs Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Balch Springs

Table COBS 1: City of Balch Springs Hazard Mitigation Planning Team

Name	Title / Department or Agency	Role
David Haas	Emergency Management Coordinator & Chief Building Official, City of Balch Springs	HMPT Coordinator, Hazard Identification, capabilities assessment; Building Codes, Land Use, Hazard Identification, Town Critical Infrastructure
Randy Smith	Fire Chief, City of Balch Springs	Hazard & Plan development, Hazard Identification, capabilities assessment
Mark Maret	Lieutenant, Police Department	Hazard & Plan development, Hazard Identification, capabilities assessment
Jay Rothwell	Public Works	Submission of Flood Plain Documentation, Hazard Identification, capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Table COBS 2

Meeting Dates	Summary of Discussions
10/09/2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
10/16/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for Balch Springs in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA form
10/23/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment
02/04/2014	Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of Balch Springs's Annex to the HAzMAP. Invited for public comment on the draft plan. Forwarded information to IT department, library and water billing offices to include announcements for public input and participation in the draft annex

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Balch Springs notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of Balch Springs made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the Town's website and public outreach program was implemented to solicit public input.

There was one (1) survey response collected from the City of Balch Springs, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Despite outreach efforts, minimal responses were received. As a result, information collected from the survey was not be statically valid and could not be incorporated into the City of Balch Springs Annex of the Dallas County HazMAP.

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

Survey Overview:

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Balch Springs (1)

2. Have you ever experienced or been impacted by a disaster?
   - ☐ Yes
   - ☒ No (1)

   If "Yes", please indicate what hazard you have endured and where it occurred.
   - ✓ "Hail Storm, April 2012"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned
☐	☒ (1)	☐	☐	☐

4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Earthquake Unlikely (1)	☐Earthquake Occasional	☐Earthquake Likely	☐Earthquake Highly Likely
Tornado	☐Tornado Unlikely	☐Tornado Occasional	☒Tornado Likely (1)	☐Tornado Highly Likely
Hail	☐Hail Unlikely	☐Hail Occasional	☒Hail Likely (1)	☐Hail Highly Likely
High Winds	☐High Winds Unlikely	☐High Winds Occasional	☒High Winds Likely (1)	☐High Winds Highly Likely
Winter Storms	☐Winter Storms Unlikely	☒ Winter Storms Occasional (1)	☐ Winter Storms Likely	☐Winter Storms Highly Likely

Extreme Heat	☐Extreme Heat Unlikely	☐Extreme Heat Occasional	☒Extreme Heat Likely (1)	☐Extreme Heat Highly Likely
Drought	☐Drought Unlikely	☐Drought Occasional	☒Drought Likely (1)	☐ Drought Highly Likely
Flooding	☒ Flooding Unlikely (1)	☐Flooding Occasional	☐ Flooding Likely	☐ Flooding Highly Likely
Dam Failure	☒Dam Failure Unlikely (1)	☐ Dam Failure Occasional	☐ Dam Failure Likely	☐ Dam Failure Highly Likely
Stream Bank Erosion	☐Stream Bank Erosion Unlikely	☒Stream Bank Erosion Occasional (1)	☐Stream Bank Erosion Likely	☐Stream Bank Erosion Highly Likely
Levee Failure	☒ Levee Failure Unlikely (1)	☐ Levee Failure Occasional	☐ Levee Failure Likely	☐ Levee Failure Highly Likely

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Tornado	☐ Limited	☐ Minor	☒ Major (1)	☐ Substantial
Hail	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
High Winds	☐ Limited	☒ Minor (1)	☒ Major	☐ Substantial
Winter Storms	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Extreme Heat	☐ Limited	☐ Minor	☒ Major (1)	☐ Substantial
Drought	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
Flooding	☒ Limited (1)	☐ Minor (1)	☐ Major	☐ Substantial
Dam Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Stream Bank Erosion	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
Levee Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

   ☐ Yes

   ☒ No (1)

   If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

   ☒ Improve on Land Use Program: (1)

   ☐ Identify undeveloped land within the flood plain and assess special use for conversation and recreation.

   ☐ Limit floodplain development

   ☐ Buy-out of property in the floodplain (flood-prone property acquisition)

   ☒ Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control) (1)

   ☐ Improve, adopt and enforce building codes

   ☒ Implement the Texas Individual Tornado Safe Room Rebate Program (1)

   ☒ Expand and improve the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs such as: (1)

   ☐ National Flood Insurance Program (NFIP) and Community Rating System (CRS) program

   ☐ What to do the event of a flood, tornado, need for a weather radio

   ☐Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events

   ☐ Coordinate with Dam owners to conduct inundation studies of dams to include:

   ☐ Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners (1)

   ☒ Purchase and improve on the Weatherization Assistance Program (WAP) (1)

   ☐ Conduct an earthquake vulnerability study

   ☒ Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure (1)

   ☐ Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing

   ☒ Structural Retrofitting of Existing Buildings (1)

Public Review Period

On December 27, 2013 the City of Balch Springs announced the availability of the City of Balch Springs Annex draft plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the city's main website inviting the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period. Invitations were also made to various external stakeholders via email. These included the Emergency Management Coordinators for Dallas Independent School District and the City of Mesquite.

The public were encouraged to submit comments prior to January 15, 2014, for consideration and possible incorporation into this draft. Figure BS1, provides a screen shot of the announcement.

The public comments were directed to David Haas, the Emergency Management Coordinator with the City of Balch Springs. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

Figure BS1: Screen Shot of Public Review and Comment Announcement



Capability Assessment

The City of Balch Springs identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Balch Springs, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments

The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the city. The administrative and technical capabilities of the city, as shown in **Table COBS 1** provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan. **Figure COBS 2** shows the agencies within the City of Balch Springs that will have a significant role in implementing the plan.

A. Balch Springs Fire Department (BSFD)

The department operates with 10 full-time firefighters per shift. The Fire Department has implemented a Swift Water Rescue Team that consists of a 16-member team. All members are Swift Water Rescue Technician II certified. Apparatus for the city include:

- ✓ Two Command Vehicles
- ✓ Two Class A Engines
- ✓ One Booster Truck
- ✓ One Rescue Truck
- ✓ One Swift Water Rescue Boat and Trailer
- ✓ Six Hazmat Tech

The Balch Springs Fire Department contracts its Paramedic Ambulance Service. The Balch Springs Fire Department protects our citizens and visitors by minimizing the loss of life and property resulting from fire, medical emergencies, and other disasters in such a manner that will retain the public's support and confidence in all aspects of service delivery.

It accomplishes this mission through fire prevention, investigation, public education, and training efforts as well as by maintaining a quick and effective response for fire suppression, Emergency Medical Services, and other emergency and non-emergency functions.

The Fire Chief currently serves as the Alternate Emergency Management Coordinator for the city and is responsible for the facilitating and coordinating the development of an Emergency Management Plan (EMP) in accordance with Chapter 418 of the Texas

Government Code and Title 37, Part 1, Chapter 7 of the Texas Administrative Code. The EMP consists of a basic plan and functional annexes and appendices. The basic plan outlines a jurisdiction's approach to emergency operations, and provides general guidance for emergency management activities, including methods of mitigation, preparedness, response, and assigns responsibilities for various emergency tasks. The city's EMP is covered under the Dallas County Plan as it has a joint resolution with Dallas County.

The City of Balch Springs Fire Department within its duties noted above, will use this HazMAP in conjunction with the City's Emergency Operations Plan to implement strategies, projects and policies which lead to a more resilient and safe city.

B. Balch Springs Police Department (BSPD)

The Police Department currently employs 39 full time Sworn Officers and 17 civilian employees. Each member of the Police Department is dedicated to quality customer service and is ready and eager to assist you with your needs.



Balch Springs maintains a modern, highly-trained, technically-skilled and well-equipped police department. The Police Department takes pride in being actively involved with the High Intensity Drug Trafficking Area Task Force (HIDTA) and is proud to be in partnership with the Southern Regional Response Group (SRRG).

C. Building and Code Department

The Building Inspection Department is responsible for ensuring compliance with City building codes and issuing permits for construction. The Building Inspection Department provides public safety by enforcing Municipal and State regulations and codes relative to the construction, enlargement, alteration, repair, moving, demolition, conversion, occupancy, equipment, use, height, area, and maintenance of all buildings or structures in the city. The construction codes of the city shall be administered and enforced by the office of the Building Official.

The Code Enforcement Department is responsible for maintaining compliance with the City of Balch Springs Codes and Ordinances, and issuing warnings and/or citations for violations. The mission of code enforcement in the City of Balch Springs is to protect the health and safety of the city's residents and visitors, and the livability of the community, by assuring compliance with the city's land use, environmental, and construction codes. The city will assure code compliance by encouraging voluntary compliance and in cases where voluntary compliance has not been met, using all legal resources available to the City of Balch Springs.

D. Public Works

The Public Works Department is responsible for the maintenance of the city streets, drainage, parks and green belts within the City of Balch Springs. The Street Division of Public Works is responsible for the maintenance of the following:

- ✓ Striping
- ✓ Signs
- ✓ Curb and gutter
- ✓ Drainage

- ✓ Crack sealing
- ✓ Street repairs
- ✓ Rights of way

The Division is also responsible for 85 paved lane-miles in the City of Balch Springs. Functions of the Division also include minimizing hazardous roadway conditions and responding to citizen requests for service. The division also responds to emergencies and weather events as needed in an effort to ensure safe conditions for citizens and motorists.

Figure COBS 1: Organizational Chart for the City of Balch Springs

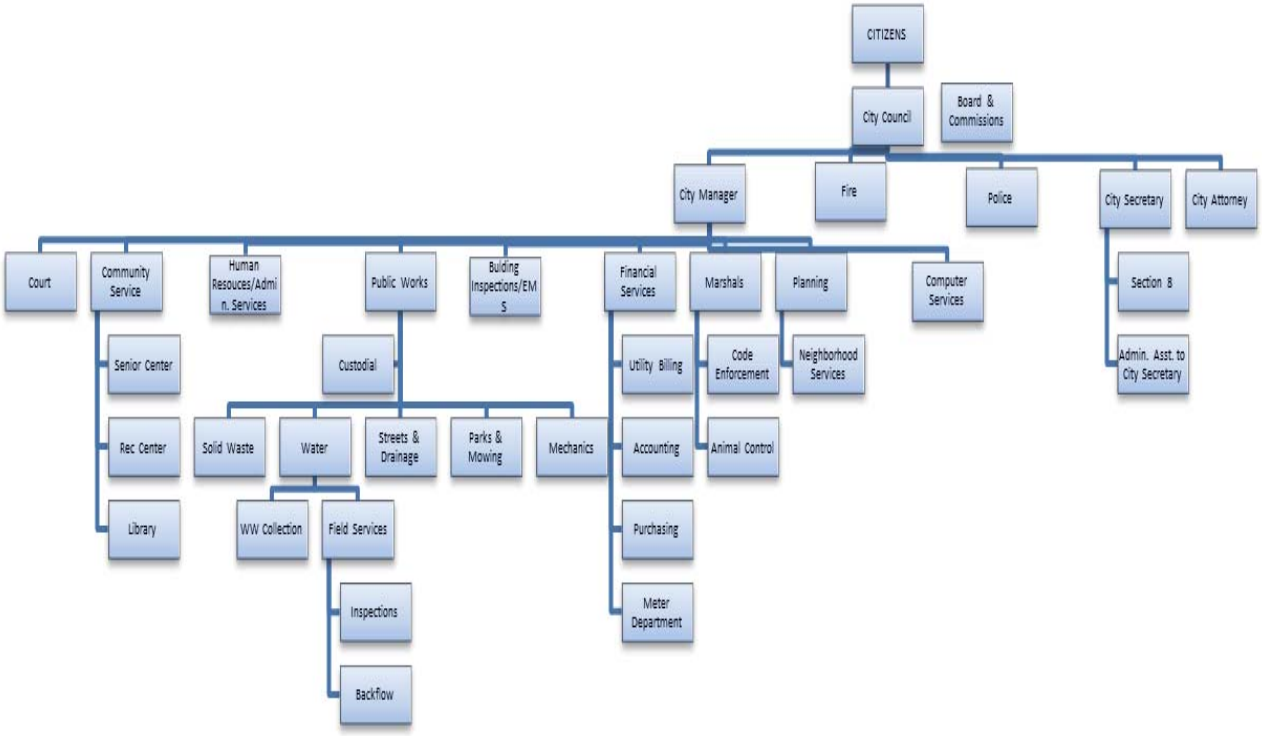
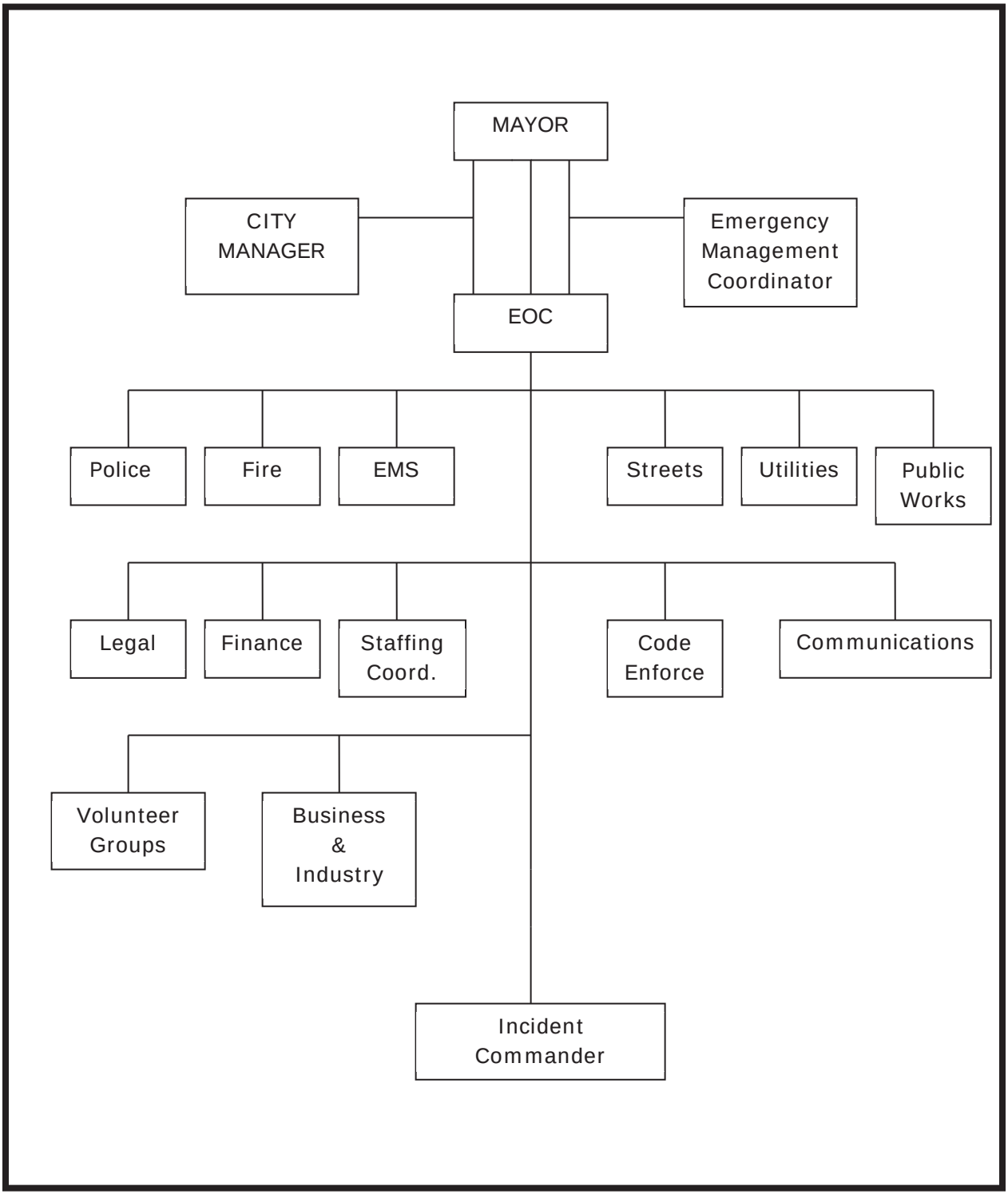


Figure COBS 2: Emergency Operations Center Organizational Chart for the City of Balch Springs



Summary of Capabilities: The tables below identify the current capabilities in the City of Balch Springs.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	**1.** No **2.** No **3.** Yes
Capital Improvements Plan	Yes	**1.** No **2.** No **3.** Yes
Economic Development Plan	Yes	**1.** No **2.** No **3.** Yes
Local Emergency Operations Plan	Yes	**1.** Yes **2.** No **3.** Yes
Continuity of Operations Plan	No	N/A
Transportation Plan	No	N/A
Storm water Management Plan	No	N/A
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	N/A
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** IBC 2006
Building Code Effectiveness Grading Schedule (BGEGS) Score	N/A	**Score:**
Fire Department ISO rating	Yes	**Rating:** 1
Site Plan review requirements	Yes	Plans are required to be submitted prior to building

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	Yes all plans are reviewed to make sure nothing is built in flood plains. Zoning is enforced by building official and code enforcement
Subdivision ordinance	Yes	Yes. All plans are reviewed to ensure nothing is built in flood zones. Ordinance is enforced by Building code official
Floodplain ordinance	Yes	Enforced by building official
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	
Flood insurance rate maps	Yes	Yes. Maps are available to citizens and developers, flood study completed in 2011
Acquisition of land for open space and public recreation uses	Yes	Yes. Chief building official ensures that natural flow of water is not obstructed
How can these capabilities be expanded and improved to reduce risk?		
• Local ordinances and codes enforced and review on an annual basis • Increase funding and hire more staff		

Administrative and Technical

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Maintains master development plan, reviews ordinances and commercial development Yes
Mitigation Planning Committee	Yes	Recommends changes to ordinances to zoning and city council
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Public works maintains drainage and storm drain boxes Yes
Mutual aid agreements	Yes	Mutual aid agreements are in effect with neighboring cities and county
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	FT	**1.** Yes **2.** Yes **3.** Yes
Floodplain Administrator	No	
Emergency Manager	PT	Maintains emergency management plan, works with planning and zoning and building official during review process regarding development
Community Planner	FT	Yes, works with planning and zoning and code enforcement as well as building official
Civil Engineer	PT	3rd party
GIS Coordinator	No	
Other	N/A	N/A
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Outdoor warning system used as well as CodeRED to alert the community of pending dangers. Yes. Location of the outdoor warning system has been reviewed to be most effective
Hazard data and information	Yes	Action and after action reports are generated during and after an event
Grant writing	Yes	Full time grant writer employed to search grant that can be used to limit or prevent hazards
HAZUS analysis	No	
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Additional warning sirens installed to be more effective. Increase the numbers that are registered for CodeRED		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Streets and drainage improvements. Yes
Authority to levy taxes for specific purposes	Yes	4A and 4B projects, parks and drainage programs. Yes
Fees for water, sewer, gas or electric services	No	
Impact fees for new development	Yes	Used to create and improve drainage throughout development
Storm water utility fee	Yes	Used to improve drainage throughout the city
Incur debt through general obligation bonds and/or special tax bonds	Yes	Used for street, drainage improvements and cleaning of major creek that runs the length of the city
Incur debt through private activities	No	
Community Development Block Grant	Yes	Home replacement, street rehab and drainage improvement
Other federal funding programs	No	
State funding programs	No	
Other	No	
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Citizens Police Academy Graduates help in the emergency management program by providing help with evacuation and assist with shelters
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Information made available to citizens with information on emergency preparedness, water use and storm drains.
Natural disaster or safety related school programs	Yes	EMC works closely with school located in the city
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	Emergency management has partnered with the private sector before, during and after an emergency
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?		✓
2. Is transportation policy used to guide growth to safe locations?		✓
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	

Subdivision Regulations	Yes	No
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?	✓	

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?		✓
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		✓
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: *The City Council for the City of Balch Springs including the City Mayor address the budget, policies, regulations and codes, hire staff, approve plans, and determine the direction of the city overall. The Council has the legal authority and capability of expanding the capabilities for the City of Balch Springs, implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs is a function of this group*

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to the Texas Water Board, there are 89 NFIP policies in the City of Balch Springs, with a total premium of $75,886
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	A total of 105 claims have been filed in the community with a total of $1,778,524 paid in claims. 17 of these claims made were over $40,000
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	67 structures are exposed to flood risk in the City of Balch Springs with a value of approximately $2,644,289
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Homes North of Elam Rd. to our city limits they are Lora, Sheliah, Wild Oak
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	If property is within 100 year floodplain as per our flood plain map, a 100 year survey is required. Our ordinance requires structures to be built 2 feet above 100 year flood plain. Engineer design required.
What are the barriers to running an effective NFIP program in the community, if	Community FPA	Man power and budget constraints
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		N/A
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	**02/01/74** **06/15/81**
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceed – Structures are to elevated at least two feet above FIRM grade
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	All building applications are reviewed for flood plain issues. If flood plain issues are present a flood plain survey is required and verified by an engineer. All buildings including out buildings and fences are to be built two feet above the FIRM grade.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	Yes
What is the community's CRS Class Ranking?	Flood Insurance Manual	10
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	FEMA

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Balch Springs HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Balch Springs are as follows:

High Risk (over 65% on HIRA)	High Winds Tornado
Moderate Risk (41%- 65% on HIRA)	Hail Winter Storms Extreme Heat Wildfire Flooding
Low Risk (12 %-40% on HIRA)	Drought Lightning
No Risk (Below 12% on HIRA)	Earthquake Stream Bank Erosion Dam/Levee Failure

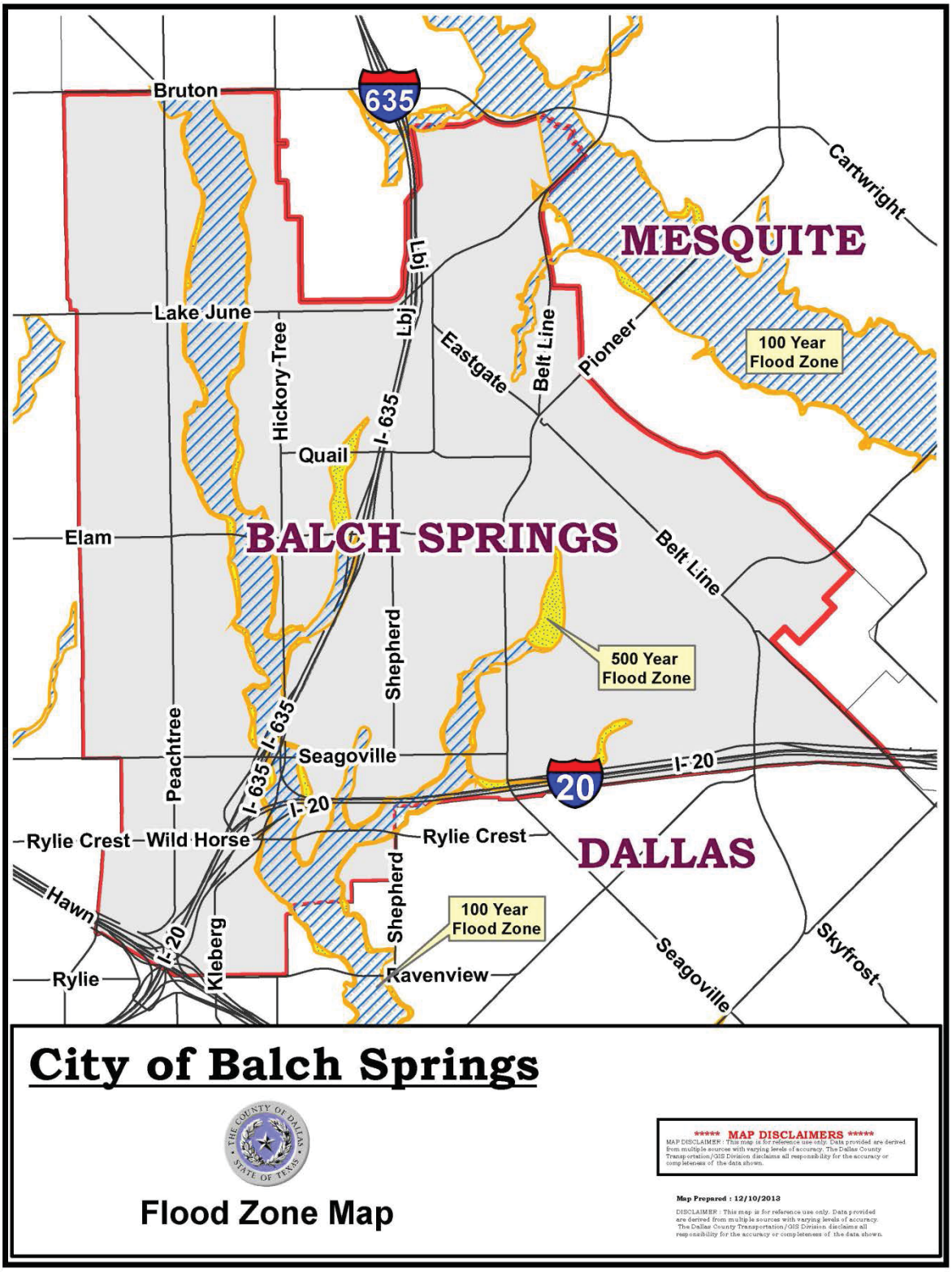
Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact in Dallas County. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk as there is no property or people that have been identified as being at risk from this hazard in the jurisdiction.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Balch Springs. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Balch Springs**.**

A. Flooding: The City of Balch Springs is one of the communities that are part of the Ten Mile/Red Oak Creeks Watershed. Other jurisdictions that are part of this watershed include Cedar Hill, Combine, Dallas, DeSoto, Duncanville, Ennis, Ferris, Garrett, Glenn Heights, Hutchins, Lancaster, Mesquite, Midlothian, Oak Leaf, Ovilla, Palmer, Pecan Hill, Red Oak, Richardson, Waxahachie, Wilmer, Dallas County, Ellis County, and Kaufman County.
The City of Balch Springs initially joined the Federal Emergency Management Agency (FEMA) National Insurance Flood Program on June 15, 1981. The initial Flood Hazard Boundary Map (FHBM) was issued in February 1974. **Map COBS.1** depicts the flood zone for the City of Balch Springs.

Map COBS.1: Flood Zone Map for the City of Balch Springs



Locations: The following are areas of the City of Balch Springs are susceptible to flooding as they lie within the flood zone:

- ✓ Lora Lane - Very high water and home flooding during large rainfall events
- ✓ Shelia Drive - Very high water and home flooding during large rainfall events
- ✓ Stein Street – Very high water runs across roadway during large rainfall
- ✓ Arrowdell Road – Very high water runs across roadway during large rainfall
- ✓ Wild Oak Drive – High water runs across roadway during large rainfall
- ✓ 11000 Block of Lake June Road – High water runs across roadway during large rainfall
- ✓ 10000 Block of Elam Road – High water runs across roadway during large rainfall
- ✓ Forest Glen Lane – High water runs across roadway during large rainfall

The land in Balch Springs is approximately 70% built out. Thus, Balch Springs has plenty of land yet to be developed.

As indicated in the capabilities section of this annex, the City of Balch Springs participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. According to the Texas Water Development Board there are 18 properties that are considered repetitive loss or severely repetitive loss properties. See Table 5.8.1

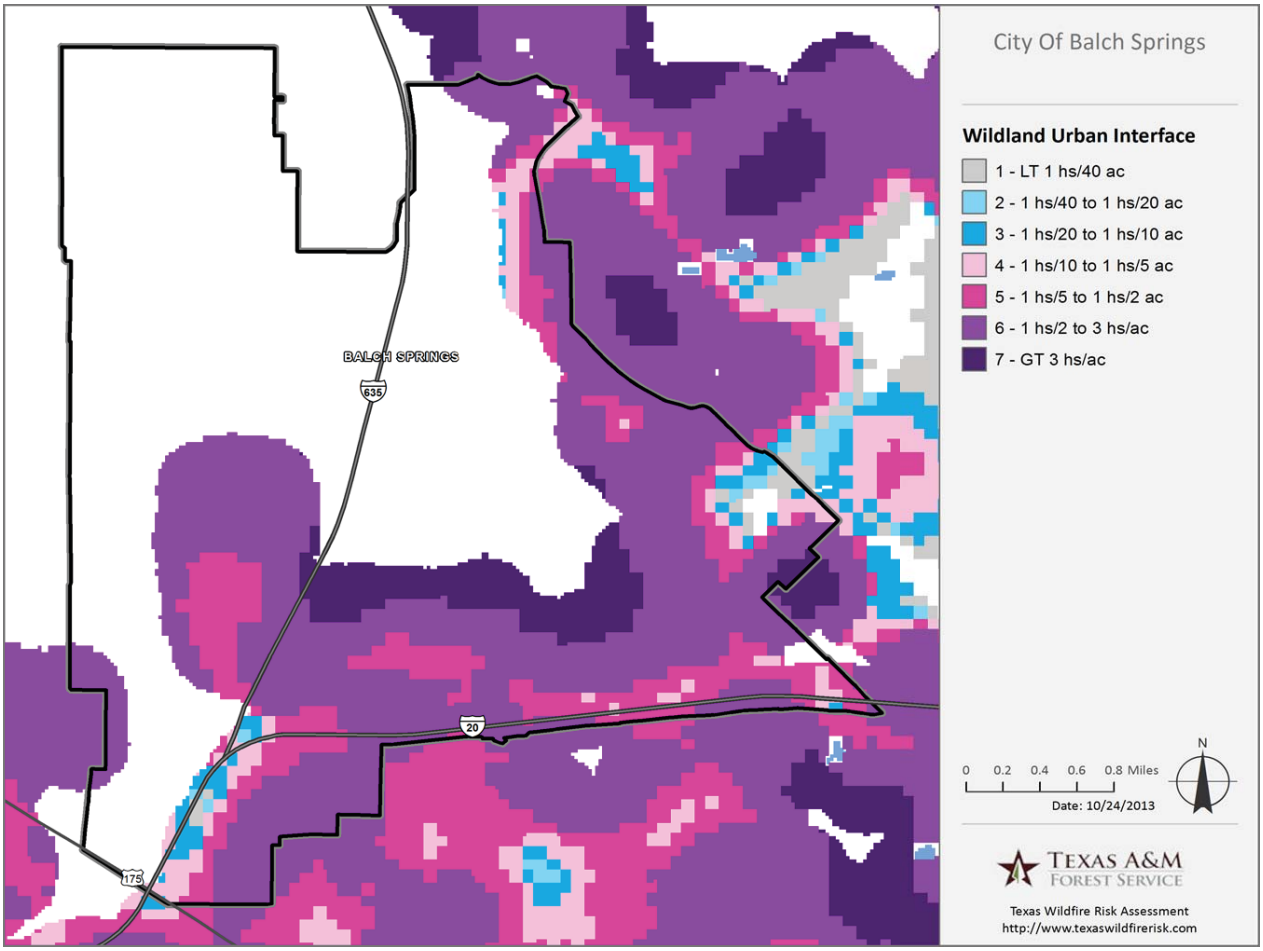
Balch Springs	Years	Properties	Number of losses	Payments
Single Family	1989,1994, 1998, 2004, 2009	17	48	$1,235,219.85
Other Residential	-	-	-	-
Non Residential	2013	1	4	$73,471.88
Total		**18**	**52**	**$1,308,691.73**

Using this plan the City of Balch Springs will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 8,003 people or 37 percent of the total population for the City of Balch Spring lives within the WUI. **Map COBS.2** depicts the WUI for the City of Balch Springs.

Map COBS.2: City of Balch Springs Wildland Urban Interface (WUI)



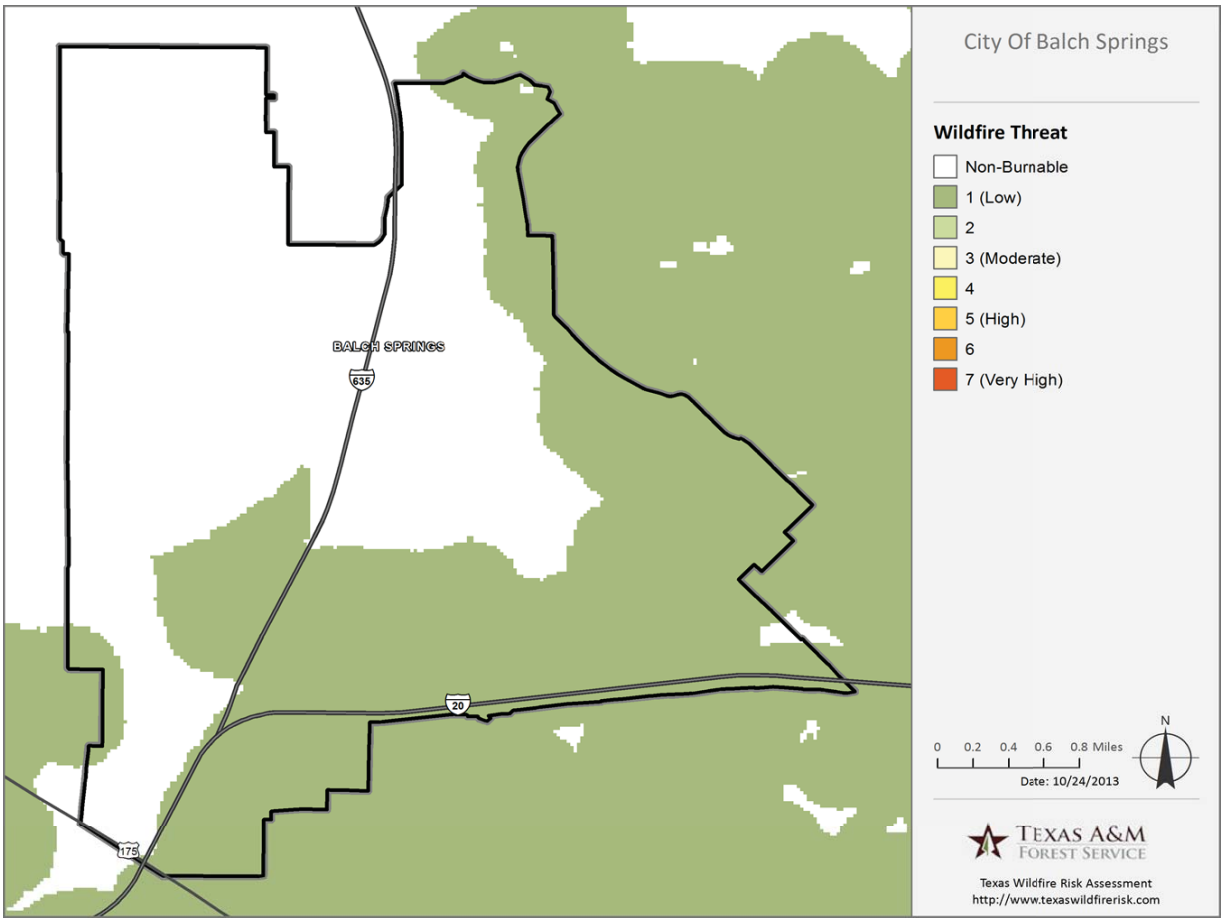
A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Balch Springs ranges from Non-Burnable to Low.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Balch Springs as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults within Balch Springs and there is no historical data of earthquakes in the City of Balch Springs. Earthquakes are therefore not considered a risk.

E. Stream Bank Erosion: The City of Balch Springs is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection,

stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits.

Stream bank erosion is not considered a risk in the City of Balch Springs as there is no property or people that have been identified as being at risk from this hazard in the jurisdiction. However, its risk potential will be re-evaluated as needed.

Vulnerability Assessment

Based on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Seagoville. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events. All emergency facilities is exposed to this hazard
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events. All critical facilities are exposed to this hazard
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events. All critical infrastructure is exposed to this hazard

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Balch Springs. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property. All improved property is exposed to this hazard
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Balch Springs.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Balch Springs.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Balch Springs.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Balch Springs due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Balch Springs are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Balch Springs are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Balch Springs are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Balch Springs is exposed to this hazard. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), $100,000 of property damage has been reported due to high wind events in the City of Balch Springs between January 2008 and September 2013. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Balch Springs are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Balch Springs are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Balch Springs are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Balch Springs have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Balch Springs. All property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Balch Springs are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Balch Springs are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Balch Springs are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Balch Springs. All the population of City of Balch Springs is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Balch Springs. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Balch Springs are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Balch Springs are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Balch Springs are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Balch Springs. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Balch Springs indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Balch Springs are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Balch Springs are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Balch Springs are exposed to this hazard.

Wildfire	
Population	Based on geographical data 37 % of the population in City of Balch Springs lives within WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. An estimated $227,907,838 worth of property is within the WUI
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	According to National Climatic Data Center (NCDC), $7,000 of property damage has been reported due to flash flooding. There are no improved valued properties in the City's areas at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	There is **no** critical infrastructure located within the 100-year storm event.

Note: The period under review for the events list is from January 1, 2008 through November 30, 2013.

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Balch Springs.

Essential Infrastructure Summary Report for the City of Balch Springs:

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Floyd Elementary School	Lat32.727400 Long-96.620851	1
Hodges Elementary School	Lat32.71478 Long-96.59978	1
Gray Elementary School	Lat32.71478 Long-96.59871	1
A.C. New Middle School	Lat32.71861 Long-9659488	1
Mackey Elementary School	Lat32.71848 Long-96.59407	1
Emergency Operations Facilities	Lat32.71861 Long-96.59488	1
Police/ Fire Departments	Lat32.718601 Long-96.594879	1
Animal Shelter	Lat32.71861 Long-96.59488	1
City Hall	Lat32.71861 Long-96.59488	1

Structure / Property and Flood Vulnerability

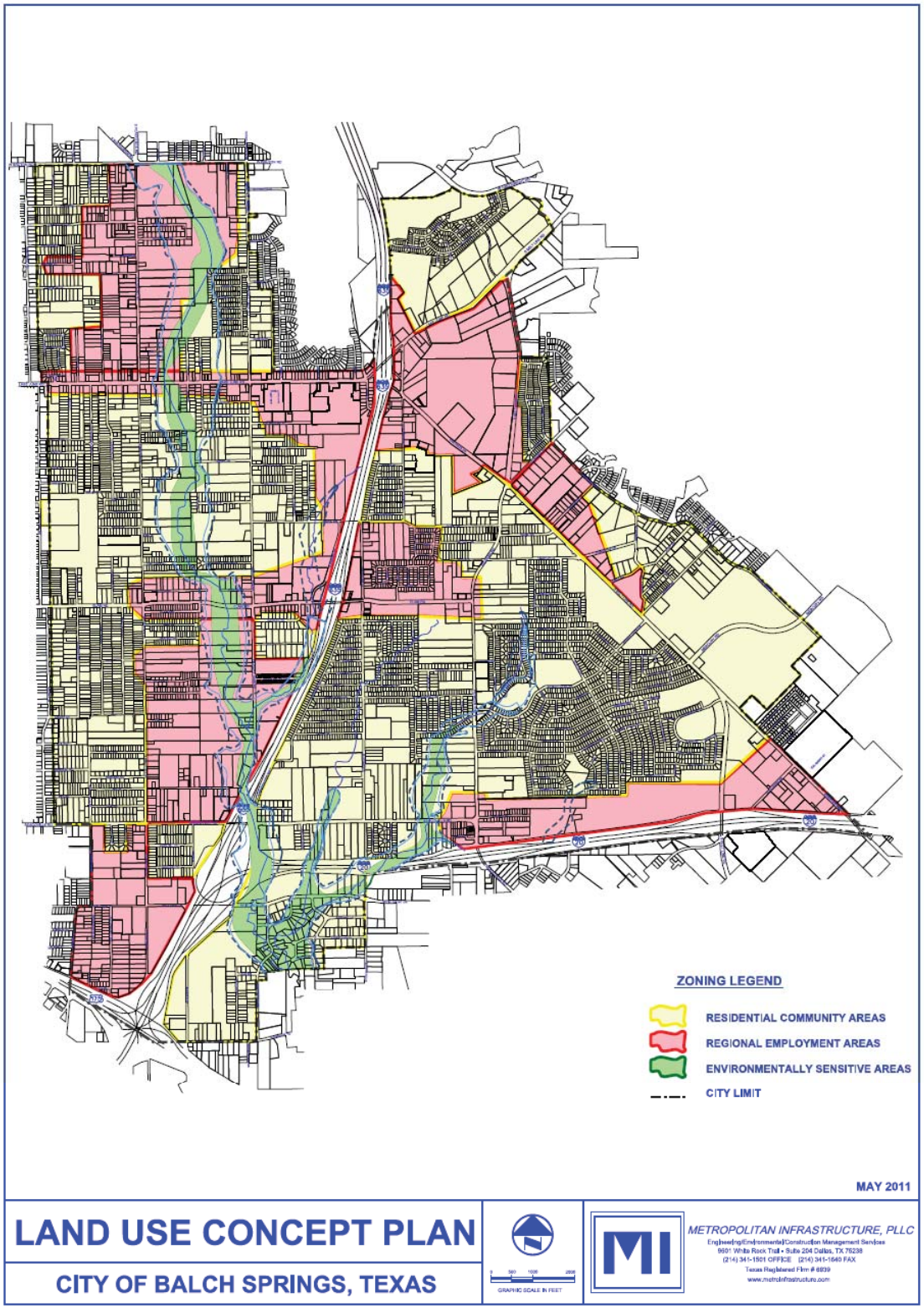
Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	$ 2,000,000	100	Within
Commercial	0	N/A	N/A
Industrial	N/A	N/A	N/A
Government / Public	-	-	-

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$148,451,104.00	Within	37% live within the WUI Zone	Low
Commercial	$79,456,734.00	N/A	Approximately 20% are within the WUI Zone	Low
Industrial	-	-	-	-
Government / Public	-	-	-	-

Land Use: The Future Land Use Plan for the City of Balch Springs illustrates the desired pattern of growth for the foreseeable future. It is intended to guide public and private decision making for development and redevelopment in the city for the next several years. For purpose of this plan, the future land use plan assists in decision making in incorporating hazard mitigation planning activities for the city. **Map COBS.4** depicts the future land use for the City of Balch Springs.

Map COBS.4: Land Use Map City of Balch Springs



Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** *Identify areas where repetitive damages occur during chronic hazard events*
- ✓ ***Objective 2-B:*** *Incorporate disaster resistant features in government facilities and infrastructure*
- ✓ ***Objective 2-C:*** *Expand and coordinate Early Warning Systems currently in use.*

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** *Provide public education materials to residents and private sector*
- ✓ ***Objective 3-B****: Encourage private sector participation in future mitigation efforts*
- ✓ ***Objective 3-C:*** *Encourage public participation in future mitigation efforts*
- ✓ ***Objective 3-D:*** *Heighten public awareness for natural and man-made hazards*

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** *Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)*

Goal 5: Continue to build capacity for hazard mitigation in the City of Balch Springs

- ✓ ***Objective 5-A:*** *Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts*
- ✓ ***Objective 5-B:*** *Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs*
- ✓ ***Objective 5-C:*** *Promote land use for public recreation*

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Balch Springs Action Item	Buy-out Program: Buy-out remaining structures that are in the floodplain
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	1.3 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Lead Agency/Department Responsible	Building Inspectors and Engineering Department
Implementation Schedule	Implement as funding is available
Effect on Old Buildings	None because the old rebuilding will be removed
Effect on New Buildings	None
Cost Effectiveness	The benefits of this program exceed the cost associated with flooding of this affected areas
Discussion	The removal of structures from flood prone areas will minimize future flood losses. This will be done by acquiring and demolishing of structures from voluntary property owners and preserving land subject to repetitive flooding.

City of Balch Springs	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, lightning
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Balch Springs Fire Department
Implementation Schedule	2 Years
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Balch Springs Action Item	Implement the Texas Safe Room Rebate Program for the residents of the City of Balch Springs
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Balch Springs Emergency Management and Building Inspection Departments
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Balch Springs Action Item	Protect Critical Facilities and Equipment
Hazard(s) Addressed	Lightning
Goal/Objective	2- B
Priority	Medium
Estimated Cost	$3,000
Potential Funding Sources	City Budget – General Funds
Lead Department	City of Balch Springs Public Works & Emergency Management
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of installing protective devices on critical equipment is much less than replacing or repairing damaged equipment.
Discussion	Install lighting rods to the city facilities with radio and communication sites. These sites are integral to the city's ability to communicate before, during and after a major disaster

City of Balch Springs Action Item	Implement water-wise program for the City of Balch Springs. This program will include purchasing water saving equipment and fixtures, such as low flow fixtures, in all city facilities
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$8,000
Potential Funding Sources	General Budget
Lead Department Responsible	Permits and Inspection Department
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

City of Balch Springs Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	General fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	Currently in progress and will continue indefinitely
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

City of Balch Springs Action Item	Develop a Wildland Urban Interface (WUI) Code
Objective(s) Addressed	1-A, 1-C
Hazard(s) Addressed	Wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	No Cost
Potential Funding Sources	No cost other than enforcing the code
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	24 months
Effect on Old Buildings	Old buildings may not be affected by this
Effect on New Buildings	New regulations will require safer construction and incorporation of wildfire mitigation considerations into the permitting process
Cost Effectiveness	Cost of implementing this program is low compared to the benefits of the program
Discussion	Developing a WUI Code can incorporate specific design guideline and development review procedures for new construction, replacement, relocation and substantial improvement in the wildfire hazard areas

City of Balch Springs	Purchase and distribute hail and wind resistant window coverings to homeowners
Hazard(s) Addressed	Hail, Tornado
Goal/Objective	1-C, 2- A, and 4-C
Priority	Low
Estimated Cost	Unknown currently, based on current population and vendor
Potential Funding Sources	HMGP
Potential Matching Sources	General Fund, in-kind
Lead Department	Emergency Management
Implementation Schedule	12 Months
Effect on Old Buildings	Potentially can reduce damage caused by severe weather
Effect on New Buildings	Potentially can reduce damage caused by severe weather
Cost Effectiveness	Low cost and will provide great benefit to the community
Discussion	The City will purchase window coverings to protect residential and business windows from damage from hail and wind damage.

Plan Maintenance

The City of Balch Springs Emergency Management Coordinator will be responsible for leading the monitoring, evaluation and update efforts of the plan. The activities involved in the process are provided in the table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Balch Springs	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

EM will call the Balch Springs Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Balch Springs EM will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Balch Springs City Council. Emergency Management will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Balch Springs or its communities, legal changes, and other events may trigger a meeting of the Balch Springs Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Balch Springs is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Balch Springs will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City of Balch Springs will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration table below shows how this will be done.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Balch Springs will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Balch Springs	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Manager	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. Hazard Identification and Risk Assessment (HIRA) Worksheet

b. Meeting and Outreach Materials

Appendix COBS A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Balch Springs
Hazard Identification and Risk Assessment (HIRA)
Date: July 29, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4	1	2	2	5	80%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	1	3	1	5	40%
Winter Storms	2	4	4	2	2	1	1	4	50%
Tornado	4	4	4	4	2	3	1	6	66%
Flooding	3	3	4	4	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	4	4	4	1	1	6	66%
Extreme Temperatures/Heat	4	4	2	2	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3	2	2	2	6	50%
Wildfire	2	2	3	3	1	3	3	7	42%
Utility Failure	4	4	3	3	4	1	1	6	50%
Energy/Fuel Shortage	1	1	3	3	4	2	1	7	42%
Terrorist Attack	1	1	4	4	4	4	3	11	36%
Urban Fire	4	4	2	2	2	3	1	6	33%
Earthquake	1	1	1	1	3	4	3	10	10%
Levee/Dam Failure	1	1	1	1	3	4	3	10	10%
Drought	3	3	1	1	1	1	1	3	33%
Aircraft Accident	1	1	2	2	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.50	1	1	2	4	12%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4	4	4	4	12	33%
Civil Disorder	2	2	3	3	2	2	2	6	33%

NB: This City of Balch Springs HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix COBS B-1: Meeting and Outreach Materials





From: David Haas
To: rrivas
Cc: Michael Gaciri
Subject: dallas County Hazard Mitigation Plan
Date: Monday, May 11, 2015 3:45:50 PM

The City of Balch Springs and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite the City of Mesquite Emergency Management to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Sincerely,

David Haas

Chief Building Offical

Emergency Management Coordinator

13503 Alexander Rd.

Balch Springs, Texas 75180

972-286-4477 ext.121

CONFIDENTIALITY NOTE: The information transmitted, including attachments, is intended only for the person(s) or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and destroy any copies of this information.

From: David Haas
To: "emergencyoperations@dallasisd.org"
Cc: Michael Gaciri
Subject: Dallas County Mitigation Plan
Date: Monday, May 11, 2015 3:59:48 PM

---

*The City/Town of **Balch Springs** and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **Dallas Independent School District** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.*

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Sincerely,

David Haas

Chief Building Offical
Emergency Management Coordinator
13503 Alexander Rd.
Balch Springs, Texas 75180
972-286-4477 ext.121

CONFIDENTIALITY NOTE: The information transmitted, including attachments, is intended only for the person(s) or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and destroy any copies of this information.

Appendix COBS -1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Balch Springs (1)

2. Have you ever experienced or been impacted by a disaster?
   - ☒ Yes
   - ☐ No

   If "Yes", please indicate what hazard you have endured and where it occurred.
   - ✓ Hail Storm, April 2012

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned
☐	☒ (1)	☐	☐	☐

4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Earthquake Unlikely (1)	☐Earthquake Occasional	☐Earthquake Likely	☐Earthquake Highly Likely
Tornado	☐Tornado Unlikely	☐Tornado Occasional	☒Tornado Likely (1)	☐Tornado Highly Likely
Hail	☐Hail Unlikely	☐Hail Occasional	☒Hail Likely (1)	☐Hail Highly Likely
High Winds	☐High Winds Unlikely	☐High Winds Occasional	☒High Winds Likely (1)	☐High Winds Highly Likely
Winter Storms	☐Winter Storms Unlikely	☒ Winter Storms Occasional (1)	☐ Winter Storms Likely	☐Winter Storms Highly Likely
Extreme Heat	☐Extreme Heat Unlikely	☐Extreme Heat Occasional	☒Extreme Heat Likely (1)	☐Extreme Heat Highly Likely
Drought	☐Drought Unlikely	☐Drought Occasional	☒Drought Likely (1)	☐ Drought Highly Likely

Flooding	☒ Flooding Unlikely (1)	☐Flooding Occasional	☐ Flooding Likely	☐ Flooding Highly Likely
Dam Failure	☒Dam Failure Unlikely (1)	☐ Dam Failure Occasional	☐ Dam Failure Likely	☐ Dam Failure Highly Likely
Stream Bank Erosion	☐Stream Bank Erosion Unlikely	☒Stream Bank Erosion Occasional (1)	☐Stream Bank Erosion Likely	☐Stream Bank Erosion Highly Likely
Levee Failure	☒ Levee Failure Unlikely (1)	☐ Levee Failure Occasional	☐ Levee Failure Likely	☐ Levee Failure Highly Likely

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Tornado	☐ Limited	☐ Minor	☒ Major (1)	☐ Substantial
Hail	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
High Winds	☐ Limited	☒ Minor (1)	☒ Major	☐ Substantial
Winter Storms	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Extreme Heat	☐ Limited	☐ Minor	☒ Major (1)	☐ Substantial
Drought	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
Flooding	☒ Limited (1)	☐ Minor (1)	☐ Major	☐ Substantial
Dam Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Stream Bank Erosion	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
Levee Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ☐ Yes
   - ☒ No (1)

If “Yes”, please list the hazard(s) you think are a wide-scale threat that are not listed.

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

☒ Improve on Land Use Program: (1)

☐ Identify undeveloped land within the flood plain and assess special use for conversation and recreation.

☐ Limit floodplain development

☐ Buy-out of property in the floodplain (flood-prone property acquisition)

☒ Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control) (1)

☐ Improve, adopt and enforce building codes

☒ Implement the Texas Individual Tornado Safe Room Rebate Program (1)

☒ Expand and improve the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs such as: (1)

☐ National Flood Insurance Program (NFIP) and Community Rating System (CRS) program

☐ What to do the event of a flood, tornado, need for a weather radio

☐Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events

☐ Coordinate with Dam owners to conduct inundation studies of dams to include:

☐ Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners (1)

☒ Purchase and improve on the Weatherization Assistance Program (WAP) (1)

☐ Conduct an earthquake vulnerability study

☒ Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure (1)

☐ Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing

☒ Structural Retrofitting of Existing Buildings (1)

City of Carrollton Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Carrollton was represented and actively participated in the Countywide Dallas County HazMAP Working Group.

This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of Carrollton. In addition to the countywide hazards and strategies discussed in the previous sections, this annex serves as a complete hazard mitigation planning tool for the City of Carrollton. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction



Carrollton is located at 32.9900 N and 96.8933 W. It is located in portions of three counties: Dallas County, Denton County and Collin County. It is located in the Northwest corner of Dallas County, bordering Coppell and Irving to the West and Southwest, Farmers Branch to the South and Addison and Dallas to the Southeast and East. Interstate 635, Interstate 35, Highway 121, and Highway 190 run through its city limits.

Carrollton was first settled by Jared Ford in 1842 by William and Mary Larner. The English colony was home to large landowners including the Furneaux, Jackson, Morgan, and Rowe families. It is most likely that Carrollton was named for Carrollton, Illinois, the original home of many of these settlers. (Handbook of Texas *Online*). Carrollton's livelihood was strictly agricultural, but after the construction of the Dallas-Wichita Railroad through Trinity Mills in 1878, the community began to grow in its industrial significance.

According to the United States Census Bureau (2011) the total population of Carrollton is 122,640. The racial makeup of the city is 63.6% White, 8.4% African American, 0.6% Native American, 13.4% Asian, 0.03% Pacific Islander, 10.8% some other race, and 3.1% from two or more races. Hispanic or Latino of any race is 30.0% of the population. The city has a total area of 37.1 square miles, of which 36.3 square miles is land and .81 square miles is water. There are approximately 45,508 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats and RVs) units.



The city of Carrollton operates under the Council-Manager form of government. Council-Manager

governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the City, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the City and for preparing and submitting an annual budget for Council review.



Carrollton ranks in the top cities in the region in creating the highest number of new jobs, the total new development square footage, and the number of businesses moving to Carrollton, including the expansion of current businesses. The momentum in commercial/industrial development continues, and the economic cornerstone is the well-balanced residential and business tax base. Carrollton is home to 122,000 citizens, over 5,000 businesses and a daytime workforce of over 71,000. In 2008, the City was ranked 15th by Money magazine as the nation's "Best Small Cities" to live in. In addition, Forbes Magazine recently ranked Carrollton #12 for "America's 25 Best Places to Move (carroltontxdevelopment.com).

Internal Planning Process

The City of Carrollton Hazard Mitigation Planning Team (HMPT) collaborated to identify the natural hazards faced by the city and the areas of the city affected by each hazard. The team consisted of the members listed in the table below:

Name	Department	Position	Role
Elliott Reep	Emergency Management	Emergency Management Coordinator	HMPT Leader
John Murphy	Fire Department	Fire Chief	Provided Urban/Wildland Fire Hazard Analysis
Mark Haseloff	Fire Department	Assistant Fire Chief; Fire Marshal	Acted as Assistant HMPT Leader
Robert Kopp	Public Works	Public Works Director	Provided Infrastructure Vulnerability Assessment; Action item Recommendations
Brian Little	Public Works	Water Utilities Manager	Provided Water System Hazard Analysis
Danny Stevens	Public Works	Streets, Drainage & Traffic Operations Manager	Assisted with Infrastructure Assessment and Urban Flood Hazard Analysis
Mike Mckay	Engineering	Civil Engineering / Flood Plain Manager	Provided Flood Plain Data and Dam Hazard Analyses
Brett King	Building Inspection	Building Official	Provided Assessment of Public/Private Building Vulnerabilities

Name	Department	Position	Role
Ta Soriaga	Environmental Services Manager	Environmental Services Manager	Assisted with Hazard Analyses and Action Items
Scott Whitaker	Parks and Recreation	Parks and Recreation Director	Assisted with Hazard Analyses and Action Items
Alina Ciocan	Economic Development	Economic Development Manager	Assisted with Hazard Analysis and Resiliency Input
Christopher Barton	Urban Development	Chief Planner	Provided City Zoning and Build-Out Data Used in Hazard Assessment

A series of planned meetings were held throughout the process as well as one on one meeting between the HMPT leader and individual team members as was necessary. These meeting served to gather information and compile a draft of hazard analyses, critical infrastructure and other necessary information. A schedule of formal meetings and what was addressed is included in the table below:

Date	***Meeting Summary***
5/30/13	*Joint Meeting with Farmers Branch HMPT – Identified common hazards and conducted a risk assessment for the both jurisdictions in respect to the Dallas County HIRA*
6/5/13	*Second Meeting – Reviewed Carrollton specific risk assessment data from previous meeting and completed the HIRA document. Discussed and identified potential action items for HMPT leader and assistant to draft. Discussed and planned survey questions and how to publicize it.*
6/27/13	*Joint Carrollton – Farmer's Branch Meeting with Valwood Improvement Authority, an important external stakeholder, to ensure their input was included in the plan.*
7/16/13	*HMPT leader met with Flood Plain Manger to review flood/dam/levee hazards and mitigation items*
7/17/13	*HMPT leader met with Building Official to review existing codes/mitigation regulations and discuss proposed action item proposals*
7/24/13	*2nd Dallas County HazMAP Group Meeting – Reviewed progress and worked on drat plan and annexes. Reviewed status of city surveys.*
7/25/13	*Joint Meeting with Farmers Branch HMPT – Worked to ensure survey results would be addressed by plans. Finalized list of action items and for each Team to include in their respective plans.*
8/12/13	*HMPT Leader met with HMPT team leader from Richardson OEM to Discuss Regional HMAP Projects*

External Stakeholders

From the beginning of the process Carrollton's HMPT coordinated and periodically met with members of the Farmers Branch HMPT to collaboratively plan and research common hazards facing both communities. The two teams all discussed possible action items such as further implementation of the Metro Storm Safe Room Program as well as Severe Weather and All-Hazard Public Education Campaigns.

Representatives from both Carrollton and Farmers Branch planning teams met jointly with a representative from the Valwood Improvement Authority to discuss the levee system that helps protect both cities. This meeting was held on June 27th, 2013 at the Offices of the Valwood Improvement Authority located at 1740 Briercroft Ct, Carrollton, TX 75006.

Carrollton's HMPT Leader and Assistant Leader met with Mr. Pat Canutesun, Executive Director at Valwood Improvement Authority. We briefed him on the mitigation plan and asked him to brief us on the levee system operated by the District and any areas of concern. We asked if there were any mitigation issues that needed to be addressed for the district to better protect the public. Pat described the system they operate and the ways in which their system works to control flood water and direct it through the levee and trench system to the Elm Fork of the Trinity River to the west of the City. He stated that the previous work on the levees increased their effectiveness and felt that no additional action was needed, beyond maintenance, to increase the effectiveness of the system at that time. However, he did mention that an education campaign to inform the surrounding public of the district's role in water direction and elimination would help with support for future mitigation actions if and when they are deemed necessary. We agreed to include this as one of our action items in the mitigation plan's final draft. He then agreed to work with us on future updates to target both structural and non-structural mitigation projects as necessary to ensure the safety and effectiveness of the District's infrastructure.

A full accounting of all external stakeholder involvement is included in the table below, and supporting documentation with email invitations has been included in Figure B-3 at the end of this annex.

Representing	Position/Department	Role
Pat Canutesun	*Executive Director; Valwood Improvement Authority*	*Review Plan*
Matthew Garrett	*Safety & Security Officer; Lewisville Independent School District*	*Review Plan*
Pat Hester	*Director of Plant Operations, Security, Building Rentals; Carrollton Farmers Branch Independent School District*	*Review Plan*
Leslie Chandler	*Facility Safety Manager; Baylor Carrollton Hospital*	*Review Plan*
Brian Copser	*Elm For Water Treatment Plant*	*Review Plan*

Sources Used for Planning Process

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	*Population and demographics*	*Population counts, parcel data and land use data*
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	*Hazard occurrences*	*Mapping for all hazards but wildfire*
National Climatic Data Center (NCDC)	*Hazard occurrences*	*Previous event occurrences and mapping for all hazards*
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	*Wildfire Threat and Urban Interface*	*Mapping and Wildfire Vulnerability data*
National Dam Inventory	*Dam information*	*High Hazard Dam list*
FEMA DFIRM Flood Zones	*Flood Zone Maps*	*GIS mapping of flood zones*

Public Involvement

During spring and summer of 2013 an online-survey was conducted county wide that allowed citizens of each city to provide input on potential hazards and the mitigation planning process to their specific city's HMPT. Feedback from this survey was used to inform the HMPT's planning and research process. The City of Carrollton began featuring the link to this survey both on its main webpage and on its news page on June 17th and it remained there on a rolling basis for several months.

The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Summary of Survey Responses and How Data Was Incorporated into the Plan

The City of Carrolton made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the City's website and a public outreach program was implemented to solicit public input.

Only twenty seven survey responses were received from Carrollton residents. These respondents indicated that summer heat and drought were the two mostly likely hazards to occur, followed by hail, high winds and tornadoes. To reflect this, action items have been added that address the safety of the pubic during summer heat by setting up a series of cooling shelters and coordinating transportation to them, as well as including tips to beat the heat in multi-hazard education campaign.

For drought, an action item has been added that calls for the development of a program to provide residents with subsidies to replace plants with water intensive demands with succulents and other drought resistance plants. Water conservation tips will also be included in the multi-hazard education campaign to education citizens about how they reduce their water consumption during drought conditions.

To address the concerns directed toward high wind, hail and tornados, one action item will include the public education component. This will covers preparedness tips, information on insurance policies to address damages, and encourage citizens to have emergency supply kits and family emergency plans. An additional item to address the concern over tornados is the storm room rebate program.

Overall, the results of the survey provide valuable information for the City of Carrollton as we continue our mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. Action items such as those described above will be implanted when possible. After implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.
The results of the survey are summarized below:

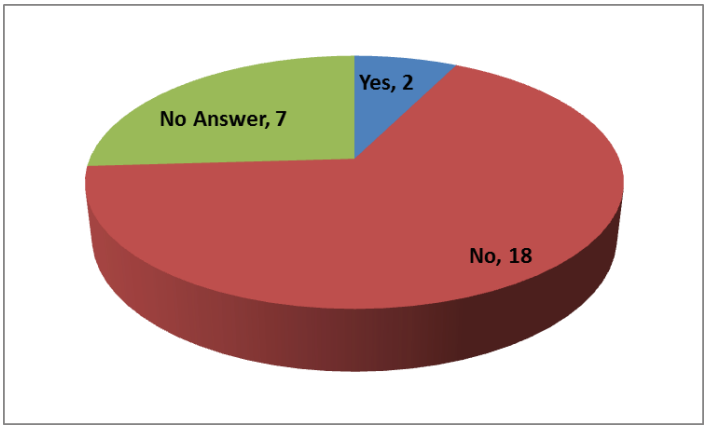
	Unlikely	Occasional	Likely	Highly Likely
Earthquake	17	3	0	0
Tornado	0	4	9	7
Hail	0	1	6	13
High Winds	0	1	6	13
Winter Storms	1	7	9	3
Summer Heat	0	2	2	16
Drought	0	2	4	14
Flooding	2	8	9	1
Dam Failure	17	1	0	1
Stream Bank Erosion	7	6	2	4
Levee Failure	16	2	1	0

Detailed Survey Results

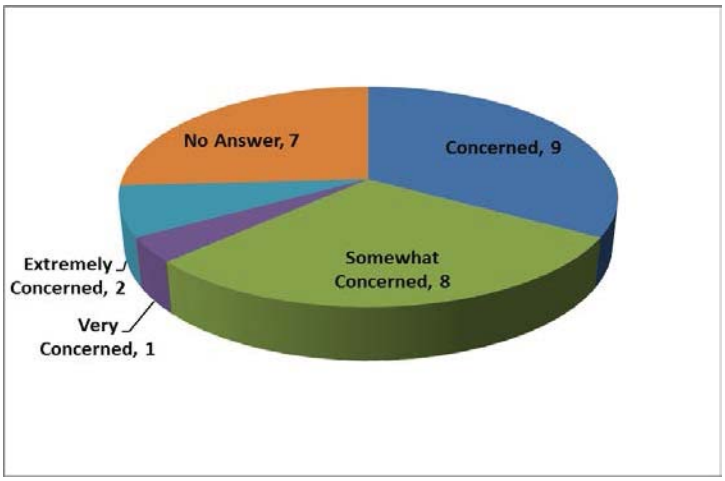
Depicted below are itemized questions and the number of respondents for each answer

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Carrolton (27 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion of how likely it is for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

- ✓ Unlikely
- ✓ Occasional
- ✓ Likely
- ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total	Average Rating
Earthquake	17	3	0	0	7	20	1.15
Tornado	0	4	9	7	7	20	3.15
Hail	0	1	6	13	7	20	3.60
High Winds	0	1	6	13	7	20	3.60
Winter Storms	1	7	9	3	7	20	2.70
Summer Heat	0	2	2	16	7	20	3.70
Drought	0	2	4	14	7	20	3.60
Flooding	2	8	9	1	7	20	2.45
Dam Failure	17	1	0	1	8	19	1.21
Stream Bank Erosion	7	6	2	4	8	19	2.16
Levee Failure	16	2	1	0	8	19	1.21

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

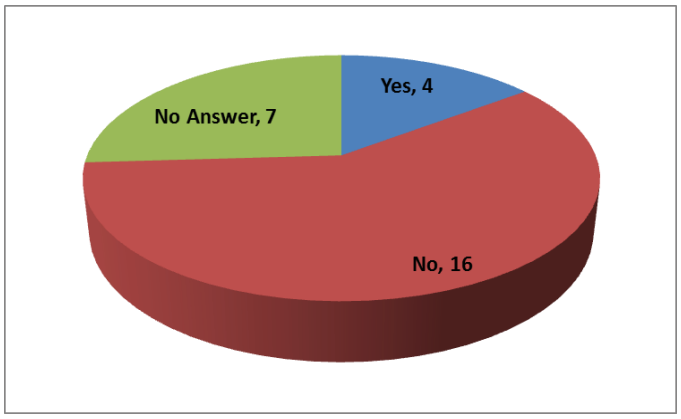
- ✓ Limited
- ✓ Minor
- ✓ Major
- ✓ Substantial

	Limited	Minor	Major	Substantial	Skipped	Total
Earthquake	13	5	1	1	7	20
Tornado	0	1	8	11	7	20
Hail	1	5	9	5	7	20

	Limited	Minor	Major	Substantial	Skipped	Total
High Winds	0	6	6	8	7	20
Winter Storms	4	9	6	1	7	20
Summer Hear	1	5	7	7	7	20
Drought	1	4	7	7	8	19
Flooding	4	7	5	4	7	20
Dam Failure	12	4	1	2	8	19
Stream Bank Erosion	8	4	2	3	10	17
Levee Failure	12	5	0	2	7	19

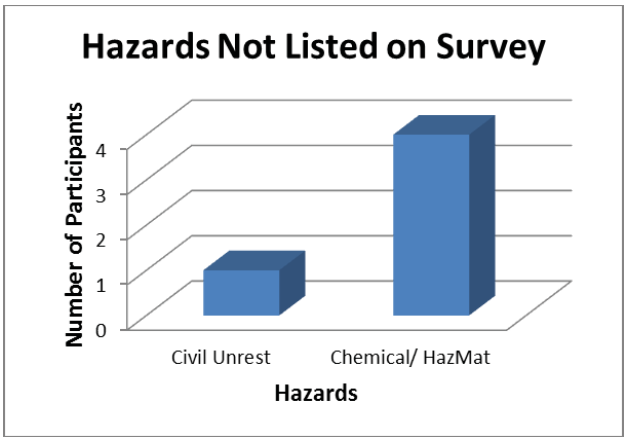
6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

- ✓ Yes (4)
- ✓ No (16)
- ✓ Skipped (7)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed

Type of Hazard	Amount
Chemical/ HazMat	4
Civil Unrest	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	5
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	13
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	13
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	5
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the National Weather Service to monitor weather events:	16
Coordinate with Dam owners to conduct inundation studies of dams:	2
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	15
Purchase and improve on the Weatherization Assistance Program (WAP):	9
Conduct an earthquake vulnerability study:	4
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Structural Retrofitting of Existing Buildings:	8
Total Respondents:	**21**

List any other strategies you think should be included in the plan:

- ✓ Structural Improvements
- ✓ Improvements of Water Irrigation

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ Notification systems
   - ✓ Equitable water usage plan

Public Review Period

On January 7, 2014 the announced the availability of the City of Carrollton's Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the City of Carrollton's main website as well as the Fire Department's website inviting the public to provide input into the draft plan. The announcement provided a 10 day public review and comment period.

The public were encouraged to submit comments prior to January 17, 2014 for consideration and possible incorporation into this draft. **Figure CC1**, provides a screen shot of the announcement.

The public comments were directed to the Elliot Reep the Emergency Management Coordinator with the City of Carrollton. The public were advised that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Figure CLT 1.0: Screen Shoot of City of Carrolton's Public Review Announcement



Capability Assessment

The City of Carrollton identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments

The following is a summary of existing departments in the City and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the City. The administrative and technical capabilities of the City, as shown in capabilities summary worksheet provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan. **Figure CLT1** shows the agencies within the City of Carrollton that will have a significant role in implementing the Plan.

Fire Rescue Department

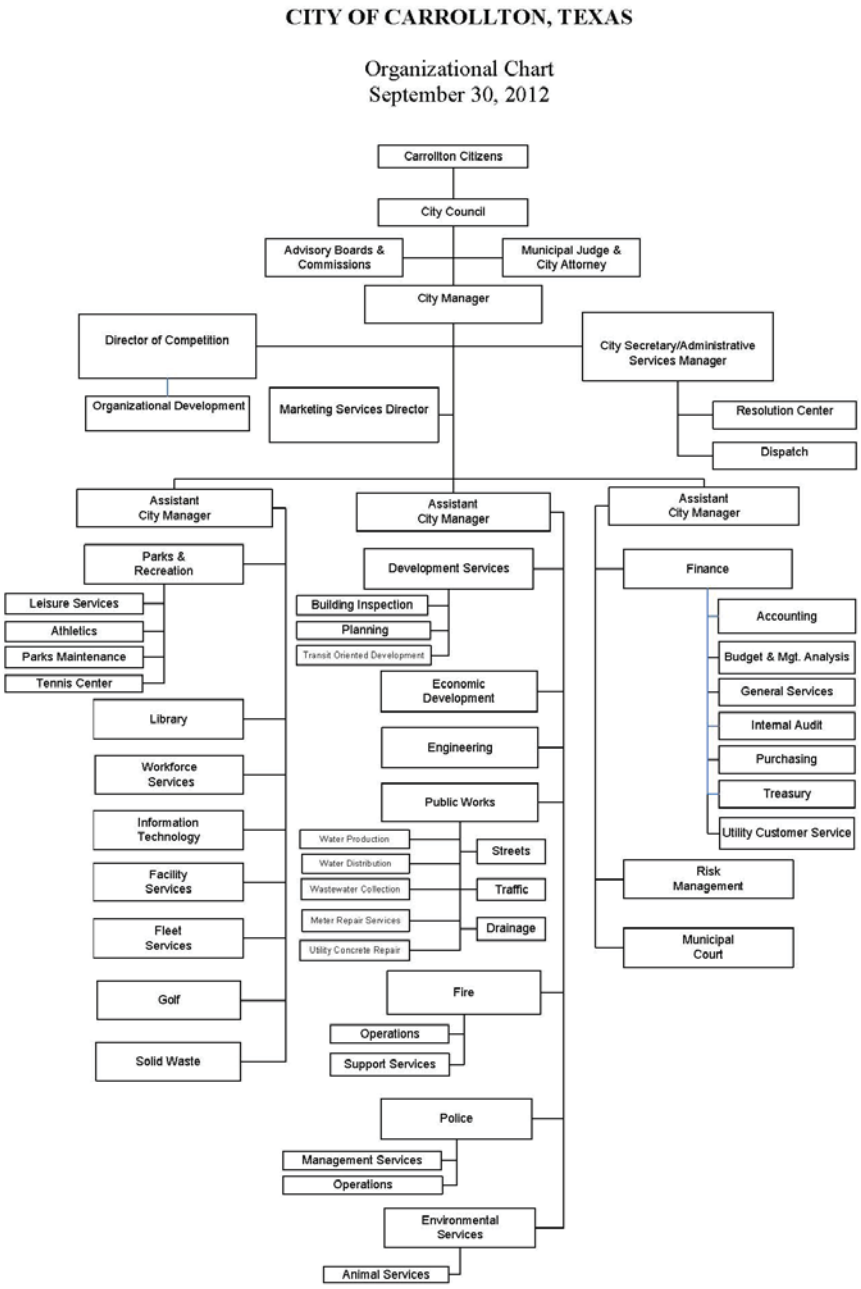
The City of Carrollton operates eight fire stations within the city limits. The Fire Chief is responsible for the overall leadership of Carrollton Fire Rescue. He or she coordinates the activities of the department with other city departments and external agencies to ensure effective and efficient emergency and non-emergency services to our citizens and visitors.

The Mission Statement is: To provide the citizens and visitors of Carrollton a well-trained team of professionals to protect their life and property through emergency prevention, education, code compliance, EMS, fire suppression, rescue and emergency management in a safe, cooperative, efficient and cost effective manner.

The Purpose Statement is: Each team member is responsible for championing emergency prevention as the Carrollton way to accomplish our Mission and to ensure the safety of all team members. When emergencies do occur, we deploy with a fit and healthy team that responds in a hurry makes a positive difference and returns home safely.

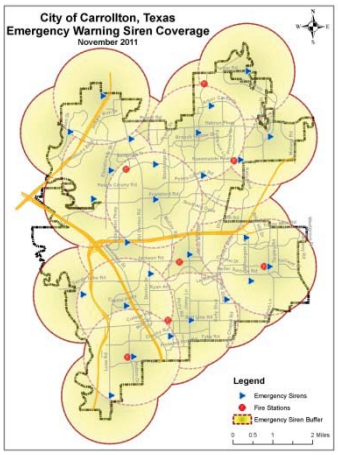
In 1996 Carrollton was the first fire service EMS system in the United States to achieve National Accreditation. The honor signifies that Carrollton meets the "gold standard" set by CAAS for modern emergency medical services providers and provides quality patient care to the community.

Figure CLT 1:



Carrollton Fire Rescue Department has two main divisions. These include Operations Division and the Support Services Division. Under these two main divisions there are several other supplemental functions or sections. These include Emergency Medical Services, Personnel/Training, and Prevention/Emergency Management. Additional areas of responsibility in the Support Service Division include the Fire Marshal's Office, Firefighter Safety, Firefighter Health and Wellness, Data Management and all Administrative Support. The main focus of the Support Service Division is to support the delivery of emergency and non-emergency services to Carrollton citizens.

Emergency Management: Coordinates and manages the emergency preparedness program for the City of Carrollton; maintains the Emergency Plan and annexes to meet and conform to federal, state and local laws; serves as the coordinator for the Regional Disaster Resource Assistance Plan; coordinates other assigned activities with City departments and personnel, outside agencies and the general public.



The City has recently launched a new Emergency Management twitter feed **@Carrollton**. This account will be used ONLY for emergency management preparedness and safety announcements. It is primarily expected to be used for weather emergencies, as a means of explaining why and when the outdoor warning sirens may be sounding. The sirens are tested the first Wednesday of every month at 1 pm, and are sounded when there is an immediate danger from tornado warning, national security threat, or environmental hazard/threat.

Carrollton Police Department: The Carrollton Police Department is comprised of 165 Police Officers, 41 civilians (including Detention Officers and support staff), and 40 part-time school crossing guards serving a very diverse community of 122,000 citizens in about 37 square miles. The Police Department is divided into two operational bureaus, each led by an Assistant Chief of Police.



The Operations Bureau is comprised of the Patrol Division, Special Services Division, and Joint Special Operations Division. The Patrol Division provides continuous coverage through vehicle and bicycle patrols, a traffic unit, and the K9 Unit. The Special Services Division is responsible for the operation of the detention facility as well as the Police Equipment Specialists and crossing guards. A Joint Special Operations Commander oversees critical operations when needed, which includes Special Weapons and Tactics (SWAT), Crisis Negotiations, and Warrant Service Team personnel.



The Investigative and Management Services Bureau is comprised of the Criminal Investigations Division, Intelligence Division and Administrative Services Division. The Criminal Investigations Division contains both Property Crimes and Crimes Against Persons detectives, as well as the School Resource Officer program. The Intelligence Division consists of covert investigations, criminal intelligence gathering and crime analysis detectives. The Administrative Services Division is comprised of specialized officers and employees to include Personnel, Training, Internal Affairs, Public Affairs, Records Management and Strategic Support and Assessment.

Public Works Department: Public Works offers a broad range of public services which includes repair and maintenance of the City's streets and alleys, storm drainage

infrastructure maintenance, ensuring that the City has a safe and reliable supply of drinking water, providing safe and efficient collection of wastewater, operation of traffic signals throughout the City, and installing and maintaining traffic signs.

Supported by 115 authorized personnel, the total replacement value for Public Works infrastructure is estimated at $2 billion.

The department maintains 1,176 miles of street pavement; 1,059 miles concrete and 117 miles asphalt. Additional transportation and pedestrian infrastructure includes 66 bridge crossings, 189 miles of alley pavement, 575 miles of concrete sidewalks and 57 railroad crossings. Twenty-one miles of screening walls, 117 intersections with traffic signals and 109 solar powered flashers are also maintained by the department.

Public Works also maintains drainage, stormwater and wastewater infrastructure. This includes 235 miles of storm sewer with 6,972 storm inlets, 42 miles of drainage channels and 2 drainage lifts stations; at Rolling Oaks and Beltline at I-35 respectively. The department distributes on average 7.8 billion gallons of water annually and stores 48 million gallons; storage capacity includes 11.5 million gallons of elevated tank capacity in 5 tanks and 36.5 million gallons of ground storage capacity in 5 tanks. Water infrastructure also includes 3 water pump stations and 2 booster stations which supply 554 miles of water distribution mains as well as 4,934 fire hydrants. Wastewater collection infrastructure consists of 410 miles of wastewater collection mains and 19 wastewater lift stations which together collect on average 4.2 billion gallons of wastewater annually. There are a total of 36,600 water service connections in Carrollton as a whole.

The operating divisions of Public Works are: 1) Water Utilities and 2) Streets, Drainage and Traffic Operations. Each Division has the following responsibilities:

Streets, Drainage and Traffic Operations Division

- Streets:
  - Maintenance and repair of streets, alleys, curbs and sidewalks
  - Weekly "Street Closures" Listings
  - Street sweeping of major thoroughfares
  - Pavement crack and joint sealing
  - Pressure grouting of sunken pavements
  - Brush and litter control within street right-of-way
  - Street sanding during winter weather
  - Railroad grade crossing improvements
- Drainage:
  - Drainage channel maintenance
  - Control of drainage from underground springs in public right-of-way
  - Maintenance of storm sewers
  - Removal of obstructions from drainage culverts
  - Repair and replacement of guardrails
  - Bridge maintenance
  - Screening walls (along streets); repair / repainting



- Traffic Operations
  - Installation and maintenance of traffic control signs
  - Installation and maintenance of traffic signals and school zone flashers
  - Installation and maintenance of pavement markings
  - Perform vehicle and pedestrian traffic counts

Water Utilities Division

- Water Quality
  - Drinking water taste and odor complaints
  - Water pressure complaints
  - Water main leak repairs
  - Utility line locates for construction or excavation
  - Water conservation and emergency water use management
  - Monthly bacteriological water samples
  - Backflow and cross connection control program
  - Registration for cross connection testers
  - Water Quality Report
  - Monthly mineral analysis reports
  - Elevated water tanks and ground storage tanks
- Water Utilities Division
  - Repair and replace water mains
  - Replacement of pavement affected by water main repairs
  - Repair and replace sewer (wastewater) mains
  - Repair sanitary sewer stoppages and overflows
  - Install water and sewer service taps
  - TV inspection services of sewer mains
  - Fire hydrant repair and maintenance

Development Services: The City of Carrollton recently united several divisions under the umbrella of Development Services. This newly reorganized department will be responsible for overseeing the inspection, permitting, and development processes that fall under building inspection, planning and transit-oriented development. The Building Inspection division provides building inspection and issues building permits for both residential and commercial buildings. It also ensures that all building codes and city ordinances are enforced. The Planning Division has the following responsibilities:

- Provides information and advice regarding zoning and land use to enable people to make sound decisions about growth and development in the community.
- Handles applications for changes to the Comprehensive Plan and/or zoning, and makes recommendations to the Planning & Zoning Commission and City Council.
- Administers requests for Special Use Permits, and makes recommendations on them to the Planning & Zoning Commission and City Council.
- Processes applications for the subdivision of land ("platting"), and makes recommendations on them to the Planning & Zoning Commission.
- Advises and assists applicants in the development of their property.
- Monitors the long-range needs of the community.



Transit-Oriented Development: Carrollton is a community looking to its future by reflecting on, and connecting with, its rich past. The rail lines that once carried cotton and grain through town now carry people to three new DART light rail stations. The stations link Carrollton directly to Dallas, other Metroplex cities, and DFW Airport. Each station brings with it transit-oriented development (TOD) opportunities and new points of connection for residents, visitors and businesses.

Environmental Services: Environmental Services protects public health and safety, and maintains and increases the sustainability of the community. The programs are dedicated to providing a safe, clean and healthy environment for Carrollton residents and businesses. They also contribute to preventing pollution, maintaining property values, preventing disease, and halting urban decline. Several services are offered under this department these include Animal Services, Community Development, Community Services and Environmental Quality. Some of the programs offered are as follows:

- ✓ Animal Services
- ✓ Community Development
  - Community Development Block Grant
  - Minor Home Repair Program
  - Neighborhood Oriented Targeted Infrastructure and Code Enforcement (N.O.T.I.C.E)
- ✓ Community Services is comprised of the following major programs:
  - Multi-Family Inspection Program
  - Neighborhood Integrity Program
  - Single-Family Rental Inspection Program
- ✓ Environmental Quality
  - The Food and Consumer Safety Program
  - Industrial Pretreatment Program
  - Pollution Control Program
  - Storm Water Program
  - Spill Response Program

Summary of Capabilities

The tables below identify the current capabilities in the City of Carrollton.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	1. No 2. No 3. Yes
Capital Improvements Plan	Yes	1. Yes 2. No 3. Yes
Economic Development Plan	Yes	1. No 2. No 3. Yes
Local Emergency Operations Plan	Yes	1. Yes 2. No 3. Yes
Continuity of Operations Plan	Yes	1. Yes 2. No 3. Yes
Transportation Plan	Yes	1. Yes 2. No 3. Yes
Stormwater Management Plan	Yes	1. Yes 2. No 3. Yes
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	1. TCEQ Sanitary Sewer Overflow Initiative a. 1: Yes; 2: Yes; 3: Yes

Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** 2012 family of International Codes
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	**Score:** 2
Fire Department ISO rating	Yes	**Rating:** 3
Site Plan review requirements	Yes	
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	1. Yes 2. Yes
Subdivision ordinance	Yes	1. Yes 2. Yes
Floodplain ordinance	Yes	1. Yes 2. Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	N/A
Flood insurance rate maps	Yes	1. Dallas County – 48113 2. Denton County - 48121
Acquisition of land for open space and public recreation uses	Yes	When land is developed for single or multi-family residences the developer must pay a fee that goes toward the Park Service Area in which the development falls. This money is used for the development and upkeep of recreational space. Figure **CLT 2** shows the Park Service Area Map for the City and Figure **CLT 3** Shows the Fee Collection Schedule Per Unit.
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Figure CLT 2: Park Service Areas Map

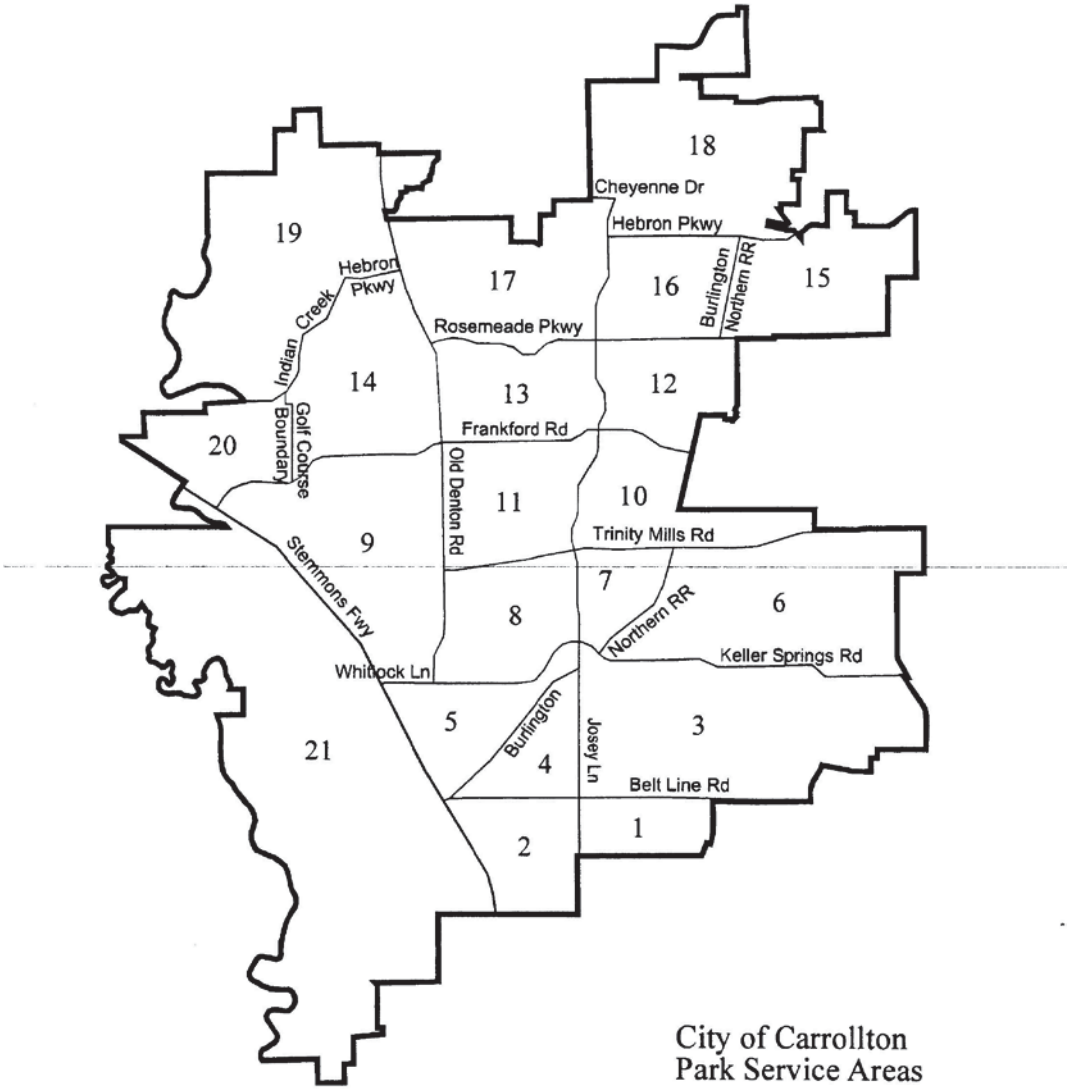


Figure CLT 3: City of Carrollton Fee Collection Schedule (Per Unit)

Column 1 SERVICE AREA	Column 2 ACTUAL ASSESSED AMOUNT	Column 3 MAXIMUM ALLOWED BY STATE
1	$ 0	$ 0
2	0	0
3	300	597
4	300	745
5	300	542
6	300	540
7	300	715
8	300	545
9	300	941
10	300	2,300
11	300	2,419
12	300	682
13	108	108
14	300	662
15	300	1,545
16	300	869
17	300	730
18	170	170
19	300	300
20	0	0
21	0	0

(Ord. No. 3271, 01/01/09)

Administrative and Technical

Administration	**Yes/No**	**Describe capability** **Is coordination effective?**
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Yes
Mutual aid agreements	Yes	Both automatic & mutual aid agreements in place with multiple jurisdictions in several counties.
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations?** **Is staff trained on hazards and mitigation?** **Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	Yes; Yes; Yes
Floodplain Administrator	Yes/FT	Yes; Yes; Yes
Emergency Manager	Yes/FT	Yes; Yes; Yes
Community Planner	Yes/FT	Yes; Yes; Yes
Civil Engineer	Yes/FT	Yes; Yes; Yes
GIS Coordinator	Yes/FT	Yes; Yes; Yes
Other		
Technical	**Yes/No**	**Describe capability** **Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Carrollton has an all hazards outdoor warning system as well as an emergency management Twitter Feed for which citizens can sign up.
Hazard data and information	Yes	Data is collected on hazards and threats and this data is used to plan for response and possible mitigation actions.
Grant writing	Yes	EMC is the grant writer.
Hazus analysis	No	The City has not utilized HAZUS in the past.
Other		
How can these capabilities be expanded and improved to reduce risk?		
Acquire a mass notification system for the City. Look at the benefits of HAZUS.		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1. Used in the past to fund infrastructure improvements. 2. Yes
Authority to levy taxes for specific purposes	Yes	1. Used to fund annual city operations. 2. Yes
Fees for water, sewer, gas or electric services	Yes	1. Water and sewer fees are charged to local customers 2. Yes
Impact fees for new development	Yes	1. Park development fees. 2. No
Storm water utility fee	No	N/A
Incur debt through general obligation bonds and/or special tax bonds	Yes	1. Used in the past to fund infrastructure improvements. 2. Yes
Incur debt through private activities	No	N/A
Community Development Block Grant	Yes	Used in the past to fund infrastructure improvements.
Other federal funding programs	Yes	1. Homeland Security Grant Program a. UASI b. Law Enforcement Grants
State funding programs	Yes	1. State Homeland Security Program a. Law Enforcement Grants
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	1. Partnerships with local ARES/RACES Amateur Radio Groups for storm spotting and other activities. 2. Agreements with American Red Cross for Shelter Assistance, Disaster Assistance, and FNSF. 3. Resources through NCTTRAC for FNSF 4. CERT Groups; VOAD. 5. Metrocrest Social Services 6. Local Churches 7. Schools as possible Shelters of Last Resort.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education,)	Yes	1. Fire Education and Safety presentations available upon request. 2. Emergency Preparedness presentations available upon request. 3. Public Education and Outreach regarding Storm Water Pollution Prevention.
Natural disaster or safety related school programs	Yes	1. Program with CFBISD to have fire safety poster in all classrooms. 2. Partnership with CFBISD and LISD in emergency preparedness. Drills are carried out together.
StormReady certification	Yes	Certification is current.
Firewise Communities certification	No	N/A
Public-private partnership initiatives addressing disaster-related issues	Yes	Pre-existing agreements with specific vendors are in place to provide assistance during sheltering and other operations.
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	●	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	●	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	●	
Transportation		
1. Does the transportation plan limit access to hazard areas?	●	
2. Is transportation policy used to guide growth to safe locations?		●
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	●	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	●	
2. Do environmental policies maintain and restore protective ecosystems?	●	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		●

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	●	
2. Is safety explicitly included in the plan's growth and development policies?		●
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	●	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	●	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		●
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	●	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	●	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	●	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		●
3. Do the regulations allow density transfers where hazard areas exist?		●

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	●	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	●	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		●
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		●
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	●	
Minimum wind loads in building code.		
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		●
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	●	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	• 375 total policies. No info on premiums. Total coverage is $107M
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	• 117 • $906,867 • 0
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	• 893 – Dallas County • 375 – Denton County
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	• Yes • Civil Engineering Manager is Flood Plain Manager, as established by City Ordinance
Is floodplain management an auxiliary function?	Community FPA	• Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	• FPA is registered Professional Engineer with CFM. FPA reviews development permits, manages GIS with floodplain info and maintains models.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	• None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	• Yes
Are there any outstanding compliance issues (i.e., current violations)?		• No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		• 2011
Is a CAV or CAC scheduled or needed?		• No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	• 7/16/1980
Are the FIRMs digital or paper?	Community FPA	• Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	• Exceed
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	• Development is not allowed in floodplain or floodway. Reclamation cannot increase the BFE. Plans for reclamation cannot increase the BFE. Plans for reclamation are reviewed as part of the overall development review process.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	• Yes
What is the community's CRS Class Ranking?	Flood Insurance Manual	• 6
What categories and activities provide CRS points and how can the class be improved?		• Maintenance, Outreach, Mapping, Open Space Preservation • Ongoing review of process to maintain 6 rating.
Does the plan include CRS planning requirements?	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	• Yes

Note: The City Council for the City of Carrollton, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans. These functions are enforced and coordinated through the Office of the City Manager

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Carrollton HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Carrollton are as follows:

High Risk (over 65% on HIRA)	
Moderate Risk (41%- 65% on HIRA)	Tornado
Low Risk (12 %-40% on HIRA)	Wildfire Dam/Levee Failure Drought Flooding High Winds Extreme Heat Hail Lightning Winter Storms Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Carrollton. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Carrollton**.**

A. Flooding: The City of Carrollton is located within the Elm Fork of the Trinity drainage basin, immediately downstream of Lake Lewisville dam. There are four sub watersheds: Hutton Branch, Furneaux, Dudley and Indian Creek. The Elm Fork is located on the far west side of the City and drainage across the City goes from east to west. Carrollton shares the floodplain of the Elm Fork in this area with Coppell to the west, Lewisville to the north and Farmers Branch to the south.

The City participates in the Community Rating System (CRS) and was recently granted an improved rating of 6. The City has an active drainage maintenance program focused on the major channels in the city. In addition to regular maintenance, a number of channel

improvement projects have been conducted over the last ten years to improve hydraulics and reduce channel erosion. Most of the major channels are located in greenbelts (permanent open space), thereby reducing the potential for flooding impacts to the public.

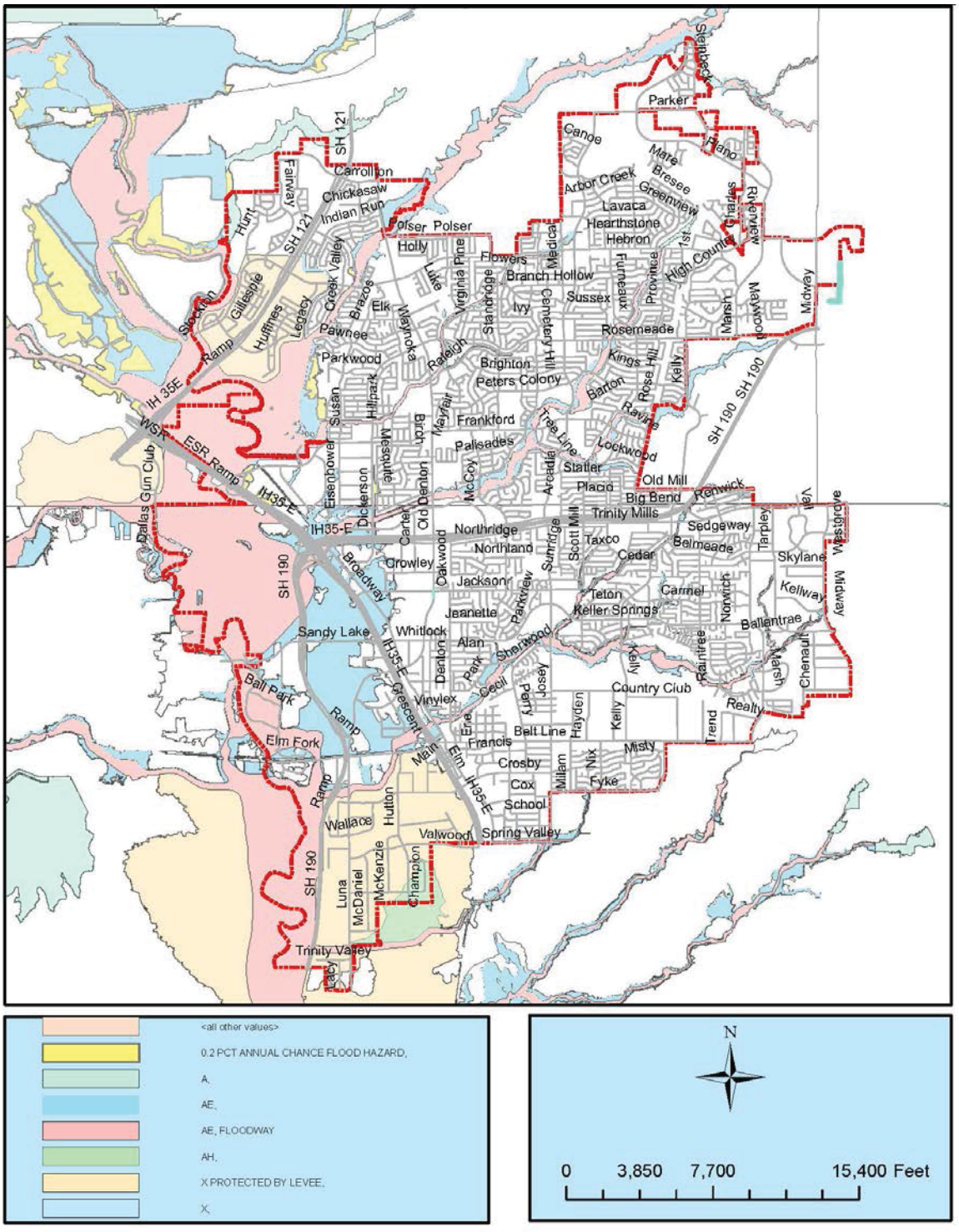
The **Map CLT 1** depicts the City of Carrollton's FEMA Flood Plain designation as well as overall flooding vulnerability for the city. **Table CLT 1** includes data on city-wide critical infrastructure and property valuations as well as those at risk in flood plains. City plans and ordinances do not allow for further development in the identified un-reclaimed flood plains. Existing property in flood plain zones was either grandfathered in or existed before a flood plain redefinition. **Map CLT 2** depicts the City's future land use plan which corresponds with this policy. A recent estimation indicated that the City of Carrollton is approximately 95% built out on available non flood plain/hazard land.

The following specific locations in the City of Carrollton are known to face flooding concerns during heavy rains:

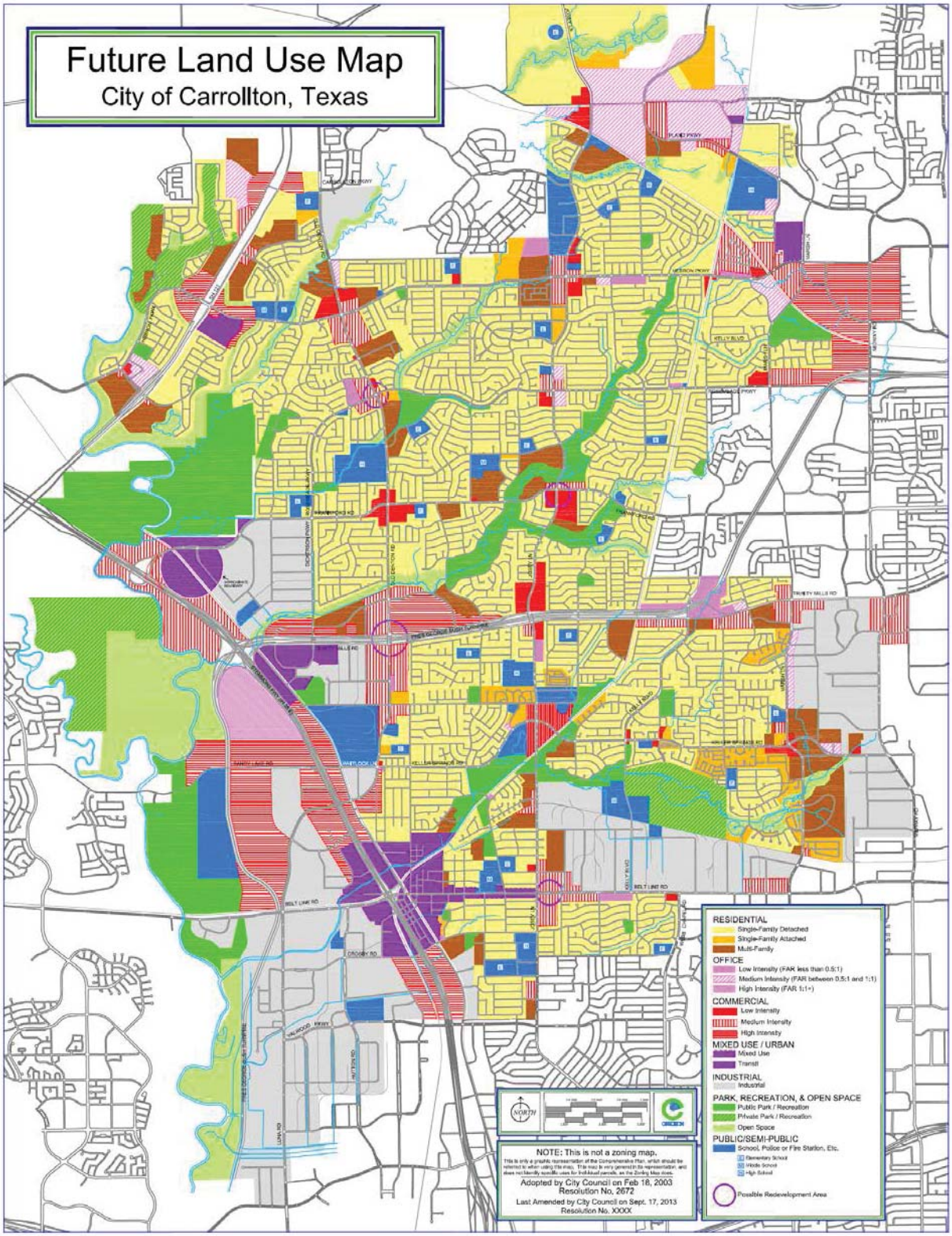
- ✓ Frankford Road West and IH 35 E North Interchange: Water over the roadway.
  - 1800 Block of Frankford Road
  - 3000 Block of IH 35 E North
- ✓ Frankford Road West between Eisenhower Street and Commodore Drive: Water over the roadway.
  - 1500 – 1600 Block of Frankford Road
- ✓ Josey Lane North at Hutton Branch stream crossing: Water over the roadway.
  - 2000 Block of Josey Lane
- ✓ Country Place: Water over the roadway.
  - 2600 – 2700 Block of Country Place
- ✓ Intersection of International Parkway and Midway Road: Water over the roadway.
  - 4000 Block of Midway and 4100 Bock of International

As indicated in this annex, the City of Carrollton participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

Map CLT 1: City of Carrollton FEMA Flood Map



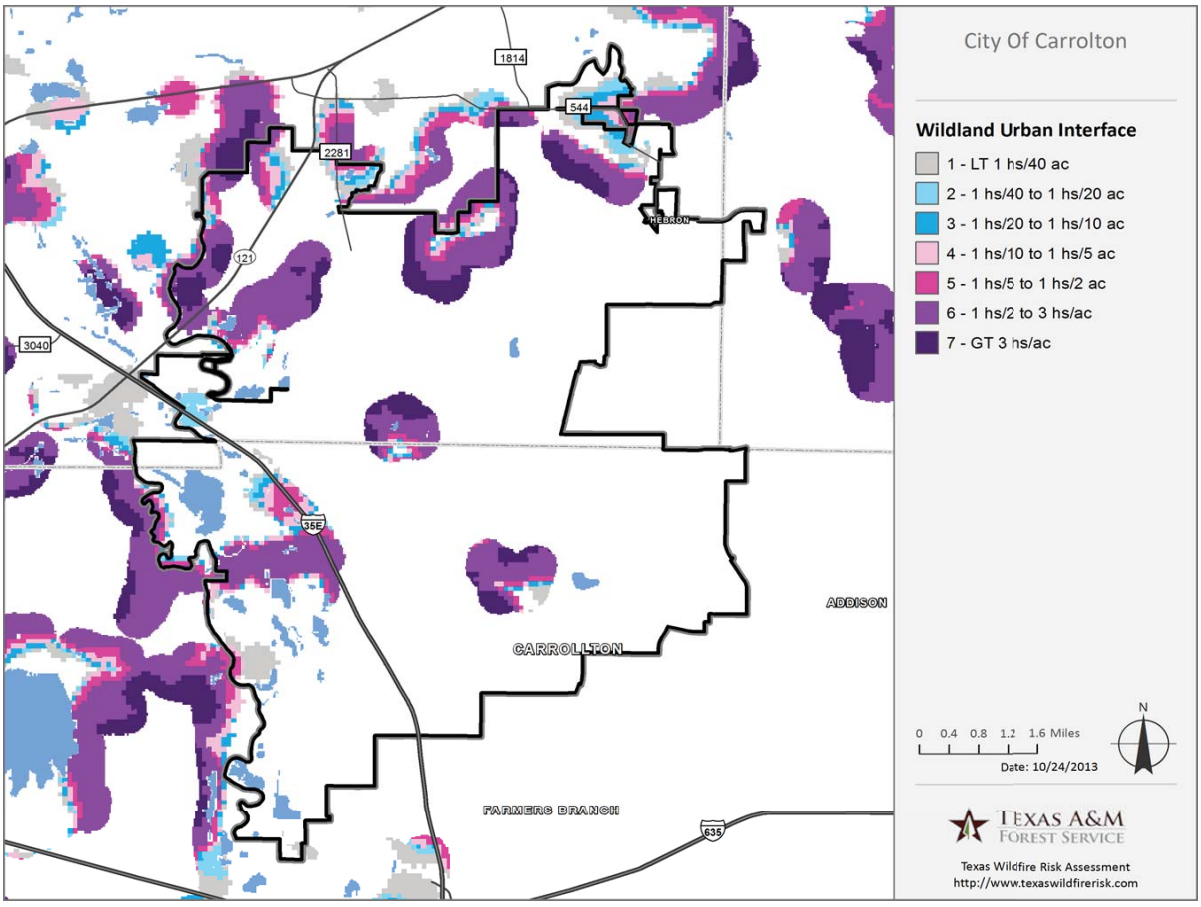
Map CLT2: City of Carrollton Land Use Map



B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

For the City of Carrolton project area, it is estimated that 16,811 people or 13 percent of the total project area population (133,177) live within the WUI. **Map CLT 3** Wildland Urban Interface (WUI) reflects housing density depicting where humans and their structures meet or intermix with wildland fuels.

Map CLT3: City of Carrollton Wildland Urban Interface (WUI)



The Wildfire Threat for the City of Carrollton ranges from Non-Burnable to Low. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

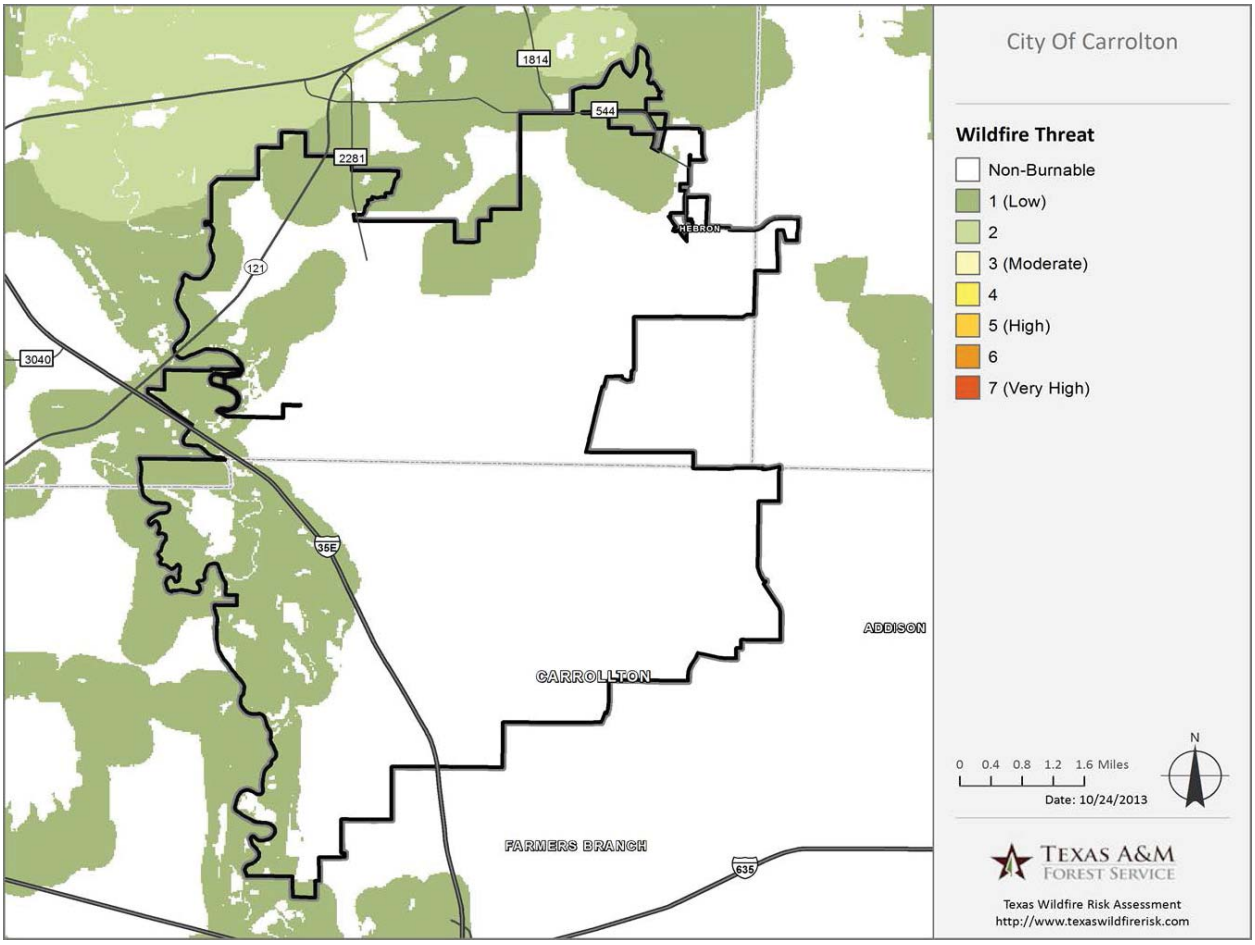
from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map CLT 4: City of Carrollton Wildfire Threat Map



C. Dam and Levee Failure: The City of Carrollton has two dams, Josey Ranch Lake Dam and Woodlake Dam.

Josey Ranch Lake Dam: The dam is located on the Hutton Branch Stream southwest of the intersection of Josey Lane and Keller Springs Road. The dam's approximate location is latitude 32.969716 and longitude -96.892183 and was built in 2002. The dam is of compacted earth fill construction. It is seventeen feet high and 553 feet in length. It has a drainage area of .23 square miles a hazard classification of: Small, High Hazard. The spillway consists of 5 box culverts – 2 – 2.5 feet high by 4 feet wide. Principal Spillway Capacity is 158 CFS. The dam has a natural auxiliary spillway with concrete crest protection, 2,092 CFS. Normal storage volume is 47 acre-feet. Maximum storage volume is 132 acre-feet. Dam elevation (Mean Sea Level) for Principle Spillway Crest is 483.5. Auxiliary Spillway Crest is 487.5 and Top of Dam is 490. **Map CLT 5** depicts the inundation areas for Josey Ranch Lake Dam. These areas are also identified on the **Map CLT 1**, City of Carrollton FEMA Flood Map. The City has written and maintains an Emergency Action Plan for failure of this dam.

The extent of inundation that can be expected from the Josey Ranch Dam is estimated to range betwwen 0 feet to 7 feet in depth.

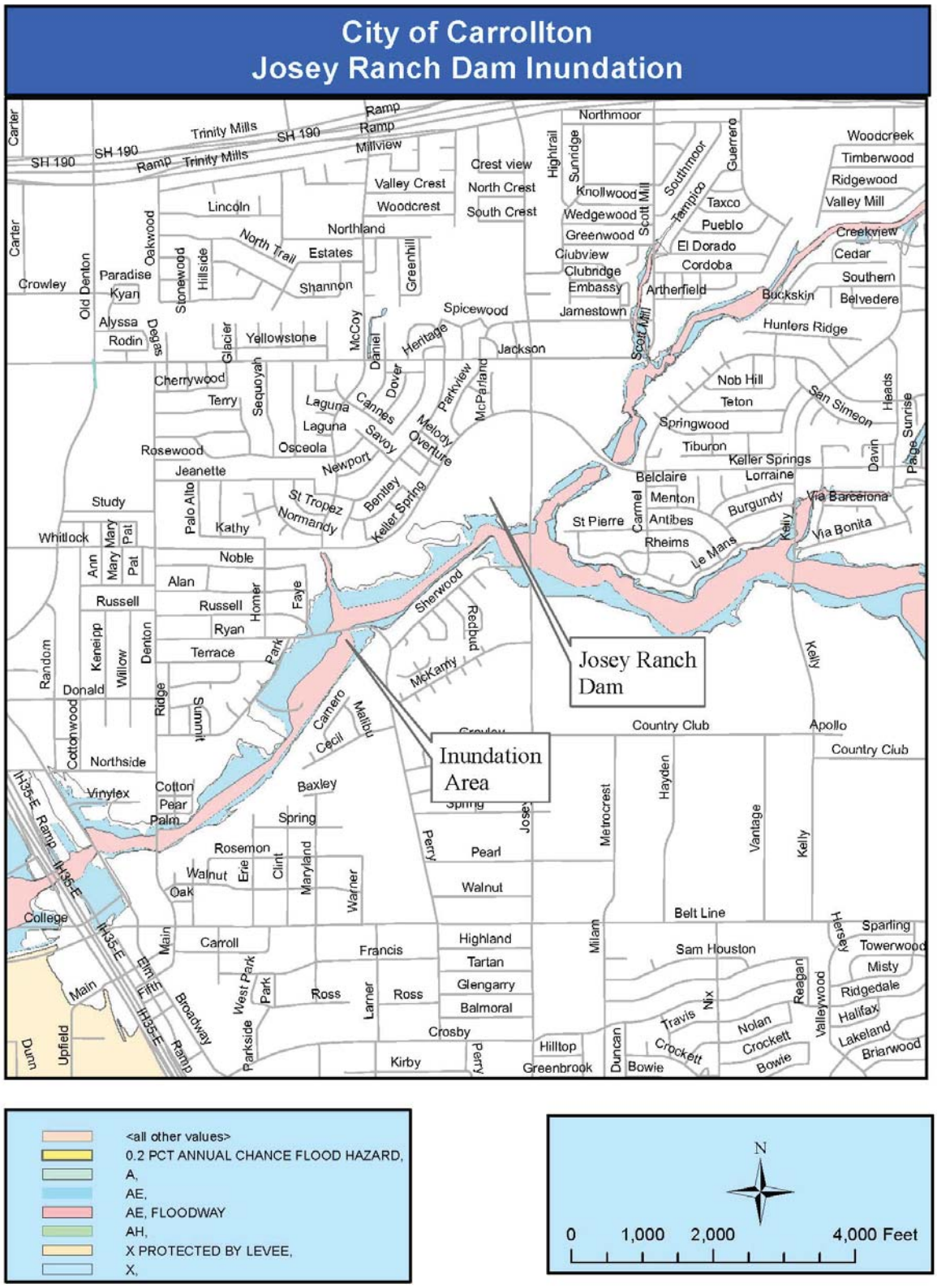
Woodlake Dam: The dam is located on Furneaux Creek Northeast of the intersection of Josey Lane and Frankford Road. The dam's approximate location is latitude 33.002581 and longitude -96.884072. The dam was built approximately in 1960 and is of compacted earth fill construction. It is seventeen feet high and 1,067 feet in length. It has a drainage area of .23 square miles and a hazard classification of: Small, Significant Hazard. The principle spillway is 90 feet wide. Principal Spillway Capacity is 4100 CFS. The dam has earthen dam auxiliary spillway, 17,220 CFS. Normal storage volume is 78.2 acre-feet. Maximum storage volume is 139 acre-feet. Dam elevation (Mean Sea Level) for Principle Spillway Crest is 511.52. Auxiliary Spillway Crest is 513.1 and Top of Dam is 514.6. **Map CLT 6** depicts the inundation areas for Woodlake Dam. These areas are also identified on the **Map CLT 1** as part of the FEMA flood plain designation. The City has written and maintains an Emergency Action Plan for failure of this dam.

Levees: Parts of Carrollton are protected by Levees operated by the Denton County Reclamation and Road District (DCRRD) as well as the Valwood Improvement Authority (VIA). The levees in Carrollton are in the nonwestern section of the city. The inundation area for this levee system is indicated on the **Map CLT 1**, City of Carrollton FEMA Flood Map. FEMA designates this area Class X, protected by levee. A magnified map of the area protected by the DCRRD levee system is depicted on **Map CLT 7**.

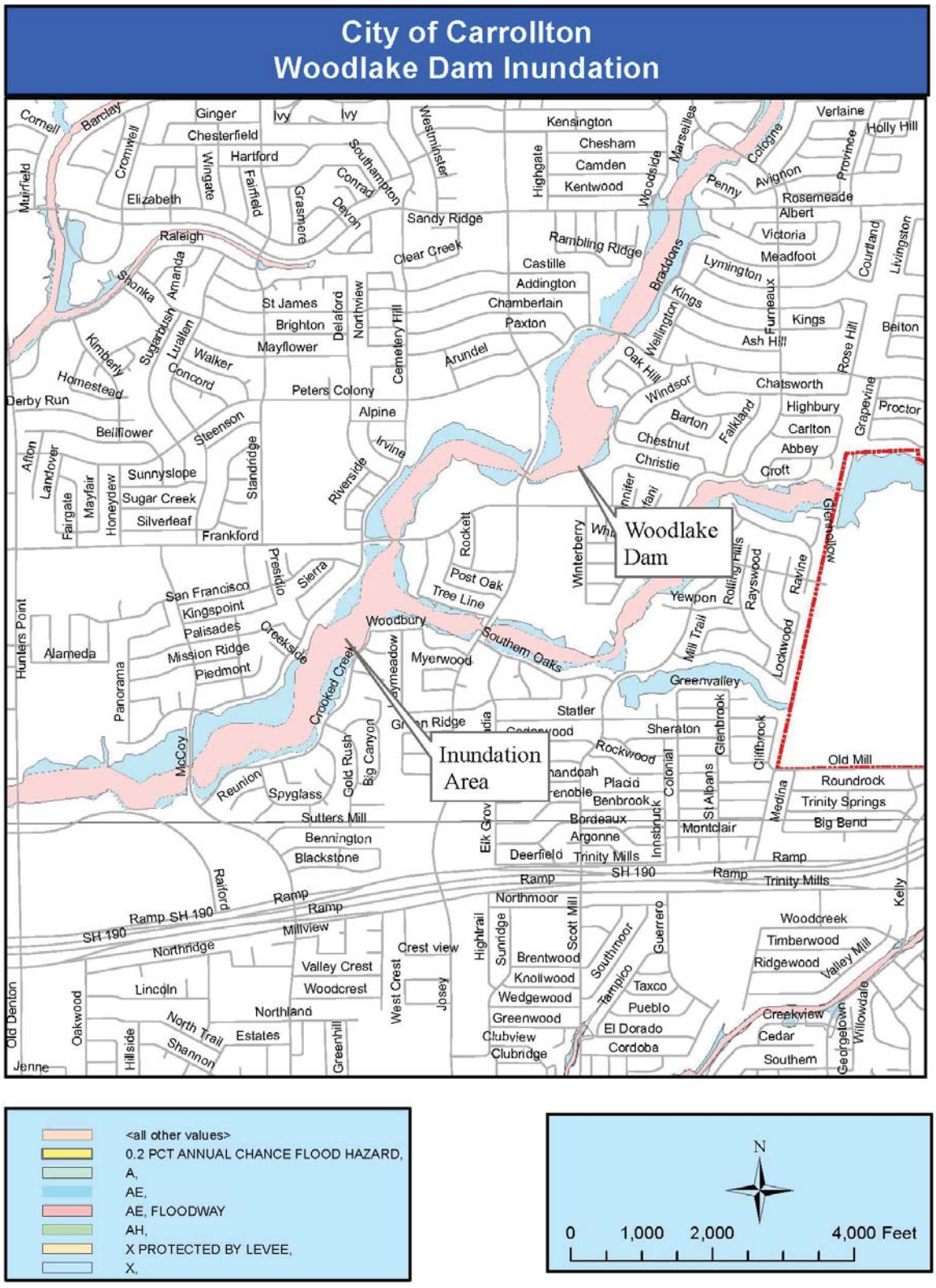
The levees in Carrollton operated by the VIA are in the southwestern section of the city. **Map CLT 8** depicts the levee district. The blue lines indicate separation between Carrollton and Farmers Branch and the yellow are the boundaries of the Improvement District. The inundation area for this levee system is indicated on **CLT 1**. FEMA designates this area Class X, protected by levee.

The extent of inundation that can be expected from the Woodlake Dam is estimated to range betwwen 0 feet to 8.5 feet in depth.

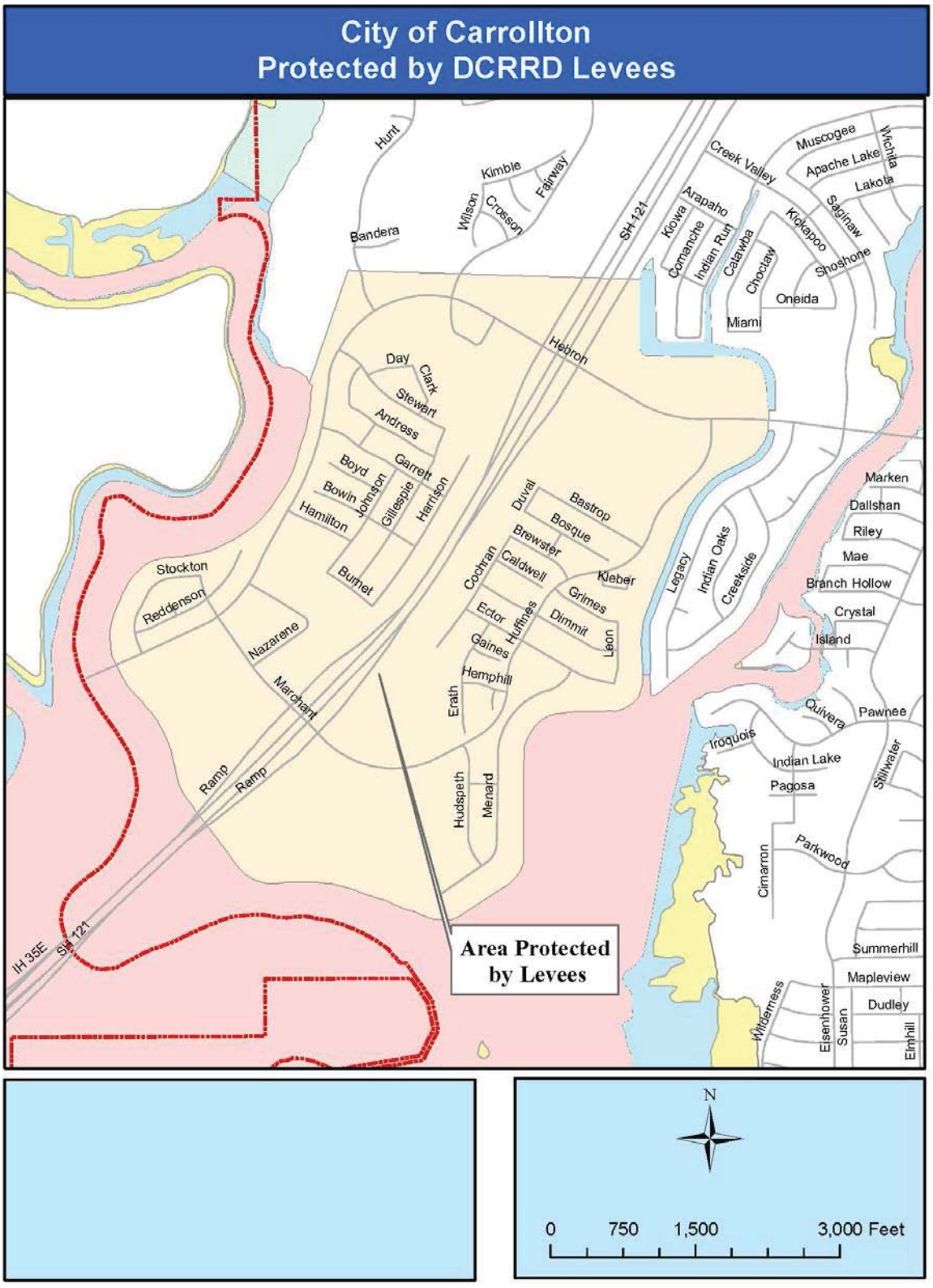
Map CLT 5: **Location and Inundation Area of Josey Ranch Dam**



Map CLT 6: Location and Inundation Area of Woodlake Dam



Map CLT 7: Area Protected by Levee System

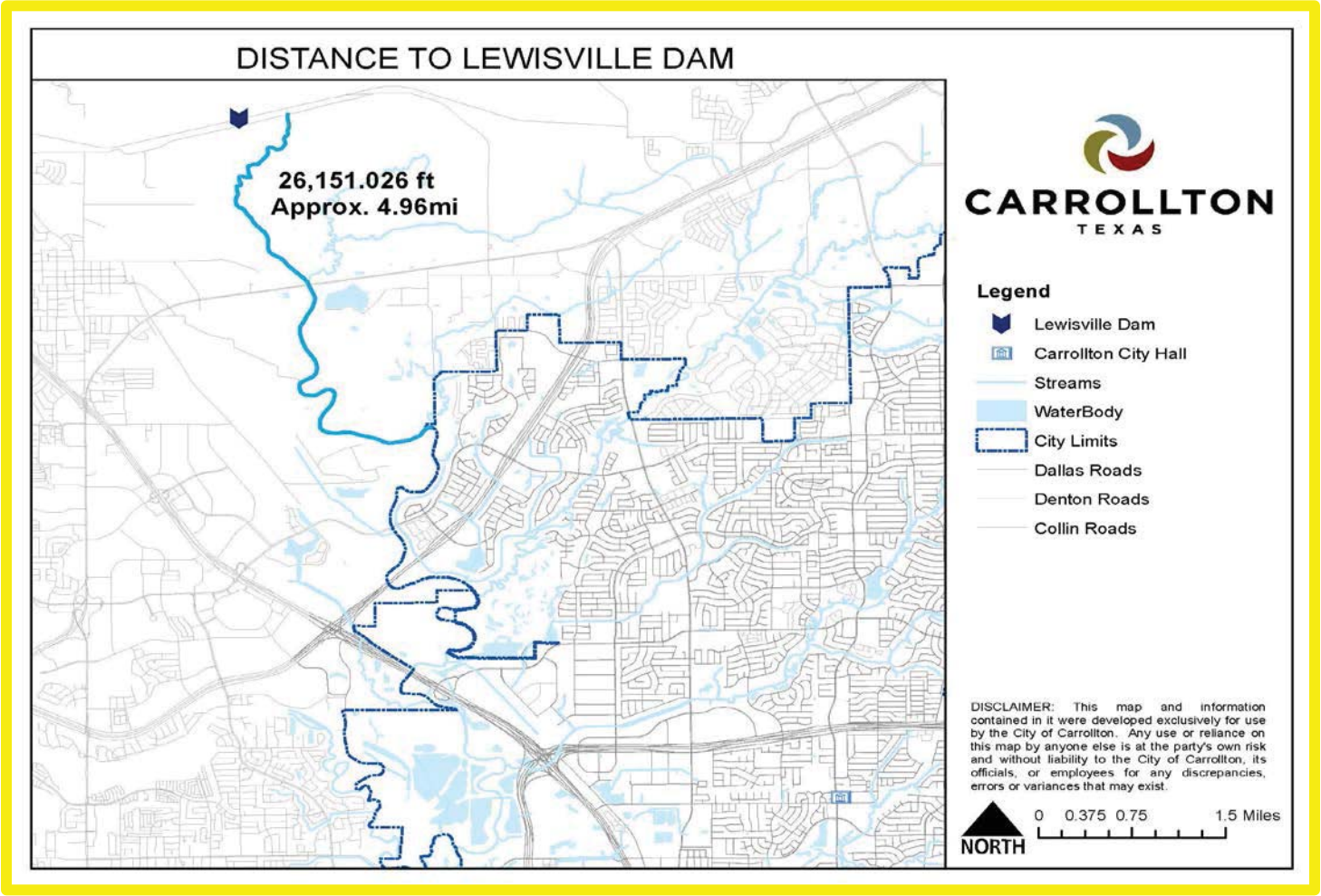


Map CLT 8: Aerial View of the DCRRD



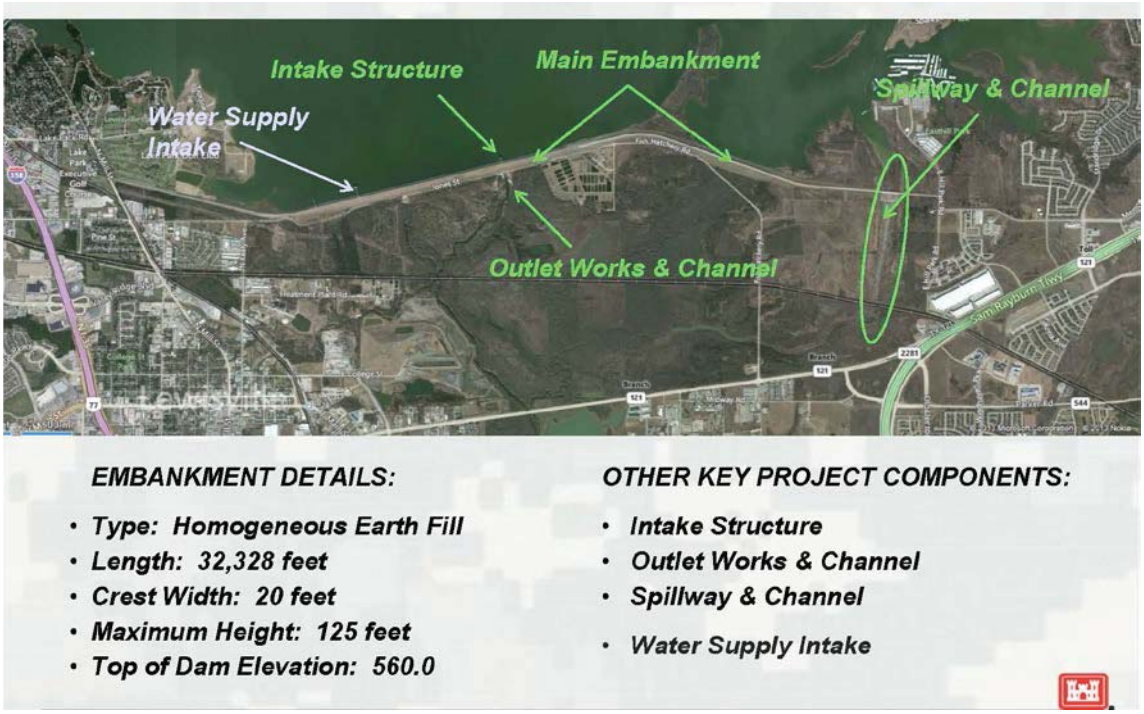
The City of Carrollton is also downstream of the Lake Lewisville Dam operated by the Army Corp of Engineers. Lake Lewisville Dam is approximately 4.96 miles from the Carrollton border following the riverbed. **Map CLT 9** depicts the geographical relationship between Carrollton and the Dam.

Map CLT 9



Lake Lewisville Dam was completed in 1955 and is estimated by the Corps of Engineers to have prevented $31.2 Billion in flood damages since that time. Figure CLT 1 provides a diagram and description of the dam's key features and embankment specifications. The dam was authorized by the River and Harbor Act, approved 2 March of 1945. The primary purposes of the dam are flood risk management and water supply. Conservation pool level is currently elevation 522.

Figure CLT 1: Lewisville Dam Key Features



Source: USACE – Lewisville DSMS, Public Meeting

As part of the Dam Safety Program, in 2004 the US Army Corps of Engineers adopted a risk-informed decision making process for evaluating each of the nearly 700 dams in its portfolio. Under the Corps' Risk Assessment (RA) process, a preliminary evaluation of Lewisville Dam was performed. Due to the very significant consequences, Lewisville Dam is considered to be very high risk due to possible poor performance associated with uncontrolled seepage through the foundation. The consequences were considered to be unacceptable due to:

- ✓ Densely Populated Urban & Suburban Environment
- ✓ Critical Economic Infrastructure
- ✓ Environmental Impacts

Further study is ongoing in conjunction with a safety modification study. Issues that have been identified as a problem include: Potential instability of spillway weir; Instability of spillway channel; Uncontrolled seepage and potential embankment instability. The purpose of the modification study will be to explore means or reducing risk factors and is being done with public input. Public meetings on the proposed modification study have already been held.

In the event there is a serious problem with the Dam, the Corp of Engineers has an Emergency Action Plan, complete with inundation maps and timetables that have been shared with local emergency management officials and worked into local emergency operation plans. Carrollton would be in the immediate downstream inundation zone and is working with the Corp of Engineers and other partners to prepare accordingly.

The extent of Lewisville Lake Dam failure to the City of Carrollton has not been determined as a result of a lack of data regarding inundation levels. While there is some information on Lewisville Lake Dam, this information is owned and maintained by the USACE. The City of Carrollton sees the need to work more closely with the USACE and conduct additional studies to determine the extent of damage to the City of Carrollton.

D. Earthquake: Earthquakes in Carrollton is considered as a low risk threat. There are no known active geological faults within Carrollton there is no historical data of earthquakes in the City of Carrollton. Earthquakes have only been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. A data deficiency has been noted for earthquakes as there is currently not a significant amount of data for earthquakes in Dallas County including the City of Carrollton. This hazard will need to be researched and studied in order to obtain data to support any change of building codes and engineering standards for high magnitude levels that can affect buildings, transportation routes, and pipelines.

E. Stream Bank Erosion: The City of Carrollton has several creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The City of Carrollton is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the City of Carrollton. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Based on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Carrollton. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events. All emergency facilities are exposed to this hazard.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events. All critical facilities are exposed to his hazard.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events. All critical infrastructure is exposed to this hazard

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Carrollton. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Carrollton.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Carrollton.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Carrollton.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Carrollton due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Carrollton are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Carrollton are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Carrollton are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Carrollton is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $8 Million of property damage has been recorded due to high wind events in the City of Carrollton. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Carrollton are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Carrollton are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Carrollton are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Carrollton have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $250,000 dollars of property have been reported as a result of lightning in the City of Carrollton. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Carrollton are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Carrollton are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Carrollton are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Carrollton. All the population of City of Carrollton is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Carrollton. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Carrollton are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Carrollton are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Carrollton are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $30,000 of property damage was reported for City of Carrollton. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Carrollton indicates that there are no expected crop losses from this event. All improved property is exposed to this hazard.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Carrollton are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Carrollton are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Carrollton are exposed to this hazard.

The table below provides a summary of the essential infrastructure for the City of Carrollton

Table CLT 1: **Critical Infrastructure and Property Valuations**

Essential/Critical Facilities	Latitude	Longitude	Count
Elementary Schools			**19**
Annie Rainwater Elementary School	32.997	-96.905	
Carrollton Elementary School	32.957	-96.894	
Central Elementary School	32.945	-96.895	
Country Place Elementary School	32.966	-96.863	
Coyote Elementary School	33.033	-96.920	
Dale B Davis Elementary School	33.005	-96.890	
E L Kent Elementary School	32.998	-96.921	

Essential / Critical Facilities	Latitude	Longitude	Count
Furneaux Elementary School	33.005	-96.872	
Hebron Valley Elementary School	33.021	-96.923	
Homestead Elementary School	33.018	-96.888	
Indian Creek Elementary School	33.032	-96.878	
Jerry Junkins Elementary School	32.974	-96.857	
June Rhoton Thompson Elementary School	32.995	-96.880	
L F Blanton Elementary School	32.983	-96.885	
Mccoy Elementary School	32.981	-96.899	
Neil Ray Mclaughlin Elementary School	32.947	-96.873	
Polser Elementary School	33.026	-96.900	
R E Good Elementary School	32.970	-96.908	
Rosemeade Elementary School	33.007	-96.905	
Middle Schools			**5**
Arbor Creek Middle School	33.034	-96.873	
Charles M Blalack Middle School	33.003	-96.896	
Creek Valley Middle School	33.021	-96.925	
Dewitt Perry Middle School	32.955	-96.896	
Ted Polk Middle School	32.964	-96.879	
High Schools			**5**
Creekview High School	33.003	-96.913	
Hebron High School	33.034	-96.857	
Newman Smith High School	32.979	-96.892	
R L Turner High School	32.947	-96.891	
Tommy Standridge Athletic Stadium	32.940	-96.914	
Other / Private Schools			**20**
American Heritage Academy	32.984	-96.860	
Bea Salazar Transition School	32.970	-96.874	
Carrollton Christian Academy	33.025	-96.866	
Carrollton Montessori	33.024	-96.881	
Carrollton Montessori At Dickerson	32.985	-96.921	
Castle Hills Montessori	33.021	-96.929	
Childs Garden Montessori	32.966	-96.912	
Community Learning Center	32.955	-96.893	
First Baptist Church Of Carrollton	32.979	-96.889	
Hebron Parkway Church Of Christ	33.024	-96.876	
Holy Covenant Methodist Church	33.006	-96.885	
Kelly Pre K Center	32.974	-96.874	
Marie Huie Special Education Center	32.999	-96.877	
Mary Grimes Education Center	32.941	-96.915	
Primrose School	33.034	-96.885	
Primrose School	33.015	-96.944	
Prince Of Peace Christian Academy	33.021	-96.842	
Rosemeade Baptist Church	33.012	-96.907	
Rosemeade Baptist Church	33.012	-96.940	
Sunray Chinese Fine Arts School	32.954	-96.901	
Hospitals			**1**
Baylor Medical Center	33.027	-96.884	
Police Stations			**1**
Carrollton Police Department	32.976	-96.886	
Fire Stations			**8**
Fire Station 1	32.953	-96.898	
Fire Station 2	32.975	-96.893	
Fire Station 3	32.973	-96.856	
Fire Station 4	33.011	-96.868	

Essential/Critical Facilities	Latitude	Longitude	Count
Fire Station 5	32.941	-96.916	
Fire Station 6	33.009	-96.915	
Fire Station 7	33.040	-96.881	
Fire Station 8	33.018	-96.930	
Administrative / Emergency Operations Facilities			**4**
City Hall and EOC	32.976	-96.889	
Animal Services	32.987	-96.928	
Crosby Recreation Center (Shelter Location)	32.948	-96.900	
Rosemeade Recreation Center (Shelter Location)	33.010	-96.906	
Water Treatment Facilities			**1**
Elm Fork Water Treatment Facility (City of Dallas)	32.973	-96.916	
City Service Centers			**3**
Central Service Center	32.987	-96.928	
South Service Center	32.948	-96.917	
Sandy Lake Service Center	32.961	-96.935	
Water Pumping Stations			**5**
Bobby Ballard Pump Station	33.040	-96.880	
Columbian Club Pump Station Zones 1 and 2	32.960	-96.874	
Done Cline Pump Station	32.972	-96.910	
Golden Bear Booster Station	32.979	-96.851	
Marsh North Booster Station	33.021	-96.854	
Ground Water Storage Tanks			**5**
Bobby Ballard Ground Storage Water Tank	33.040	-96.880	
Country Club Ground Storage Water Tank 1	32.961	-96.874	
Country Club Ground Storage Water Tank 2	32.960	-96.873	
Don Cline Ground Storage Water Tank North	32.973	-96.910	
Don Cline Ground Storage Water Tank South	32.972	-96.910	
Elevated Water Storage Tanks			**5**
Hebron Elevated Water Tank	33.023	-96.910	
Hutton Elevated Water Tank	32.949	-96.918	
Josey Elevated Water Tank	32.978	-96.891	
Marsh North Elevated Water Tower	33.020	-96.854	
Marsh South Elevated Water Tank	32.973	-96.856	
Dams			**2**
Josey Ranch Lake Dam	32.969	-96.892	
Woodlake Lake Dam	33.002	-96.883	
Critical Transportation Infrastructure			**3**
Downtown Carrollton DART Station	32.954	-96.907	
North Carrollton DART Station	32.992	-96.937	
Trinity Mills Dart Station	32.981	-96.926	

Essential/Critical Facilities	Latitude	Longitude	Count
Sewer System Lift Stations			**26**
Broadway LS	32.970588	-96.917753	
Cottonbelt Lift Station	32.931875	-96.918209	
Coyote Ridge Lift Station	33.038552	-96.935068	
Crosby Rd Lift Station	32.946096	-96.911632	
Frankford Road Lift	32.990645	-96.936236	
Fyke Road Lift Station	32.946574	-96.883765	
Huffines Lift Station	33.017295	-96.931147	
I-35 Lift Station	32.992387	-96.944946	
Interbasin Lift Station	33.036430	-96.885222	

Inverness Lift Station	32.985344	-96.879913	
Land Fill Lift Station #3	32.962350	-96.936291	
Land Fill Lift Station #1	32.961443	-96.935967	
Land Fill Lift Station #2	32.961433	-96.935229	
McInnish Lift Station	32.955032	-96.937024	
McInnish RestRoom Lift Station	32.959307	-96.940754	
McInnish Soccer Lift Station	32.965293	-96.937269	
Monetary Lift Station	32.941993	-96.907623	
Polser Lift Station	33.027164	-96.903418	
Private Cedar Crk Lumber	32.959794	-96.874936	
Private lift Station	32.968469	-96.918553	
Rolling Oaks Storm Lift Station	33.019450	-96.907164	
Storm Lift Station	32.953633	-96.909903	
TRA Lift Station	32.952508	-96.917834	
Upper Indian Creek Lift Station	33.052311	-96.866015	
Westway Cir Lift Station	32.963908	-96.913574	
N Carrollton Baptist Church	33.024316	-96.879694	

Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	5.7 B	482.1 M	N/A
Commercial	1.0 B	63.8 M	N/A
Industrial	1.3 B	209.6 M	N/A
Government / Public	0.3 B	21.6 M	N/A

Structure/Property and Wildfire Vulnerability

To assess the City of Carrollton's vulnerability to wildfire, the Texas A&M Forrest Service's Wildfire Risk Assessment Professional Viewer was used to conduct a risk assessment. The two primary products used were the Wildland Urban Interface and the Wildfire Threat Maps. These maps are included above. This analysis revealed that no area in Carrollton rated higher than a 1 (lowest threat) with regard to burnable wildfire threat. This threat is therefore minimal and confined primarily to green spaces in the western areas of the city which are dominated by flood plain where additional development is prohibited. No critical infrastructure is included in a high threat area. The threat revealed via the wild land urban interface analysis was similarly minimal. Primary areas of concern were once again controlled green space specifically designed to be away from critical infrastructure. No critical infrastructure in included in a high threat area. The results of this analysis were reviewed by the HMPT as part of our HIRA review process and incorporated into the overall plan. This assessment will be conducted as needed and appropriate changes and mitigation activities will be incorporated into the plan accordingly. The responsibility for the revisions will rest with the Emergency Management Coordinator.

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan Update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disasters.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Carrollton.

- ✓ ***Objective 5-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*****:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP Update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the Updated Plan. The new actions items are as follows:

City of Carrollton	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Carrollton Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Carrollton Action Item	Implement a Mass Notification System such as CodeRED, Blackboard, or Everbridge System
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, dam/levee failure
Goal/Objective	2-D
Priority	Medium
Estimated Cost	Unknown - To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Emergency Management / Fire
Implementation Schedule	1 year after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is low compared to the benefits
Discussion	Installing and implementing a Mass Notification System will help alert citizens of the need to take the appropriate action once notified. As a result such a system will save lives

City of Carrollton Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms for the City of Carrolton residents
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Carrollton Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebate

City of Carrollton	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex there is a data deficiency when it comes to stream bank erosion and its effect on the community. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion for the City of Carrollton

City of Balch Springs	Purchase and distribute hail and wind resistant window coverings to homeowners
Hazard(s) Addressed	Hail, Tornado
Goal/Objective	1-C, 2- A, and 4-C
Priority	Low
Estimated Cost	Unknown currently, based on current population and vendor
Potential Funding Sources	HMGP
Potential Matching Sources	General Fund, in-kind
Lead Department	Emergency Management
Implementation Schedule	12 Months
Effect on Old Buildings	Potentially can reduce damage caused by severe weather
Effect on New Buildings	Potentially can reduce damage caused by severe weather
Cost Effectiveness	Low cost and will provide great benefit to the community
Discussion	The City will purchase window coverings to protect residential and business windows from damage from hail and wind damage.

City of Carrollton Action Item	Implement water-wise program for the City of Carrollton. This program will include purchasing water saving equipment and fixtures, such as low flow fixtures, in all city facilities
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$20,000
Potential Funding Sources	General Budget
Lead Department Responsible	Permits and Inspection Department
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

City of Carrollton Action Item	Conduct a Inundation and Flood Protection Study to determine the most appropriate mitigation actions to alleviate the inundation areas of the dams and levees that affect the City of Carrollton
Hazard(s) Addressed	Flooding, Dam and Levee failure, stream bank erosion
Goal/Objective	2-A
Priority	High
Estimated Cost	$150,000
Potential Funding Sources	City Budget, State and Federal Funding including HMGP and PDM
Lead Department	City Engineering
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	Future flood studies for floodway crossings of the City of Carrollton. Improvements required as a result of the future studies will be incorporated into the future roadway improvement projects.

City of Carrollton Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5 and in this annex, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

City of Carrollton Action Item	Promote land use program, identify land within the floodplain, and assess uses for conservation or recreation
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, stream bank erosion, and dam/levee failure
Priority (High, Medium, Low):	Medium
Estimated Cost	TBD
Potential Funding Sources	Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Carrollton Community Development Department
Implementation Schedule	Within 12 months of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Preserving natural areas and vegetation benefits natural resources while also mitigating potential flood losses.
Discussion	Program will include developing an open space re-use, and preservation plan targeting as well as developing a land banking program for the preservation of the natural and beneficial functions of flood hazard areas

Carrollton Action Item	Tree trimming program to minimize debris and protect power lines and infrastructure
Hazard(s) Addressed	High winds, winter storms, wildfire and lightning
Goal/Objective	2-A, 3-A, 1-A
Priority	High
Estimated Cost	$100,000
Potential Funding Sources	City of Carrollton
Lead Department	City of Carrollton Parks Department
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than having to deal with the effects that debris can cause following a sever event
Discussion	The regular maintenance and upkeep of utilities can help prevent wind damage. Possible strategies include establishing standards for all utilities regarding tree pruning around lines and incorporating inspection and management of hazardous trees into the drainage system maintenance process

Carrollton Action Item	Initiate a targeted fuel load reduction campaign to reduce the potential of a WUI fire event
Hazard(s) Addressed	3-A
Goal/Objective	Low
Priority	Wildfire
Estimated Cost	Unknown - To be determined
Potential Funding Sources	State, federal and local funding. Private and donor funding will also be explored
Lead Department	City of Carrollton Community Services and Fire Departments
Implementation Schedule	Funding Dependent
Effect on Old Buildings	Creating a defensible space around structures will reduce risk
Effect on New Buildings	Creating a defensible space around structures will reduce risk
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches, replacing flammable vegetation with less flammable species, creating defensible zones around power lines, oil and gas lines and other infrastructure systems

Carrollton Action Item	Retrofit Public Buildings and Critical Facilities
Hazard(s) Addressed	High winds, winter storms, lightning, hail, extreme heat, tornados, wildfires, earthquake
Goal/Objective	2-B
Priority	Low
Estimated Cost	$500,000
Potential Funding Sources	HMGP, PDM, state and federal grants, city budget
Lead Department	City of Carrollton Facilities & Fleet Division
Implementation Schedule	2 years after the receipt of funding
Effect on Old Buildings	Old building that house critical facilities and equipment will be retrofitted to higher standards
Effect on New Buildings	New city facilities will be built to FEMA 361 standards
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Public buildings and critical facilities can be retrofitted to reduce future severe weather events with action that can include improving roof coverings, anchoring roof-mounted heating, ventilation, and air conditioning units, retrofitting buildings with load-path connectors to strengthen the structural frames, retrofitting or constructing the emergency operations center to FEMA 361 standards, avoiding placing flag poles or antennas near buildings, implementing lightning protection systems to prevent roof cover damage, requiring upgrading of reused buildings that will house critical facilities, protecting traffic lights and other traffic controls from high winds and winter weather

Carrollton Action Item	Lightning protection/alarms: These systems protect citizens and employees who utilize outdoor recreation and sports facilities during weather events that produce cloud to ground lightning
Hazard(s) Addressed	Lightning
Goal/Objective	2-C
Priority	Medium
Estimated Cost	$6,000/each
Potential Funding Sources	City Budget & Hazard Mitigation Grants
Lead Department	Parks & Recreation Department
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Installing such systems will help warn staff and other users of city outdoor facilities to seek shelter

City of Carrollton Action Item	Construct new drainage ditches, pipes/culverts and potentially detention ponds on a property to the east of Sandy Lake RV Resort.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	1-A
Priority	Medium
Estimated Cost	Unknown - To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Engineering
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	By preventing inundation of domiciles as well as the resulting evacuation of the RV Resort during heightened rain and fiver flooding conditions, these improvements will be highly cost effective. It is the lack of drainage on this property to the east that caused a majority of the backing up of water that flooded the Resort during rain and river flood events. These events had high financial impacts to the City, the RV Resort and those living there. This project will leverage one time expenditures and ongoing maintenance to avoid these acute costs during future flooding conditions.
Discussion	The property to the east of the RV Resort is owned by Dallas Water Utilities but the City of Carrollton has a drainage easement with shared maintenance responsibilities. We have already talked to DWU about potential projects on this property to mitigate the resultant flash and river flooding events

Plan Maintenance

The Emergency Management Coordinator will be responsible for leading the monitoring, evaluation and update efforts of the plan. The Emergency Management Coordinator will call the Carrollton Hazard Mitigation Planning Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Emergency Management Coordinator will report the outcomes of the HMPT reviews to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Carrollton's HMPT will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Carrollton or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Carrollton is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Carrollton will be a strong advocate that jurisdictions within Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Carrollton will engage stakeholders in community emergency planning.

Plan Incorporation

The City of Carrollton has several other city plans which were considered during the mitigation planning process. These include Federal Emergency Management Agency (FEMA) maps, City of Carrollton comprehensive plan, future land use and thoroughfare plans, emergency operations plan, Capital Improvement Program (CIP) including current zoning plan, adopted building codes and amendments and City of Carrollton ordinances. The Hazard Mitigation Team will continue to use these plans as guidance in determining gaps in the capabilities of the city as well as developing goals and mitigation action items in response to the vulnerability assessment. The City will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Carrollton	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

A-1: HIRA

B-1: Meeting Documentation and Outreach Materials

C-1: City of Carrollton Survey Results

Appendix CLT A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Carrollton, TX
Hazard Identification and Risk Assessment (HIRA)
Date: December 30, 2014

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4	3	4	3	10	40%
Hail	4	4	4	4	3	4	3	10	40%
Lightning	4	4	2	2	3	3	1	7	28.6%
Winter Storms	3	3	2	2	3	3	2	8	25%
Tornado	4	3	4	5	4	4	4	12	41.7%
Flooding	2	2	2	2	2	3	3	8	25%
Pandemic/Public Health Emergency	2	2	1	1	3	1	1	5	20%
Extreme Temperatures/Heat	3	3	2	2	4	1	1	6	33.3%
Hazardous Materials Incidents Nuclear /Radiological	2	2	2	2	3	2	2	7	28.6%
Wildfire	1	1	1	1	1	2	3	6	16.7%
Utility Failure	2	2	1	1	3	1	1	5	20%
Energy/Fuel Shortage	1	1	1	1	4	1	1	6	16.7%
Terrorist Attack	1	1	2	2	3	2	2	7	28.6%
Urban Fire	1	1	1	1	2	2	2	6	16.7%
Earthquake	2	2	1	1	2	2	1	5	20%
Levee/Dam Failure	1	1	4	4	4	4	3	11	36.4%
Drought	2	2	2	2	2	1	2	5	40%
Aircraft Accident	1	1	1	1	2	2	2	6	16.7%
Stream Bank Erosion	1	1	1	1	1	2	3	6	16.7%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	3	3	3	3	3	9	33.3%
Civil Disorder	1	1	1	1	2	2	1	5	20%

NB: This City of Carrollton HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix CLT B-1: Meeting Documentation

Figure B-1: Screen Shot of Public Survey Announcement on City of Carrollton Main Webpage



Figure B-2: Screen Shot of Link to the Public Survey Link



Figure B-3: Screen Shot Inviting Public - Public Review and Comment of Draft Plan





Figure B-4: Screen Shot Inviting Public - Public Review and Comment of Draft Plan Fire Rescue Department Webpage



Figure B-3: External Stakeholder Invitation Emails

1 of 3

From: Elliott Reep
To: "Chandler, Leslie D."
Subject: Hazard Mitigation Plan
Date: Thursday, April 23, 2015 3:12:12 PM

Leslie,

The City of Carrollton, in conjunction with the Dallas County Office of Homeland Security and Emergency Management, is currently in the process of updating our combined Hazard Mitigation Plan. As an important stakeholder in Carrollton, I wanted to reach out to you with a link where you can view the plan draft, and invite your input as we proceed with consolidation of the plan.

Any suggestions or comments you may have will be incorporated into the final draft. The Carrollton-specific Annex to the basic plan can be found in Section 9: C-1. The plan can be accessed at the following link:

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Please don't hesitate to contact me with questions or feedback. Thank you for your time.

Sincerely,

Elliott Reep

Elliott Reep, MPA
Emergency Management Coordinator
Carrollton Fire Rescue
City of Carrollton, TX
1945 East Jackson Road, Carrollton, TX 75006
O: 972-466-4739 C: 903-319-5476

2 of 3

From: Elliott Reep
To: Matthew Garrett (garrettms@lisd.net)
Subject: Hazard Mitigation Plan
Date: Thursday, April 23, 2015 3:09:25 PM

Matt,

The City of Carrollton, in conjunction with the Dallas County Office of Homeland Security and Emergency Management, is currently in the process of updating our combined Hazard Mitigation Plan. As an important stakeholder in Carrollton, I wanted to reach out to you with a link where you can view the plan draft, and invite your input as we proceed with consolidation of the plan.

Any suggestions or comments you may have will be incorporated into the final draft. The Carrollton-specific Annex to the basic plan can be found in Section 9: C-1. The plan can be accessed at the following link:

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Please don't hesitate to contact me with questions or feedback. Thank you for your time.

Sincerely,

Elliott Reep

Elliott Reep, MPA
Emergency Management Coordinator
Carrollton Fire Rescue
City of Carrollton, TX
1945 East Jackson Road, Carrollton, TX 75006
O: 972-466-4739 C: 903-319-5476

3 of 3

From: Elliott Reep
To: Pat Hester
Subject: Hazard Mitigation Plan
Date: Thursday, April 23, 2015 3:10:01 PM

Pat,

The City of Carrollton, in conjunction with the Dallas County Office of Homeland Security and Emergency Management, is currently in the process of updating our combined Hazard Mitigation Plan. As an important stakeholder in Carrollton, I wanted to reach out to you with a link where you can view the plan draft, and invite your input as we proceed with consolidation of the plan.

Any suggestions or comments you may have will be incorporated into the final draft. The Carrollton-specific Annex to the basic plan can be found in Section 9: C-1. The plan can be accessed at the following link:

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Please don't hesitate to contact me with questions or feedback. Thank you for your time.

Sincerely,

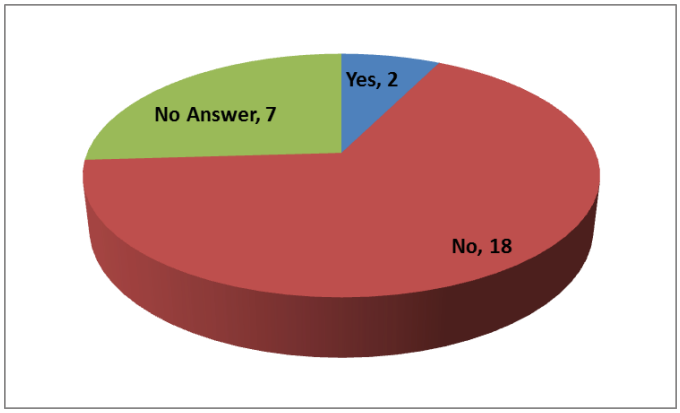
Elliott Reep

Elliott Reep, MPA
Emergency Management Coordinator
Carrollton Fire Rescue
City of Carrollton, TX
1945 East Jackson Road, Carrollton, TX 75006
O: 972-466-4739 C: 903-319-5476

Appendix C-1: Survey Results

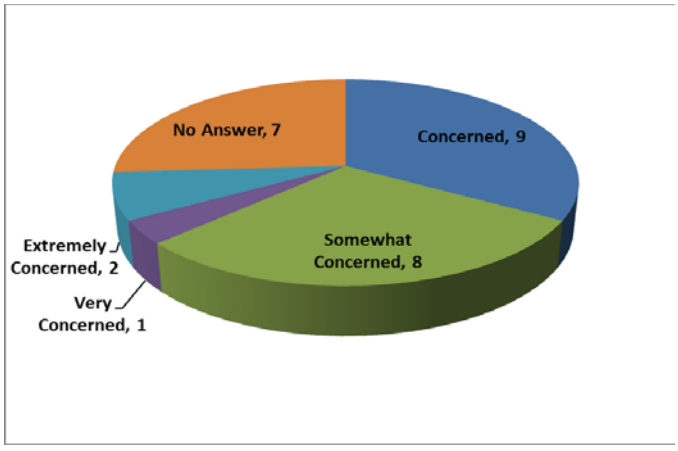
1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Carrolton (27 responses)

2. Have you ever experienced or been impacted by a disaster?

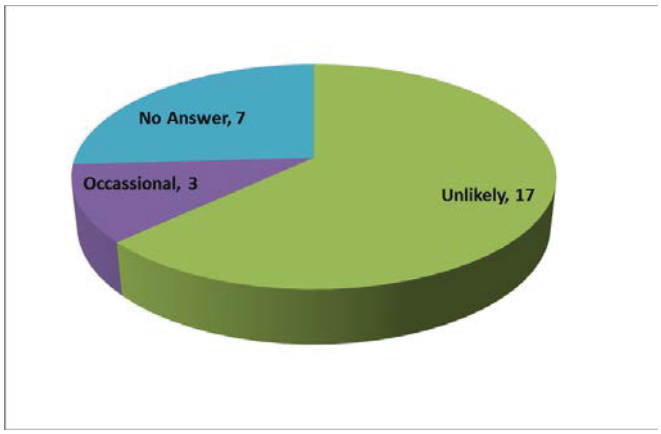


   If "Yes", please indicate what hazard you have endured and where it occurred?
   - ✓ Flooding in Albany, Texas in 1954 to 1955.
   - ✓ Evacuated because of forest fire. Los Alamos, NM 2000.

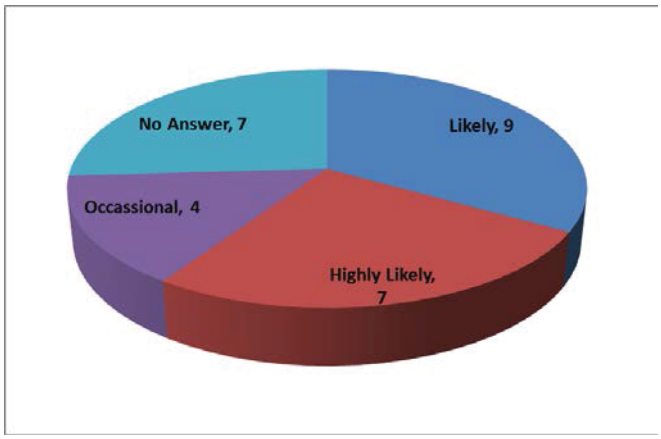
3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



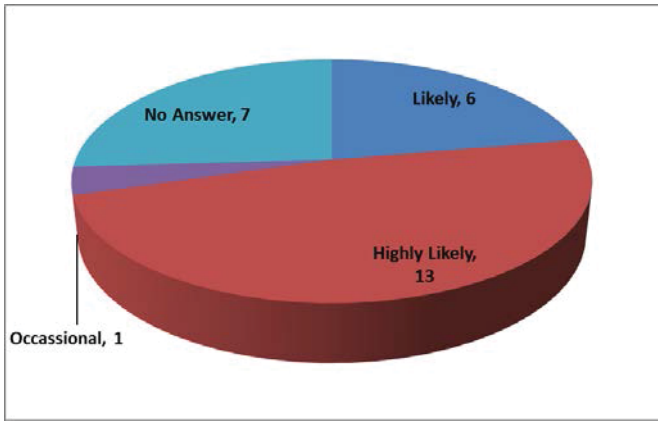
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact your city:
    a. Earthquake



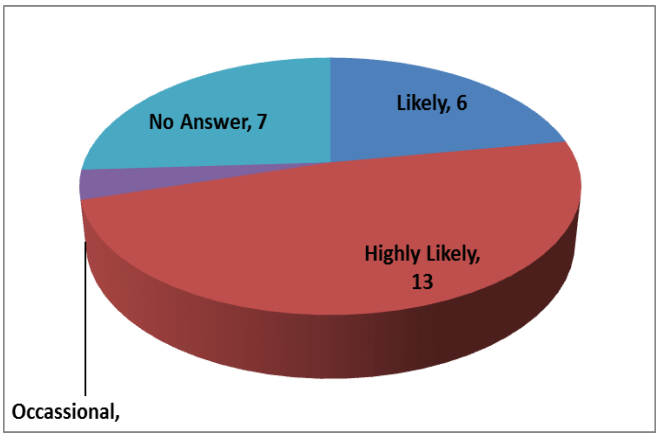
    b. Tornado



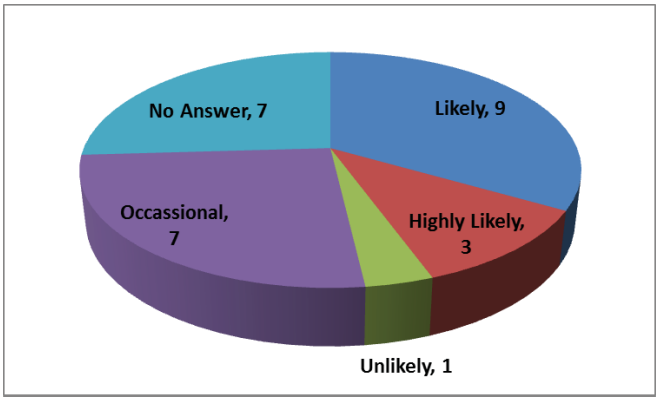
    c. Hail



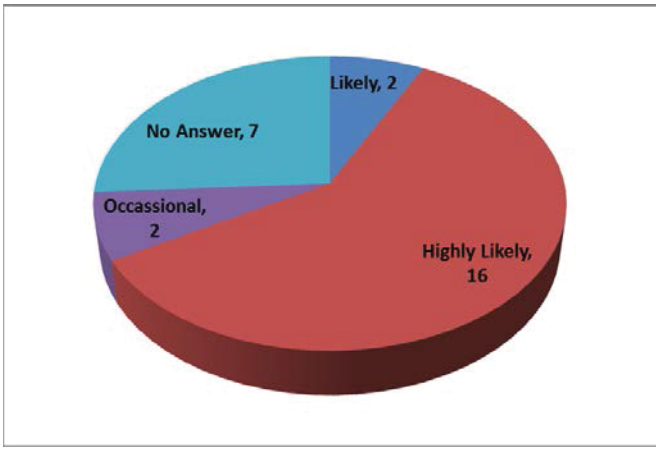
d. High Winds



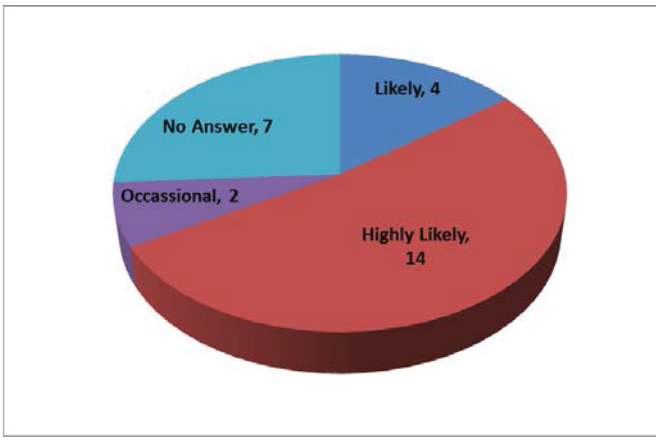
e. Winter Storms



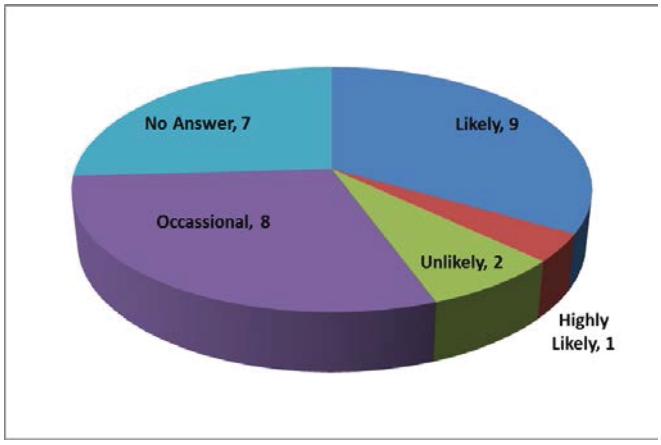
f. Summer Heat



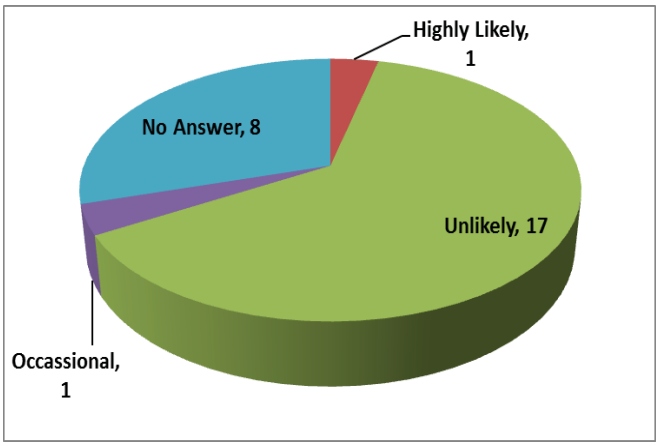
g. Drought



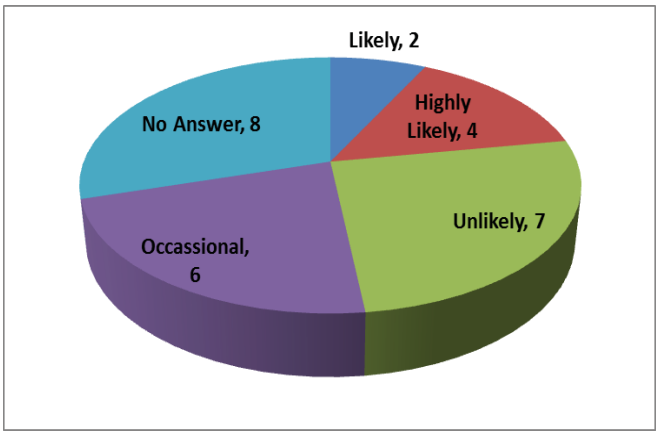
h. Flooding



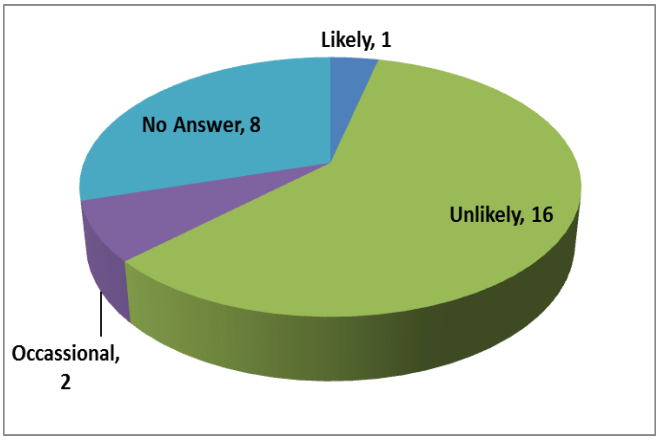
i. Dam Failure



j. Stream Bank Erosion

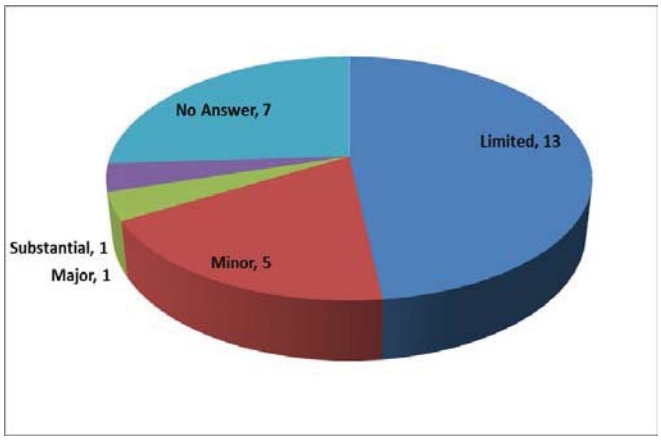


k. Levee Failure

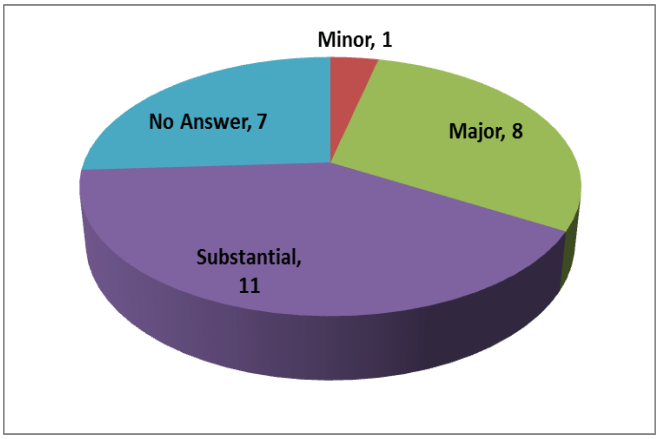


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

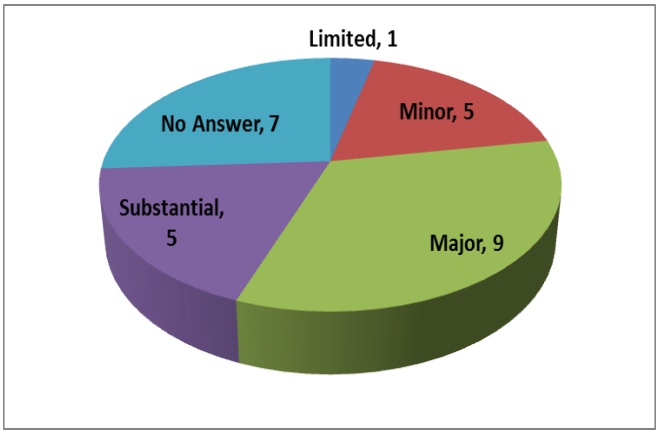
   a. Earthquake



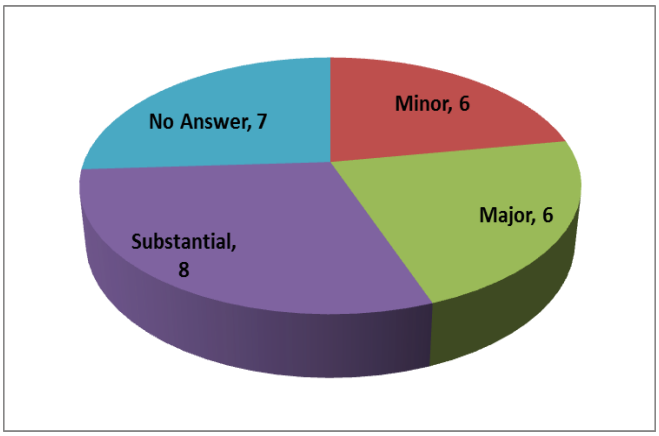
   b. Tornado



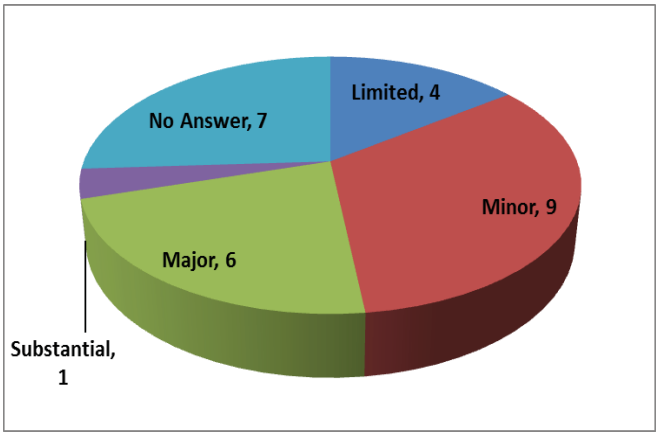
   c. Hail



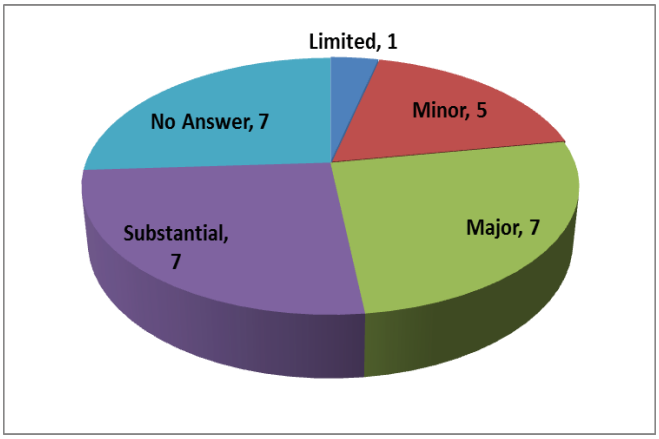
d. High Winds



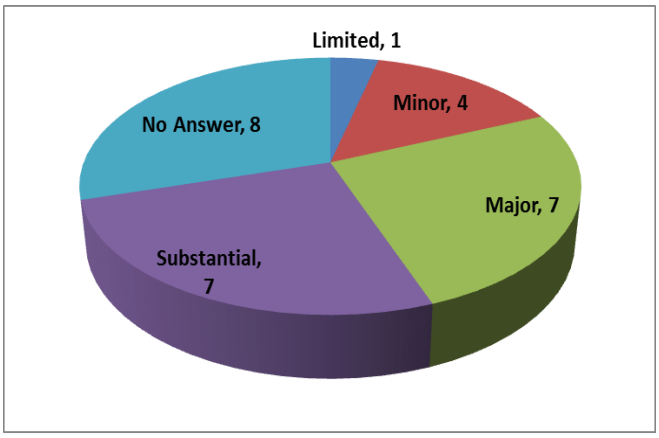
e. Winter Storms



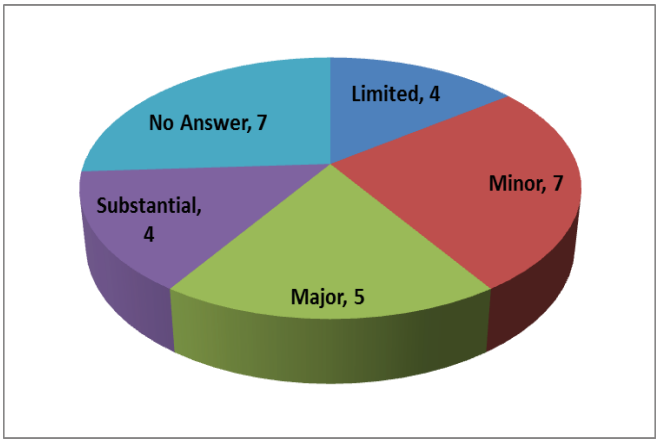
f. Summer Heat



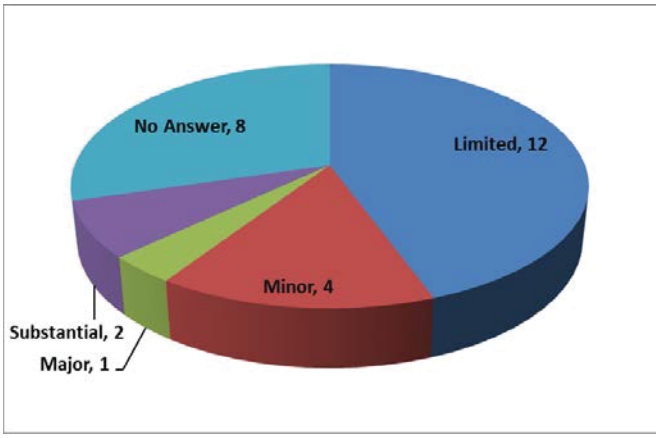
g. Drought



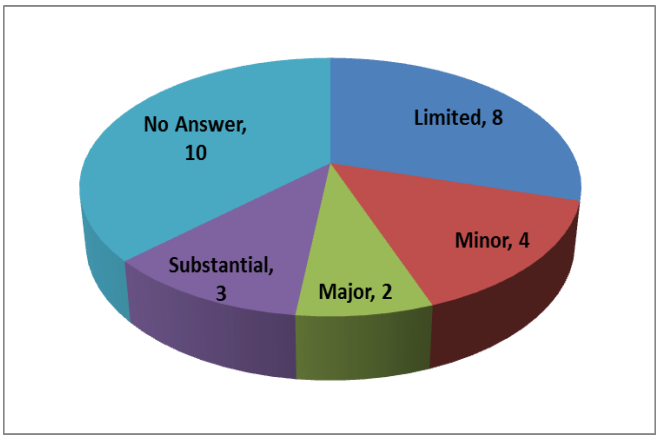
h. Flooding



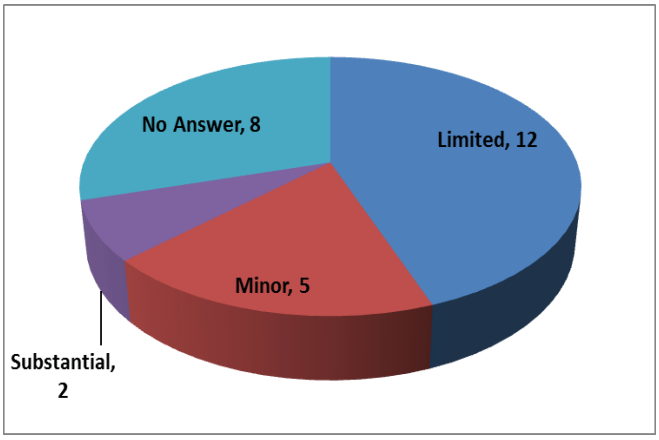
i. Dam Failure



j. Stream Bank Erosion

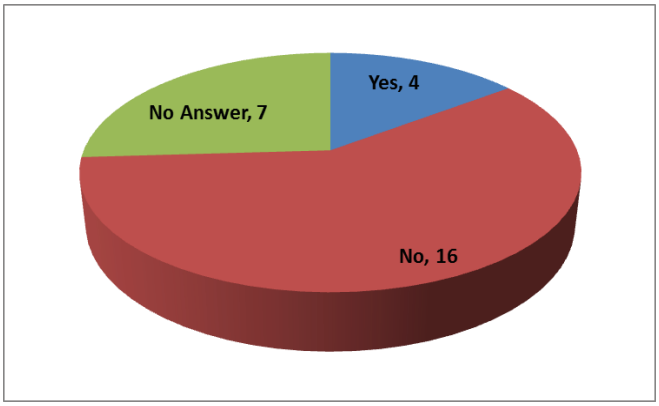


k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

. Yes (4)
a. No (16)
b. Skipped (7)



If “Yes”, please list the hazard(s) you think are a wide-scale threat that are not listed:

- ✓ These are all of a "natural" nature. Other hazards relate to more man-made hazards such as chemical. Occurrence: Likely or Highly Likely Severity or Impact: High Extent: Medium or High.
- ✓ We have several rail lines that daily cross our city. Hazardous or even dangerous materials could devastate our city if an accident was to happen. There could also be the potential of an intentional act. We need to make sure the city is equipped to handle any kind of hazard.
- ✓ Civil unrest, looting due to wind damage from weather events or from major population discontent with government control; lack of it. Chemical spill from rail lines in the area and city of Dallas Water Treatment plant.
- ✓ A chemical spill or fire could affect a large area of the city, depending on the wind or severity of an explosion, and could result in mass evacuation in some places. It would be Unlikely (Occurrence), possibly High/Catastrophic (Impact), and possibly High/Catastrophic (Extent). I don't know the Carrollton hazardous materials routes or hazardous materials plants to know if this is even unlikely. However, I'm thinking of West, Texas.

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	5
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	13
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	13
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	5
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the National Weather Service to monitor weather events:	16
Coordinate with Dam owners to conduct inundation studies of dams:	2
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	15
Purchase and improve on the Weatherization Assistance Program (WAP):	9
Conduct an earthquake vulnerability study:	4
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Structural Retrofitting of Existing Buildings:	8
Total Respondents:	**21**

List any other strategies you think should be included in the plan:

- ✓ Residential soil erosion along city water flows.

- ✓ New buildings should be made of something more solid (like complete concrete) to withstand tornado weather. Also buildings (like schools, community centers, etc…) that will likely become shelters in case of emergency should have basements. I don't know why basements aren't more common in such a tornado prone area.
- ✓ Consider drilling more water vs. surface water and evaporation and dealing with miles of pipeline.

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ Sending mass text messages during an emergency.
   - ✓ Wireless emergency notification system would be very helpful in the event of a major disaster. Citizens should have the ability to communicate even when power is lost…
   - ✓ Apartment buildings need to pay their fair share of water treatment and usage, not giving them a commercial rate for water usage. A family of four uses as much water in a home six months out of the year and dumps as much waste all year long. Have them paying their fair share will provide funds to build tomorrow's Metroplex.

This page intentionally left blank.

City of Cedar Hill Annex

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Cedar Hill has a FEMA approved hazard mitigation plan. The city was one of the 11 jurisdictions that participated in the Dallas County Hazard Mitigation Action Plan that was adopted in 2009.



This annex serves as a complete hazard mitigation planning tool for the City of Cedar Hill and is an addition to the countywide hazards and strategies discussed in the previous section. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Cedar Hill is located at 32.588454 N and 96.947325 W. It is just minutes east of Joe Pool Lake. Adjacent cities are Grand Prairie to the southwest, west, and northwest; Dallas to the north; Duncanville to the north and northeast; DeSoto to the northeast and east; Cedar Hill and Ovilla to the southeast; and Midlothian to the south. Most of the city of Cedar Hill is in Dallas County, but a small southern section of the city spills over into Ellis County.

The city stands at an elevation of about 800 feet above sea level; the highest point in a straight line from the Red River at the Texas-Oklahoma border to the Gulf Coast. Due to its hilly terrain, Cedar Hill is also known as the "Hill Country of Dallas County." Crawford Trees is noted as one of Cedar Hill's earliest settlers in 1845. Trees left for the California Gold Rush in 1846 and returned with enough money to purchase thousands of acres. An 1856 tornado, made up of two funnel clouds that merged, destroyed the town, leaving only one house and one business undamaged, and nine citizens not only dead but unrecognizable. After more than 300 people from surrounding communities helped rebuild the town, it became a center of trade and shipping.



According to the United States Census Bureau (2011) the total population of Cedar Hill is approximately 45,945. The racial and ethnic composition of the population is 25.8% non-Hispanic white, 51.4% non-Hispanic black, 0.5% Hispanic black, 0.5% native American, 2.0% Asian, 0.1% Pacific Islander, 0.1% from some other race, 2.8% reporting two or more races, and 18.7% Hispanic or Latino. The city has a total area of 35.91 square miles, 35.8 square miles land and .08 square miles water. There are approximately 16,338 housing

units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. manufactured housing, boats and RVs) units.

The City of Cedar Hill operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.



Cedar Hill has Type A sales tax funds that can be used to attract businesses to the city and help local businesses expand. Triple Freeport Tax Exemption, available workforce, and competitive prices are among the list of reasons businesses choose to locate in Cedar Hill (cedarhilledc.com). Recently, the Cedar Hill EDC was awarded the Certificate of Achievement for Economic Excellence by the Texas Economic Development Council for a commitment to professional economic development by city administration, elected and appointed officials, and exemplary professional standards demonstrated by the economic development staff (cedarhilltx.com).

Internal Planning Process

The table below lists members of the City of Cedar Hill Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Cedar Hill.

Name	Title / Department or Agency	Role
Greg Porter	City Manager	Assisted in risk assessment and conducting capabilities assessment. Attended and participated in HMPT meetings.
John R. Ballard	Fire Chief/ Emergency Management Coordinator	HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment Provided input on the hazard identification process.
Rod Tyler	Planning Director	Provided technical information and capabilities assessment including land development, city codes and ordinance.
Elias Sasson	Director of Public Works	Provided an updated capability assessment and supported mitigation planning projects. Provided expertise in capability assessment.
Martin Avila	Finance Director	Attended and participated in HMPT meeting Provided expertise in budget, Capital

Name	Title/Department or Agency	Role
		Improvement Plan, funding sources Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment.
Johnny Kendro	Building Official	Attended and participated in HMPT meeting; Provided building code and permitting regulations.
Cork Brown	Public Relations Manager	Provided technical, communication support and public information throughout the planning process. Attended HMPT meetings.
Rhode Savage	Director of Parks and Recreation	Provided expertise in open space planning and land development.
Earl Shipman	IT Manager	Provided technical support, data for risk assessment. Attended HMPT meeting.
Patricia Bushart	Tourism Manager	Assisted in risk assessment and Historic Preservation. Invited to HMPT meetings and supported mitigation planning project.
Skyla Pellum	Emergency Management Administrator	Assistant to the HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal and the local city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

External stakeholders invited via email to participate in the planning and review process of the City of Cedar Hill HazMAP annex section included:

Representing	*Position/Department*	*Role*
Northwood University Cedar Hill Campus	President/CEO	Review Plan
Cedar Hill ISD	Emergency Operations Coordinator/School Safety	Review Plan

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
6/12/13	Reviewed Hazard Mitigation Action Plan and update process. Review of the Planning Process and Review HIRA as discussed at the Dallas County Hazard Mitigation Working Group. Reviewed survey questions and developed Strategy for promoting survey
8/29/13	Hazard risk assessment. HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for City of Cedar Hill in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA Matrix
11/21/13	Identified hazards and estimated potential losses from future hazard events. Conducted Capabilities Assessment
12/10/13	Review existing mitigation authorities, activities and policies. Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment. Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

City of Cedar Hill residents and business had an opportunity to comment on the plan during the drafting stage and prior to the plan approval. During the drafting stages the City of Cedar Hill made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and human made hazards. The survey was linked to the City's website and public outreach program was implemented to solicit public input. A draft copy of the Hazard Mitigation Action Plan and surveys were available at Library and the City Hall. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

These public participation opportunities allow the public to express concerns, opinions or ideas about the plan. The Hazard Mitigation Team will review the comments and make changes to the plan as appropriate. Feedback received from the public proved valuable to the development of the plan.

Survey Results

The City of Cedar Hill made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 10 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Despite outreach efforts, only ten responses were received. Majority of these respondents identified five hazards that were deemed as most likely to occur in their jurisdiction. These included extreme heat, hail, high winds, drought and tornados were the hazards that were rated the most likely to occur (had an average rating of above 3.00). These same hazards were also deemed to potentially have the most impact on the community. Overall the City of Cedar Hill Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. Most of the respondents indicated that they wanted to see implement the Texas Individual Tornado Safe Room Rebate Program, an increase in public outreach programs (i.e. CERT), increase water conservation strategies, and installation of lighting prediction and protection devices as some of the mitigation strategies the city can employ.

The results of the survey provide valuable information for the City of Cedar Hill hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. The city will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

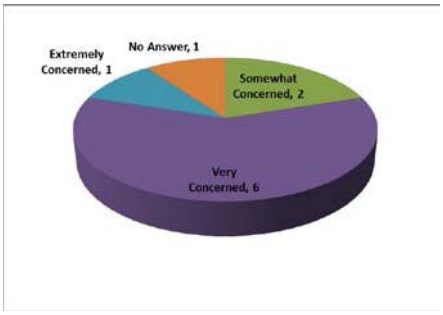
A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ City of Cedar Hill (10 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

   ✓ Unlikely ✓ Likely
   ✓ Occasional ✓ Highly Likely

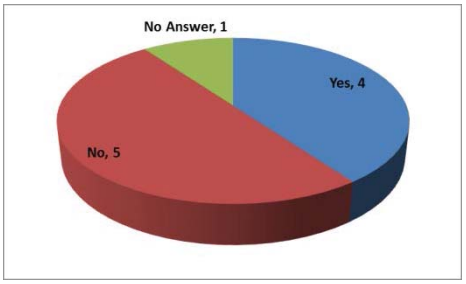
	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total	Average Rating
Earthquake	7	1	1	0	1	10	1.33
Tornado	0	2	2	4	2	8	3.25
Hail	0	0	3	6	1	9	3.67
High Winds	0	1	3	5	1	9	3.44
Winter Storms	1	3	2	3	1	9	2.78
Summer Heat	0	0	2	7	1	9	3.78
Drought	0	0	1	8	1	9	3.89
Flooding	3	5	1	0	1	9	1.78
Dam Failure	6	3	0	0	1	9	1.33
Stream Bank Erosion	3	3	1	2	1	9	2.22
Levee Failure	7	2	0	0	1	9	1.22

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

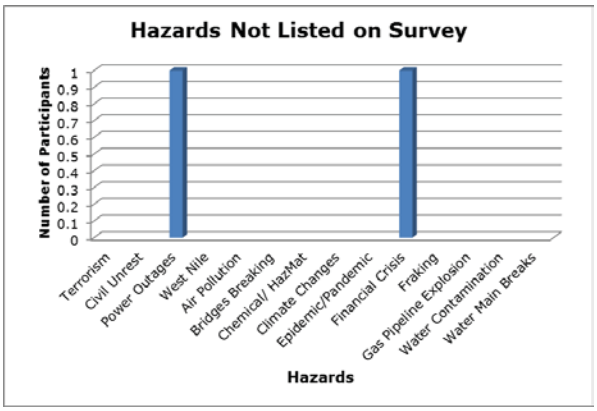
   ✓ Limited ✓ Minor
   ✓ Major ✓ Substantial

	Limited	Minor	Major	Substantial	Skipped	Total
Earthquake	6	2	1	0	1	10
Tornado	0	0	6	3	1	10
Hail	0	3	5	1	1	10
High Winds	0	3	4	2	1	10
Winter Storms	0	4	3	2	1	10
Summer Heat	0	5	3	1	1	10
Drought	0	3	3	3	1	10
Flooding	4	4	1	0	1	10
Dam Failure	6	2	1	0	1	10
Stream Bank Erosion	5	4	0	0	1	10
Levee Failure	7	2	0	0	1	10

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	5

Answer Choices	Responses
Implement the Texas Individual Tornado Safe Room Rebate Program:	7
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	7
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	0
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	5
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	7
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	2
Structural Retrofitting of Existing Buildings:	1
Total Respondents:	**10**

List any other strategies you think should be included in the plan:

- ✓ "Structural Improvements"
- ✓ "Improvements of Water Irrigation"

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ "Notification systems"
   - ✓ "Equitable water usage plan"

Public Review Period

On January 8, 2014 the City of Cedar Hill announced the availability of the City of Cedar Hill's Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through the city's website inviting the public to provide input into the draft plan. The announcement provided a 10 day public review and comment period. The plan was made available at both the city website and a hard copy was placed at the city's public library. The public were encouraged to submit comments prior to January 24, 2014 for consideration and possible incorporation into this draft. Figure 1, provides a screen shot of the announcement.

The public comments were directed to the Skyla Pellum the Regional Emergency Manager Administrator for the City of Cedar Hill, DeSoto and Duncanville. The public were advised that any comments received after the adoption of the update plan will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Figure 1: Screen Shot of Public Review and Comment Announcement



Capability Assessment:

The City of Cedar Hill identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Cedar Hill, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments: The key departments that are involved in hazard mitigation activities in the City of Cedar Hill include:

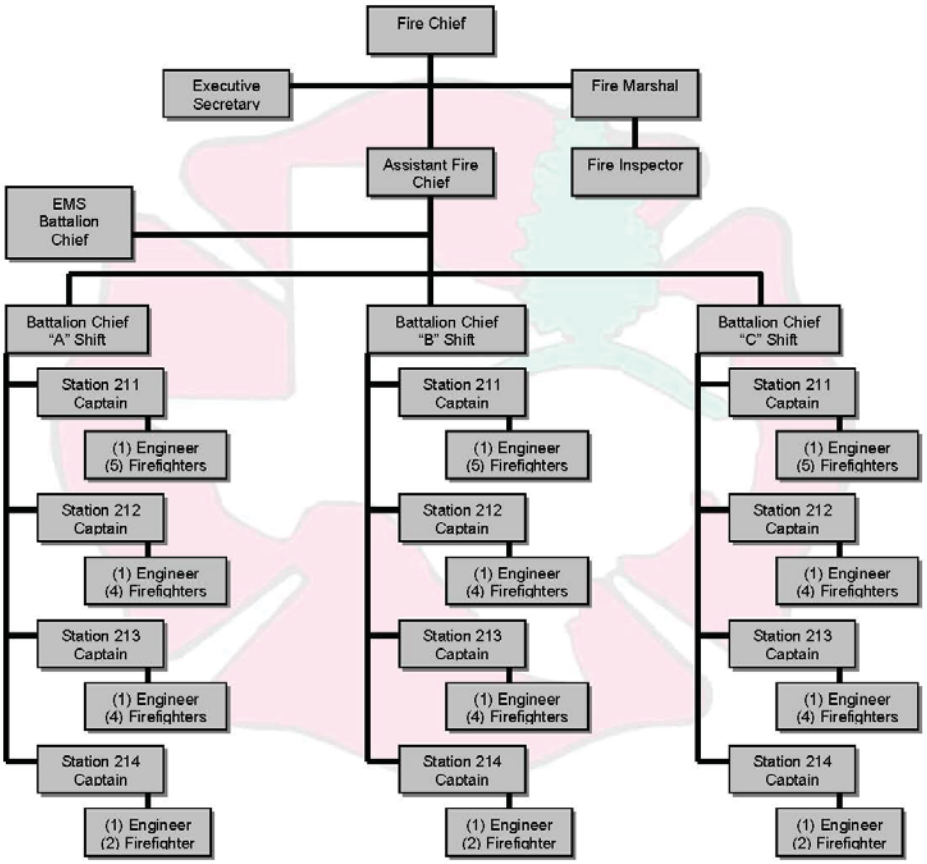
1. Cedar Hill Fire Department (CHFD): CHFD is an all risk Fire Department. These services include:

- ✓ Fire Suppression
- ✓ Emergency Medical Services (Advanced Life Support)
- ✓ Rescue Services
- ✓ Fire Prevention
- ✓ Public Education
- ✓ Community Emergency Response Team (CERT)
- ✓ Disaster Mitigation.



The Fire Department provides these services through four fire stations and fire administration staffed by 78 fire personnel. **Figure CH 1** depicts the Organizational Chart and personnel involved in running the operations of the CHFD.

Figure CH 1: City of Cedar Hill Fire Department Organization Diagram



2. **Cedar Hill Police Department:** The Cedar Hill Police Department plays a key role is to provide a safe and secure environment for all the citizens and visitors of Cedar Hill. The department consists of the Administrative Bureau, Field Services Bureau, and Support Services Bureau and is staffed by 67 sworn police officers and 21 civilian employees. CHPD is comprised of five divisions which include:

   - ✓ Administration: The administration of the police department provides leadership and guidance for the overall direction of the department.
   - ✓ Animal Control: The primary function and intent of Animal Control is to provide protection for the health, safety, and welfare of people and animals within the city. Animal Control Officers are responsible for responding to emergency and non-emergency situations concerning animals and fowl within the city and enforcing related state and local statutes.
   - ✓ Criminal Investigation: The Criminal Investigations Division has the primary responsibility to investigate criminal offenses, apprehend offenders, recover stolen property, and seek prosecution. The division is divided into three sections representing person's crimes, property crimes, and special investigations.
   - ✓ Patrol: The patrol division is considered the "backbone of the department", and consist patrol and community services, K-9 and traffic officers.

- ✓ Support Services: The Support Services Division is the "behind the scenes" portion of the department. Vital daily duties are performed by the staff of this division. The division consists of the following units:
  - o Animal Control
  - o Alarm Unit
  - o Police records
  - o Property and Evidence
  - o Public Service Officers

3. **Public Works:** The Public Works department provides several services to the citizens of Cedar Hill. These include:
   - ✓ Environmental Services
   - ✓ Engineering
   - ✓ Fleet Maintenance
   - ✓ GIS
   - ✓ Signs and Signals
   - ✓ Streets and Drainage
   - ✓ Water and Wastewater Management



4. **Planning Department:** The Planning department mission is to shape the physical development of the city. To achieve this, the department works closely with land developers and builders to ensure careful and thoughtful compliance with all city codes, policies and ordinances. The objectives of the planning development include:
   - ✓ Guide land development proposals through the city approval process
   - ✓ Administer the city's Comprehensive Plan and other long range plans
   - ✓ Direct the creation of plans, policies and ordinances relating to land use and development
   - ✓ Provide timely and comprehensive assistance throughout the development process

5. **Building Inspections Department:** The Building Inspections Department regulates the design, construction, quality of materials used, locations, use occupancy, maintenance of all buildings and structure within the city. The staff is responsible for enforcing the city's:
   - ✓ Building codes
   - ✓ Plumbing codes
   - ✓ Mechanical and electrical codes
   - ✓ Permits for the erection of buildings, signs, swimming pools, and the demolition of buildings



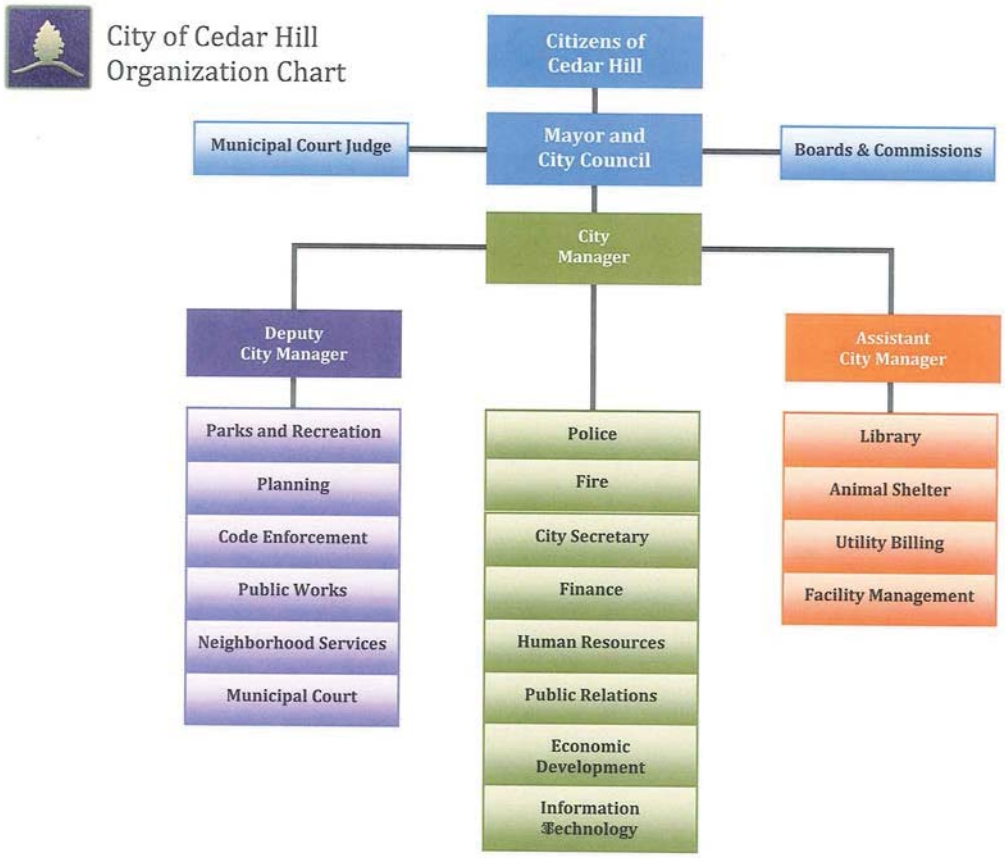
6. **Public Relations Department:** The Public Relations department manages the city's communication with the public. Information is shared with the public using several avenues that include:
   - ✓ Mass media: radio, TV, newspapers and magazines
   - ✓ Online: web sites, email subscriptions, social media, RSS feeds
   - ✓ Direct mail: newsletters and flyers distributed with residents' water bills and placed at locations in the city

- ✓ Community involvement: City Council Meetings, Board and Commission meetings, Mayor's Leadership Meetings, visits to neighborhood organizations, special events
- ✓ Direct contact: at the Library, at the Recreation Center, as citizens conduct business with the city, interaction between citizens and emergency services personnel

7. **Finance Department:** The Finance Department's function is to collect, disburse, safeguard, invest and maintain records of the city's assets. The mission of the department is to provide the City of Cedar Hill with:
   - ✓ Fiscally prudent financial accounting
   - ✓ Debt management
   - ✓ Investment services
   - ✓ Purchasing services

   Other functions of the Finance Department include:
   - ✓ Debt management:
     - o Prepare bond rating and insurance information for debt issuance
     - o Coordinate issuance of debt
     - o Conduct maturity payments
   - ✓ Investments:
     - o Manage City funds
     - o Make sound investments per City investment policy and Public Funds Investment Act
     - o Investment performance reporting
     - o Maintain authorized broker/dealer list
   - ✓ Purchasing:
     - o Conduct Citywide bids
     - o Contract administration
     - o Participate in cooperative-purchasing program

Figure CH 2: City of Cedar Hill Organization Chart



Summary of Capabilities

The tables below identify the current capabilities in the City of Cedar Hill.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	Last update 2008-it identifies know hazard areas and appropriate land uses
Capital Improvements Plan	Yes	Updated Annually-Includes improvements that reduce or eliminates hazardous conditions
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	Updated annually- Emergency Operations Plan, all aspects of shelter management, planning, resource management, and emergency response and recovery activities.
Continuity of Operations Plan	Yes	Reduces/mitigate disruptions to operations
Transportation Plan	Yes	Updated as needed with the Comprehensive Plan updates. Includes improvements that reduce or eliminates hazardous conditions
Storm water Management Plan	Yes	Updated as needed-Cedar Hill follows Storm water Management Program that provides for the planning and design of drainage improvements to further protect against floods.
Community Wildfire Protection Plan	Yes	Updated as needed-Assesses Cedar Hill's emergency preparedness, including evacuation planning, safety zones, and fire assistance agreements, as well as the response capability of community and cooperator fire protection forces.
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	

Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** 2009 International Residential Code, 2009 International Plumbing Code, 2009 International Mechanical Code, 2011 National Electric Code, 2009 International Energy Conservation Code, 2009 International Fuel Gas Code, 2009 International Fire Code
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	**Score:** 7.75
Fire Department ISO rating	Yes	**Rating:** 2
Site Plan review requirements	Yes	
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Limits use of land in know hazardous areas
Subdivision ordinance	Yes	Specifies minimum level of mitigation required to develop in or near hazardous areas
Floodplain ordinance	Yes	Specifies minimum level of mitigation required to develop in or near flood prone areas
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Escarpment Ordinances-specifies the minimum level of mitigation required to develop in or near escarpment zone
Flood insurance rate maps	Yes	Specifies areas in which more detail study is required and the minimum level of mitigation required
Acquisition of land for open space and public recreation uses	Yes	Policy-dependent upon available funds and need
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	Yes	Meets twice monthly and reviews all new development applications-very
Mitigation Planning Committee	Yes	Committee coordinate the update of the Hazard Mitigation Plan
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Standard O&M for Public Works and Parks Department
Mutual aid agreements	Yes	Mutual aid agreements with neighboring jurisdictions-coordination is effective
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes FT	
Floodplain Administrator	Yes FT	
Emergency Manager	Yes FT	
Community Planner	Yes FT	
Civil Engineer	Yes FT	
GIS Coordinator	Yes FT	
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	The city operates, maintains and augments Outdoor Siren System. Connect-CTY
Hazard data and information	Yes	Wildfire and Flooding data/information maintain in Public Works and Fire Department
Grant writing	Yes	Individual departments apply for grants
HAZUS analysis	No	HAZUS analysis can be conducted through North Central Texas Council of Government
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas or electric services	Yes	Water and Sewer only
Impact fees for new development	Yes	
Storm water utility fee	No	
Incur debt through general obligation bonds and/or special tax bonds	Yes	
Incur debt through private activities	Yes	
Community Development Block Grant	Yes	
Other federal funding programs	Yes	
State funding programs	Yes	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	The city has several non-profit and local citizen the related to disaster resilience and mitigation. Community Emergency Response Team (CERT). CERT teams help provide critical support by giving immediate assistance to victims, providing damage assessment information, and organizing other volunteers at a disaster site.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Citizen Fire Academy encourage citizens to become more safety conscious, Fire Safety/ Prevention informs citizens of specific fire hazard, Water Wise program
Natural disaster or safety related school programs	Yes	Fire Safety and Prevention Public Education. KnoWhat 2Do program educates citizen on disaster preparedness.
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	Yes	
• Flood Prone areas • Escarpment Zone • Vegetation and tree cover • Other		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	Yes	
• The identified natural hazard areas are designated as very low density		
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	Yes	
Transportation		
1. Does the transportation plan limit access to hazard areas?	Yes	
• The plan minimizes crossings of areas prone to flooding and escarpment zone		
2. Is transportation policy used to guide growth to safe locations?	Yes	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	Yes	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	Yes	
2. Do environmental policies maintain and restore protective ecosystems?	Yes	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	Yes	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	Yes	
2. Is safety explicitly included in the plan's growth and development policies?	Yes	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	Yes	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	Yes	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		No
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	Yes	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	Yes	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	Yes	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	Yes	
3. Do the regulations allow density transfers where hazard areas exist?		No
Capital Improvement Program and Infrastructure Policies	**Yes**	**No**
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	Yes	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?		No
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		No

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	Yes	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	Yes	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		No
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	Yes	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	Texas Water Development Board – January 2015	There are 98 policies in the Community with a total premium paid of $67,999.00
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	Texas Water Development Board – January 2015	21 claims were made in the community. 14 of these were closed for a total payment of $211,541. The rest were closed without payment. At least 2 of these payments were substantial damage
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	120
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	None
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Certified Floodplain Manager
Is floodplain management an auxiliary function?	Community FPA	Cedar Hill has two Certified Floodplain Manager on staff within the Public Works Department
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Public Information, GIS Mapping Effort Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		1999 TCEQ conducted a CAV
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	04/01/81
Are the FIRMs digital or paper?	Community FPA	Digital and Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	The current floodplain regulations were adopted in 1988. The flood maps for Dallas and Ellis Counties have been updated and became effective in July 2014. Many of the regulations for modification of a flood area were included in the Manual for General Design Standards for Pavement, Drainage Systems and Water & Sanitary Sewer Systems produced by the Public Works Department and adopted by the City Council on May 8, 2012.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Site plan approval required from Planning and Zoning Commission and City Council prior to permitting any new structure
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		Encourage the purchase of flood insurance, preserve open space, protect natural floodplain functions and manage storm water
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Cedar Hill HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Cedar Hill are as follows:

High Risk (over 65% on HIRA)	Extreme Heat High Winds Lightning Wildfire Tornado Winter Storms
Moderate Risk (41%- 65% on HIRA)	Hail Flooding Drought
Low Risk (12 %-40% on HIRA)	Dam/Levee Failure Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan, i.e., tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Cedar Hill. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Cedar Hill**.**

A. Flood: There are four major drainage basins within the City of Cedar Hill. The Upper Red Oak Creek, Upper Ten Mile Creek, Joe Pool Lake, and Chambers Watershed. Due to the recent growth and development within the city, more impervious surfaces have been added throughout Cedar Hill resulting in increased runoff and potential threat of flooding. The city is subject to variable amounts of rainfall resulting in flooding for short periods of time. Development within the Bentle Branch floodplain has resulted in the construction of a regional detention facility to receive the storm water from the surge of growth experienced in that area.

As has been referenced in the capabilities above, the city has established criteria and standards to govern the use govern the use of natural streams and floodplains and to serve as guidelines for the development of man-made drainage facilities and the improvement of natural channels. Floodplains in the city are managed by a flood damage prevention ordinance. The ordinance designates the floodplain administrator as a single point contact to

oversee issues and record the studies and records of floodplain areas established within the city.

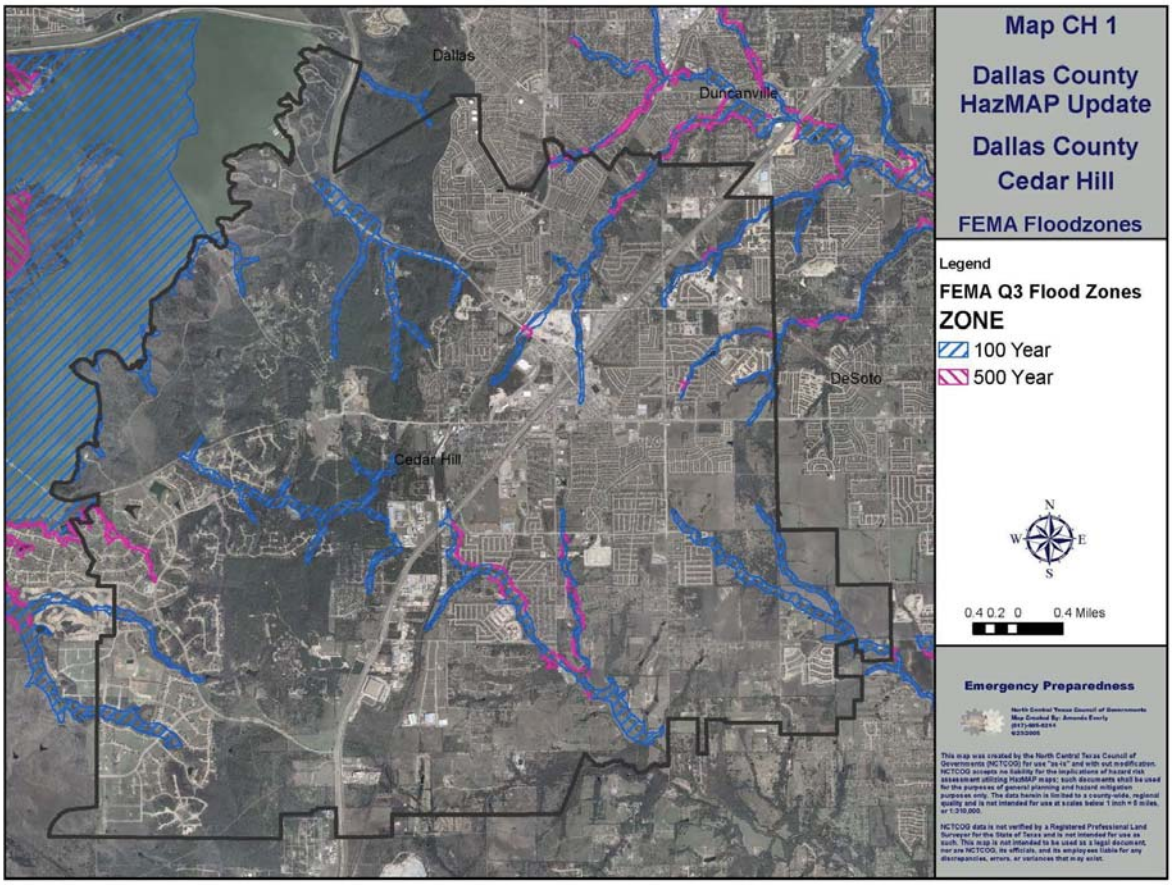
Residential areas prone to flooding are west of Lake Ridge Elementary School, including parts of Sunrise Court. Street flooding have been observed and described at the following locations:

- ✓ Clark and 500 Block of Astoria – Just south of Astoria on Clark Road; water drains out into the roadway.
- ✓ 2900 Block of Lakeview Drive - Very high water during large rainfall events.
- ✓ Duncanville Road - Just north of Ovilla city limits; water runs across roadway during large rain fall events.
- ✓ 1300 Block of Joe Wilson Road - Just north of Bear Creek under large rain events; water runs across roadway.
- ✓ 200 Block of Kenya Street - East of Clark Road. Water builds up in the roadway during large rain events.
- ✓ 100 Block of Joe Wilson Road - On the corner by the Tiger Mart, water builds up during heavy rainfalls.
- ✓ Wood Lane and Little Creek - Large amounts of water shed across the roadway of Wood Lane. Roadway floods when private pond on the west side of Wood Lane becomes full.
- ✓ West Wintergreen and High Pointe – This intersection floods under very large rain fall events.
- ✓ Meadow Ridge Drive and Daniel Lane - This intersection floods during large rain fall events.

Map CH 1 depicts the 100 and 500 year designated floodplain for the City of Cedar Hill.

The City of Cedar Hill does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis. The City does not have any structures that have been repetitively flooded over the years, and thus repetitive flooding is not an issue for the city.

Map CH 1: City of Cedar Hill FEMA Flood Zones

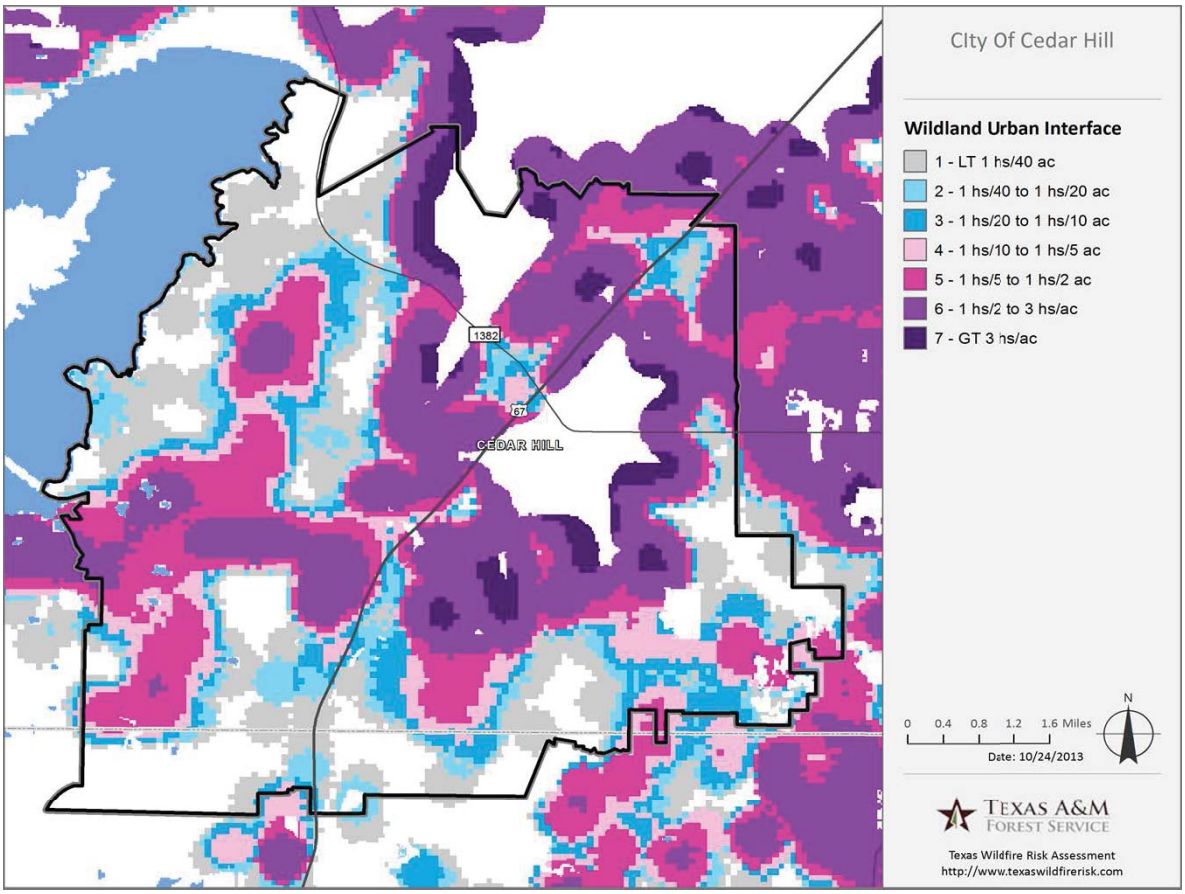


Source: North Central Texas of Governments

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 27,876 people or 64 percent of the total project area population (43,221) live within the WUI. **Map CH 2** depicts the WUI for the City of Cedar Hill.

Map CH 2: City of Cedar Hill Wildland Urban Interface



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Cedar Hill ranges from Non-Burnable to High.

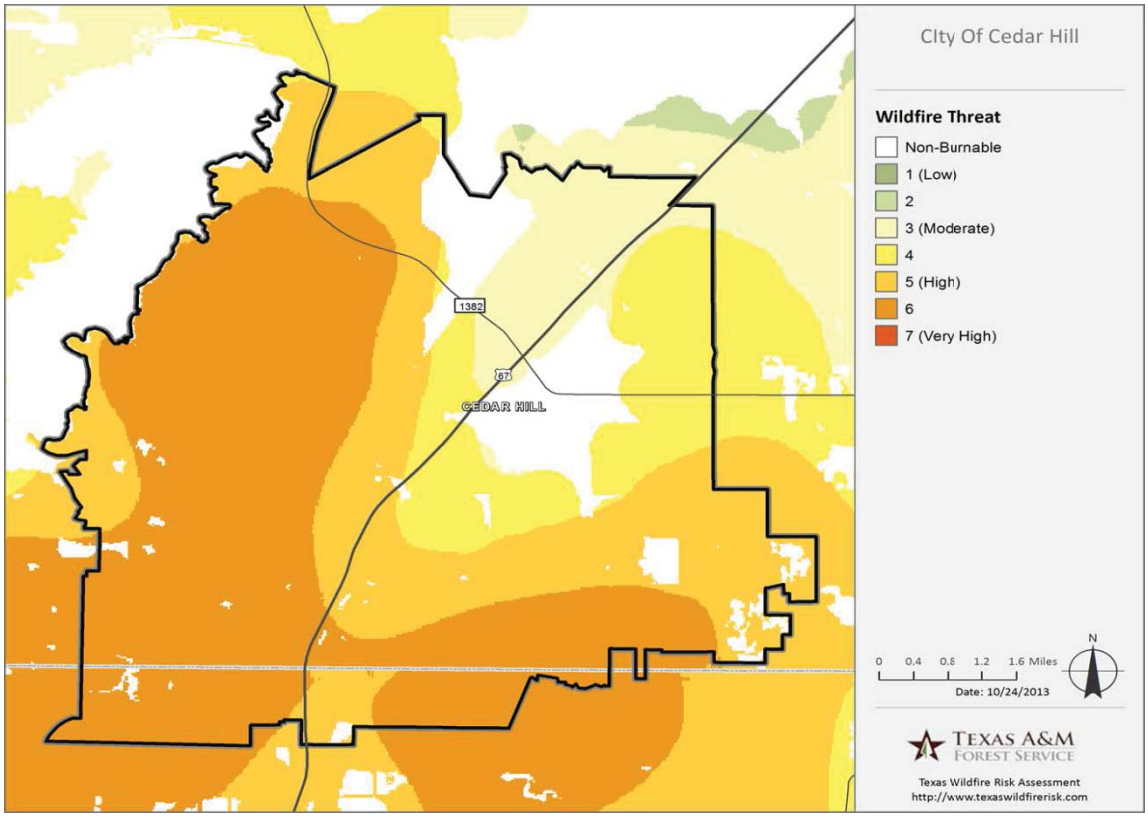
Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map CH 3: City of Cedar Hill Wildfire Threat



C. Dam and Levee Failure: Lake Joe Pool is located to the northwest and western section of the City of Cedar Hill. Joe Pool Lake is mostly fed by Mountain Creek and Walnut Creek and drains north into Mountain Creek leading into Mountain Creek Lake and is one of the only lakes in Texas that actually drains to the north. Joe Pool Lake impounds water in two arms formed by Mountain Creek and Walnut Creek. The Mountain Creek Water Shed is in the Upper Trinity River Basin and has a length of 37 miles and a total drainage area of 304

square miles. Location id depicted in the Map below. The City of Cedar Hill considers the lake to be a low risk hazard.



Google Maps

Lake Joe Pool is operated by the United States Corp of Engineers (USCAE) for conservation, flood control, recreation, and municipal water. The Trinity River Authority also has some interests in the lake. It is assumed that part of the City of Cedar Hill is in the inundation areas of the lake, but this is in the State Park Area of the City. The extent of inundation failure of the lake to the Cedar Hill has not been determined as a result of a lack of data regarding inundation levels. While there is some information on Lewisville Lake Dam, this information is owned and maintained by the USACE. The City of Ceda Hill sees the need to work more closely with the USACE and conduct additional studies to determine the extent of damage to the city.

D. Stream Bank Erosion: The City of Cedar Hill has several miles of creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The City of Cedar Hill is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues

affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the City of Cedar Hill. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

E. Earthquake: There are no known active geological faults within Cedar Hill and there is no historical data of earthquakes in the City of Cedar Hill. However due to recent increase in earthquakes in the county and the lack for data, a data deficiency has been noted for this hazard. This hazard will need to be researched and studied in order to obtain data to address mitigation strategies and activities.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Cedar Hill. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events. All emergency facilities are exposed to this hazard
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events. All critical facilities are exposed to his hazard.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events. All critical infrastructures is exposed to his hazard.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Cedar Hill. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Cedar Hill. All emergency facilities are exposed to this hazard
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Cedar Hill.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Cedar Hill.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Cedar Hill due to winter storm events. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Cedar Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Cedar Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Cedar Hill are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Cedar Hill is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Cedar Hill. All improved property is exposed to this hazard. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Cedar Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Cedar Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Cedar Hill are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Cedar Hill have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Cedar Hill. All property, new, improved and existing property is exposed to this hazard..
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Cedar Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Cedar Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Cedar Hill are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Cedar Hill. All the population of City of Cedar Hill is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Cedar Hill. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Cedar Hill are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Cedar Hill are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Cedar Hill are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Cedar Hill. All property, new, improved and existing property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Cedar Hill indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Cedar Hill are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Cedar Hill are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Cedar Hill are exposed to this hazard.

Wildfire	
Population	Based on geographical data 64% of the population in City of Cedar Hill who live in the WUI areas. This is the percentage of the population exposed to this hazard
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. 10% of all property (new, improved and existing) in the WUI is exposed to this hazard.
Emergency Facilities	There are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there no schools are at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges or dams are at risk from wildfire events. However the wastewater treatment/water treatment facility has a moderate threat of wildfire

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the City of Cedar Hill area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	0 % of railways/highways and bridges, 0 % of dams, 0 % of water treatment works, and 0 % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

Changes in Population and Development

The City of Cedar Hill participated in the 2009 Dallas County Hazard Mitigation Action Plan. Table 3.1 shows that from the 2010 census data to the 2014 estimates for the City of Cedar Hill, the population has grown from 45,028 to 45,820, an increase of 1.8%.

New housing developments increased from 16,338 units in 2010 to 16,839 units in 2014, an increase of 501 units**.** Major structural and economic development, include a secondary school, 46,000 square foot apartment complex and a strip center. No new developments have been built in floodplains.

To help mitigate the impacts of the hazards identified the City of Cedar Hill has identified varies mitigation strategies to lower the vulnerability on the population and property from the natural hazards identified. These include establishing additional flood plain regulations, adopted stricter rules and regulations such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

Essential Infrastructure Summary Report for the City Cedar Hill

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals		0
Schools DeSoto ISD		14
• Elementary	32.591954,-96.957017 32.616130,-96.952315 32.588977,-96.929485 32.569302,-97.005302 32.565729,-96.942581 32.598524,-96.916804	6
• Intermediate	32.589218,-96.932655 32.572315,-96.926123 32.621403,-96.953312	3
• Middle	32.602432,-96.915596 32.576759,-96.949646	2
• High School	32.594555,-96.973640 32.583048,-96.949453 32.594555,-96.973640	3
• Northwood University	32.613318,-96.967249	1
• Cedar Valley College	32.620468,-96.768410	1
Police Station	32.590652,-96.929764 32.590652,-96.929764	2
Fire Stations		4
• Station 211	32.590221,-96.965612	
• Station 212	32.568878,-96.943031	
• Station 213	32.619377,-96.952103	
• Station 214	32.556019,-96.998108	
Emergency Operations Facilities		7
• Cedar Hill Government Center	32.594555,-96.973640	
• Cedar Hill Service Center	32.556583,-96.940712	
• Recreation Center (shelter)	32.574196,-96.939308	
• Pump Station Meadow Crest/Hwy 67	32.622200,-96.912964	
• Water Tower Mt Lebanon/Hwy 67	32.558087,-96.971337	
• Water Tower Valley View Drive	32.573856,-96.972328	
• Pump Station 391 Flameleaf	32.627404,-96.954330	

Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	$7,406,971	100	Within
Residential	$563,170	500	Within
Commercial	$3,057,340	100	Within
Commercial	$1,390,220	500	Within
Industrial	N/A	N/A	N/A
Government / Public	N/A	N/A	N/A

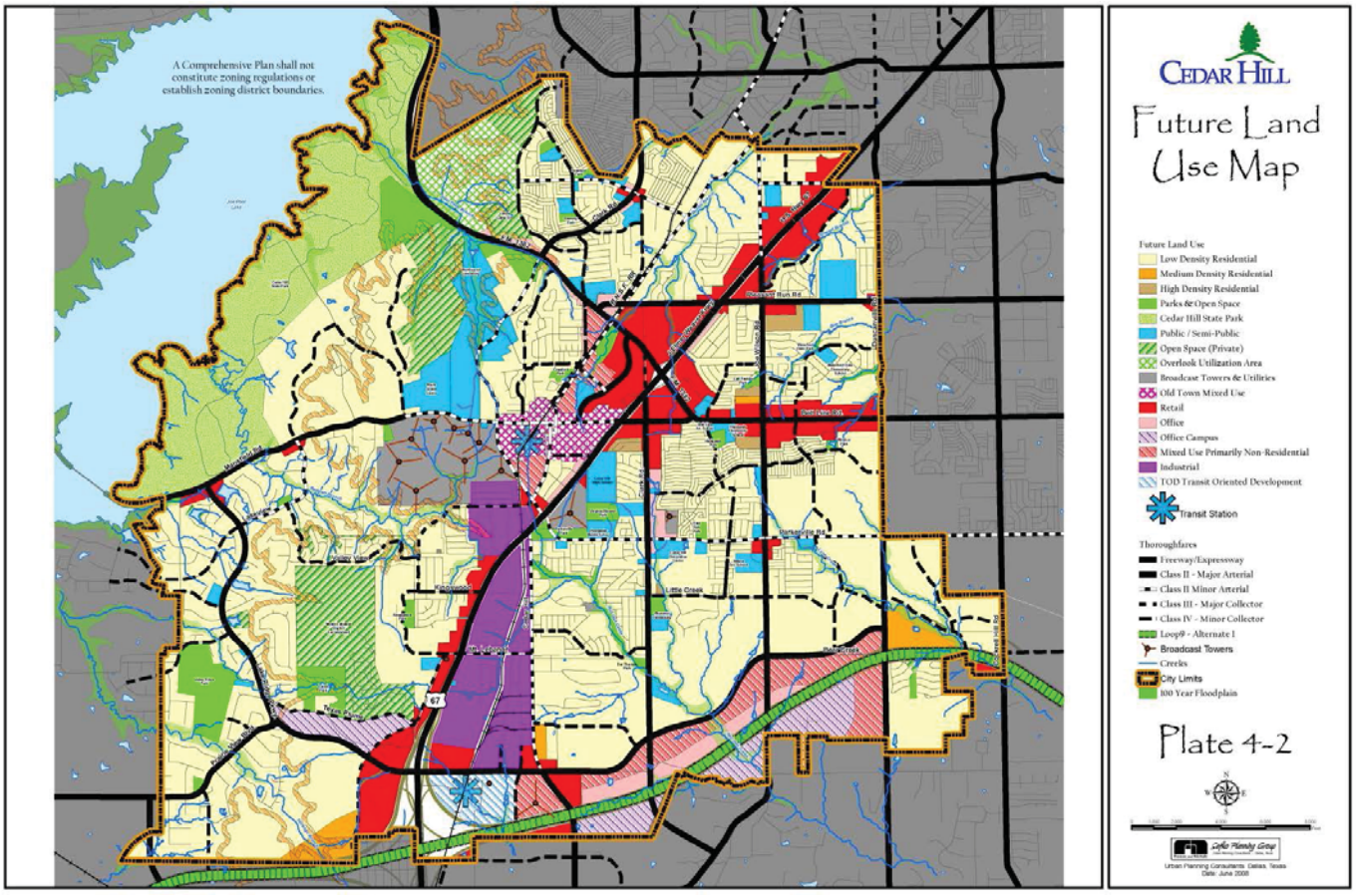
Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$7,907,600	Outside	Within	Moderate
Residential	$17,196,544	Within	Within	Moderate
Commercial	$2,540,190	Within	Outside	Moderate
Industrial	N/A	N/A	N/A	N/A
Government / Public	$11,763,480	Within	Within	High

The City of Cedar Hill has a comprehensive Land Use Plan. The purpose of the plan is to manage and regulate land use in order to protect the health, safety and welfare of the city's citizens. In other words, the Land Use Plan serves as a guide to the unique vision of the city has in regards to land use and zoning. The decisions made in regard to this will determine whether the city attains its vision. **Map CH 4**, depicts the Future Land Use Map and **Map CH 6** depicts the Zoning Map for the City of Cedar Hill.

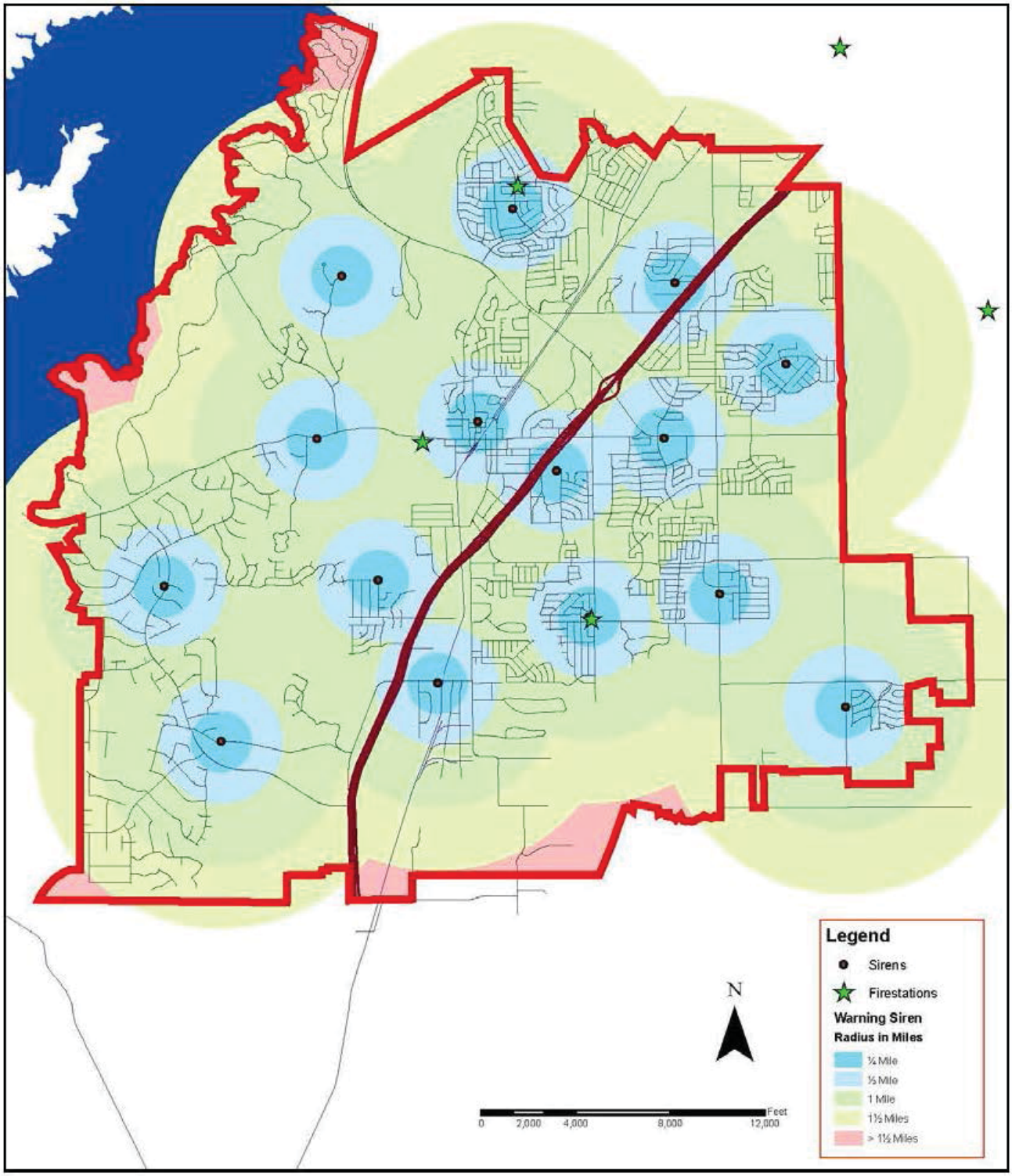
In addition to fire station locations and response service areas, another important safety feature for the city's residents is that of the siren warning system. Sirens are located throughout Cedar Hill and in adjacent communities to audibly warn citizens of impending severe weather situations and tornadoes. Due to the quick on-set of many dangerous storms, this form of alert serves as an essential warning of approaching peril. **Map CH 5** illustrates the location of sirens and fire stations throughout the city and surrounding communities, along with the corresponding distances from each. The vast majority of the city is within one mile of siren, with very small segments located beyond one and half miles from a siren.

CH 4: City of Cedar Hill Future Land Use Map



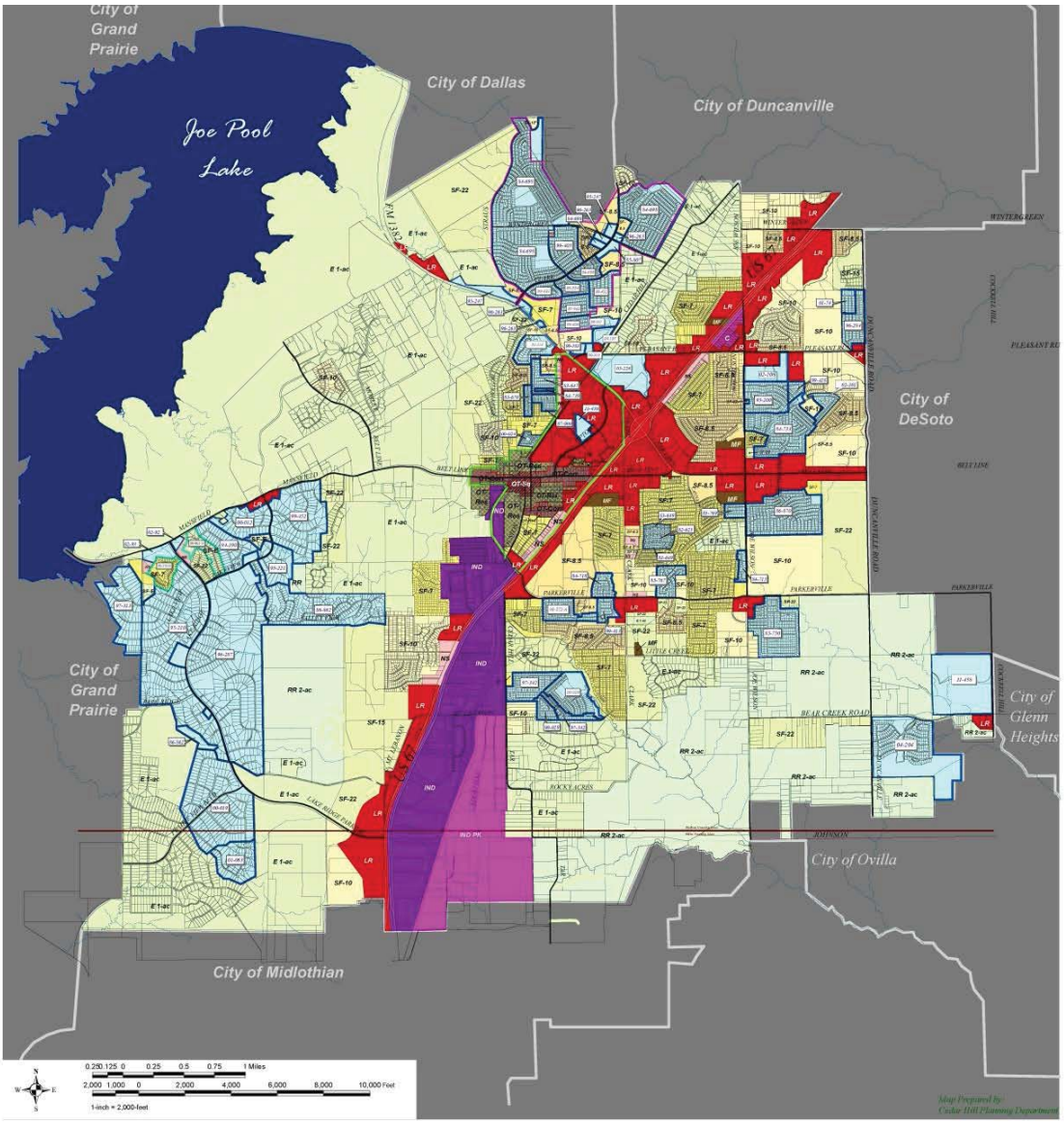
Source: The City of Cedar Hill Comprehensive Plan 2008

Map CH 5: Location of Siren Warning Systems and Fire Stations



Source: The City of Cedar Hill Comprehensive Plan 2008

Map CH 6: City of Cedar Hill Zoning Map



City of Cedar Hill

Zoning District Map

Current to July 1, 2012

Zoning District Legend

RR -2-acres	NS
SF-E	LR
SF-22	Comm
SF-15	CC
SF-10	Ind Pk
SF-8.5	Ind
SF-7	OT-Corr
TH	OT-Res
MF	OT-Sq
	PD

Overlay District Legend

- High Pointe Overlay District
- Up Town Overlay District
- Planned Developments w/ Ord No.
- Vested PD Combing Distrct w/ Ord No.

Zoning District Descriptions

RR	Rural Residential - Min. Lot Size of 2-acres
SF-E	Single-Family Residential-Estate - Min. Lot Size of 43,560 SF
SF-22	Single-Family Residential - Min. Lot Size of 22,000 SF
SF-15	Single-Family Residential - Min. Lot Size of 15,000 SF
SF-10	Single-Family Residential - Min. Lot Size of 10,000 SF
SF-8.5	Single-Family Residential - Min. Lot Size of 8,500 SF
SF-7	Single-Family Residential - Min. Lot Size of 7,000 SF
TH	Single-Family Attached Residential (Townhomes)
MF	Multiple-Family Dwelling District
NS	Neighborhood Service District
LR	Local Retail District
OT	Old Town District
UT	Uptown Overlay District
C	Commercial District
CC	Corporate Campus District
IP	Industrial Park District
I	Industrial District
PD	Planned Development
HP	High Pointe Overlay District



Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in unincorporated areas of Dallas County

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5*-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Cedar Hill Action Item	Promote land use program, identify undeveloped land within the floodplain, and assess uses for conservation or recreation. Implement storm water detention basin at the upstream of Bentle Branch, to allow for a more natural environment condition of Bentle Branch and Ten Mile Creek
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	$300,000
Potential Funding Sources	Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Public Works Department
Implementation Schedule	Within 12 months of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Preserving natural areas and vegetation benefits natural resources while also mitigating potential flood losses.
Discussion	Program will include developing an open space re-use, and preservation plan targeting as well as developing a land banking program for the preservation of the natural and beneficial functions of flood hazard areas

Cedar Hill Action Item	Conduct an inundation extent study for Joe Pool Lake to determine the extent of flooding. This study will be done in coordination with the owners and operators of the dams.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levee's.

Discussion	As noted in this annex a data deficiency was identified for Joe Pool. Such a study can include procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

City of Cedar Hill Action Item	Acquire floodplain and protect environmentally sensitive areas to include Red Oak Creek and Bentle Branch Creek and the Balcones Escarpment and convert them into open space land
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, stream bank erosion and dam/levee failure
Priority (High, Medium, Low):	Medium
Estimated Cost	$200,000
Potential Funding Sources	City Budget, Capital Improvement Plan
Lead Agency/Department Responsible	Public Works Department, Parks and Recreation
Implementation Schedule	24 months upon funding
Effect on Old Buildings	Old building will be acquired and maintained by the city
Effect on New Buildings	None
Cost Effectiveness	The benefits of this program exceed the cost associated with flooding of this affected areas
Discussion	The removal of structures from flood prone areas will minimize future flood losses. This will be done by acquiring and demolishing of structures from voluntary property owners and preserving land subject to repetitive flooding.

City of Cedar Hill Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	Low
Estimated Cost	TBD
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Dallas County Department of Health and Human Serves, Utility Billing Office, City Health Inspector
Implementation Schedule	Will implement as funding is available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for

	assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Cedar Hill Action Item	Incorporate of drought tolerant, fire resistant and xeriscaping practices for existing and new city facilities. This program will also be expanded to include residential areas through regulatory and incentive measure mitigate the risk. The program can also include installing water saving equipment in city facilities
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Public Work, Utilities Billing Department
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire.

Cedar Hill Action Item	Adopt and enforce new building codes for construction of storm shelters and safe rooms in existing and new construction recreational, institutional and commercial buildings
Hazard(s) Addressed	Tornadoes, high winds
Goal/Objective	1-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Cedar Hill Building Inspections Department
Implementation Schedule	Within one year of funding and approval
Effect on Old Buildings	None
Effect on New Buildings	New building will be required to meet the new standards
Cost Effectiveness	The benefits are much more than the cost
Discussion	Adopting and enforcing new building codes will mitigate the damages and injuries as a result of severe winds and tornados

Cedar Hill Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Cedar Hill Action Item	Reduce Urban Heat Island Effect by distributing cool roofing products to home owners that reflect sunlight and heat away from buildings
Objective(s) Addressed	1-A
Hazard(s) Addressed	Extreme Heat
Priority (High, Medium, Low):	Low
Estimated Cost	TBD
Potential Funding Sources	Homeowners
Lead Agency/Department Responsible	Public Works Department, Building Inspections Department
Implementation Schedule	2 years after approval of initiative
Effect on Old Buildings	Buildings will be required to meet the new standards
Effect on New Buildings	Buildings will be required to meet the new standards
Cost Effectiveness	The benefits outweigh the cost
Discussion	The use of this technics will not only conserve energy but will also mitigate the effects of extreme heat

City of Cedar Hill	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Cedar Emergency Management and Public Relations Departments
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Cedar Hill	Install lightning prediction systems at Cedar Hill parks (Crawford Park, Community Center Park, Dot Thomas Park, Virginia Park and Valley Ridge Park) to provide advance warning to park patrons in the event of lightning strikes.
Hazard(s) Addressed	Lightning
Goal/Objective	2-D
Priority	Medium
Estimated Cost	$50,000
Potential Funding Sources	City Budget
Lead Department	Parks and Recreation Department
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The benefits outweigh the cost
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during weather conditions that comes with lightning

City of Cedar Hill Action Item	Improve and Enhance Storm Water Draining capabilities to prevent flooding in flood prone areas
Objective(s) Addressed	1-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$60,000
Potential Funding Sources	City Budget, Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Cedar Hill Public Works Department
Implementation Schedule	1 year upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost of implementing this program is low compared to the benefits it offers
Discussion	Stormwater management projects will include: ✓ Installing, re-routing, or increasing the capacity of a storm drainage system. ✓ Increasing capacity of stormwater detention and retention basins. ✓ Increasing dimensions of drainage culverts in flood-prone areas.

City of Cedar Hill	Buyout structures that are in the floodplain
Hazard(s) Addressed	Flooding
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Low
Estimated Cost	$5 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Cedar Hill Administration, Engineering and Parks and Recreation
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	Remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners

City of Cedar Hill	Purchase and distribute hail and wind resistant window coverings to homeowners
Hazard(s) Addressed	Hail, Tornado
Goal/Objective	1-C, 2- A, and 4-C
Priority	Low
Estimated Cost	Unknown currently, based on current population and vendor
Potential Funding Sources	HMGP
Potential Matching Sources	General Fund, in-kind
Lead Department	Emergency Management
Implementation Schedule	12 Months
Effect on Old Buildings	Potentially can reduce damage caused by severe weather
Effect on New Buildings	Potentially can reduce damage caused by severe weather
Cost Effectiveness	Low cost and will provide great benefit to the community
Discussion	The City will purchase window coverings to protect residential and business windows from damage from hail and wind damage.

City of Cedar Hill	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Cedar Hill

Plan Maintenance

The City of Cedar Hill Fire Department through the Office of Emergency Management will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator (EMC) will be responsible for leading this effort.

The EMC will call the Cedar Hill Hazard Mitigation Planning Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Cedar Hill	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will report the outcomes of the HMPT reviews to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Cedar Hill's HMPT will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Cedar Hill or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Cedar Hill is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Cedar Hill will be a strong advocate that jurisdictions within Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Cedar Hill will engage stakeholders in community emergency planning.

The city will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Cedar Hill	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Manager	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

c. Complete Survey Results

d. References

Appendix CH A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Cedar Hill
Hazard Identification and Risk Assessment (HIRA)
Date: July 29, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms									
High Winds	4	4	3	3	1	1	1	3	100%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	3	3.00	1	2	1	4	75%
Winter Storms	3	2	3	4.50	2	3	1	6	75%
Tornado	4	3	4	5.33	3	4	1	8	66.67%
Flooding	3	2	2	3	2	2	1	5	60%
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat	4	4	4	4	3	1	2	6	66.67%
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire	3	2	4	6.00	3	3	3	9	66.67%
Utility Failure									
Energy/Fuel Shortage	2	2	2	2.00	2	1	1	4	50%
Terrorist Attack	2	1	2	4.00	4	2	1	7	57.14%
Urban Fire	4	3	1	1.00	2	2	1	5	26.67%
Earthquake	2	1	1	2.00	1	2	2	5	40%
Levee/Dam Failure	1	1	1	1.00	1	1	2	4	25%
Drought	4	4	3	3.00	1	2	2	5	60%
Aircraft Accident	2	1	1	2.00	1	1	1	3	66.67%
Stream Bank Erosion	1	1	1	1.00	1	1	1	3	33.33%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

NB: The City of Cedar Hill only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix B-1: Meeting Documentation and Outreach Materials



From: Skyla Pellum
To: adp.cedarhill@northwood.edu
Subject: City of Cedar Hill Hazard Mitigation Action Plan

Dr. Keith Perry,

The City of Cedar Hill and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP).
We would like to invite Northwood University - Cedar Hill Campus to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Sincerely,

Skyla Pellum
Regional Emergency Management Administrator
Cedar Hill * DeSoto * Duncanville

Duncanville Fire Department
PO Box 380280
Duncanville, Texas 75138

Office: 972.780.5054
Fax: 972.780.4928
spellum@ci.duncanville.tx.us

From: Skyla Pellum
To: Chris.Santos@chisd.net
Subject: City of Cedar Hill Hazard Mitigation Plan

Mr. Santos

The City Cedar Hill and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite Cedar Hill ISD Administration and School Safety to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Sincerely,

Skyla Pellum
Regional Emergency Management Administrator
Cedar Hill * DeSoto * Duncanville
Duncanville Fire Department
PO Box 380280
Duncanville, Texas 75138

Office: 972.780.5054
Fax: 972.780.4928
spellum@ci.duncanville.tx.us

Appendix CH-1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

   ✓ City of Cedar Hill (10 responses)

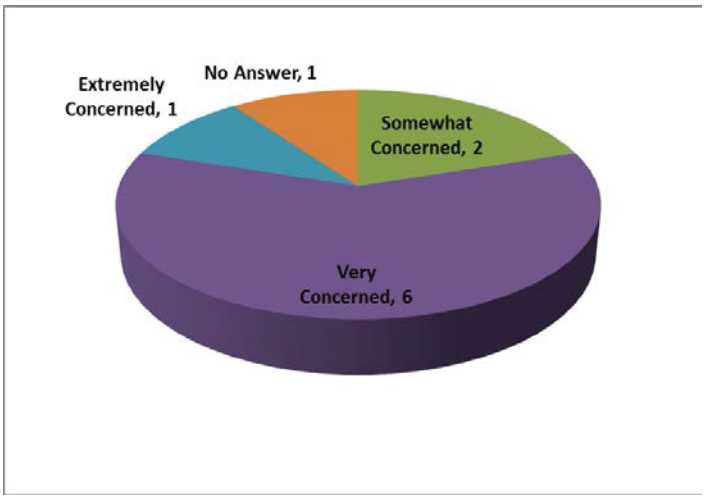
2. Have you ever experienced or been impacted by a disaster?



   If "Yes", please indicate what hazard you have endured and where it occurred?

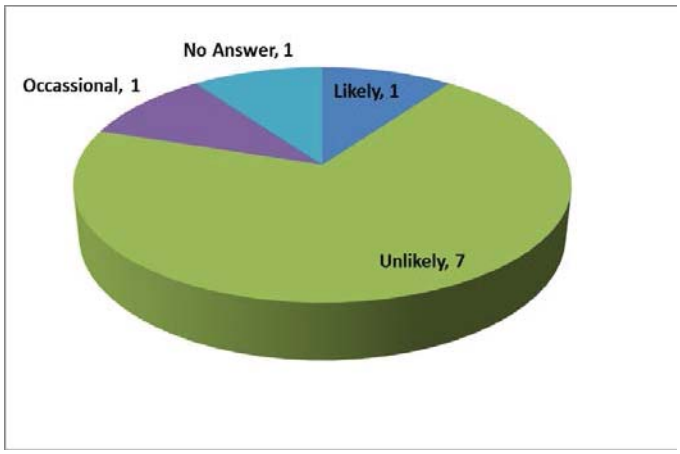
   ✓ "Tornado-FL 1995"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

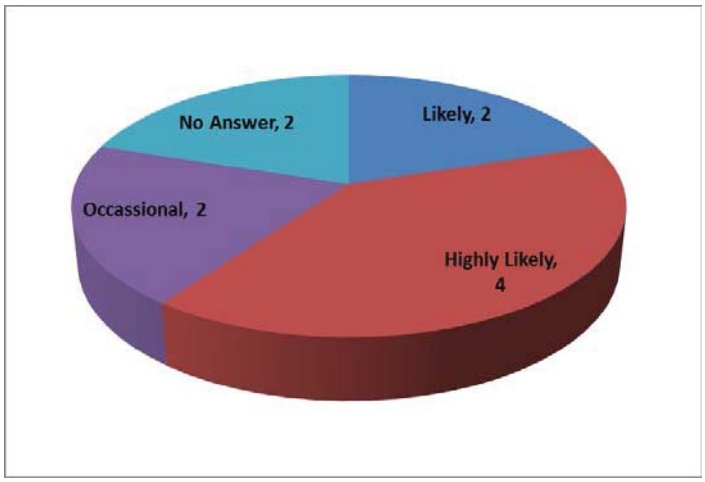


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

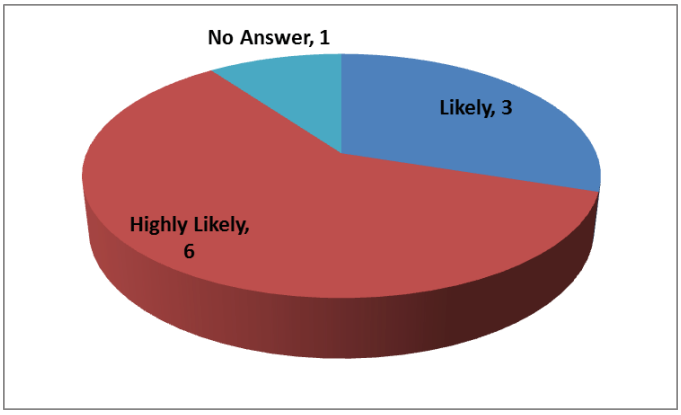
a. Earthquake



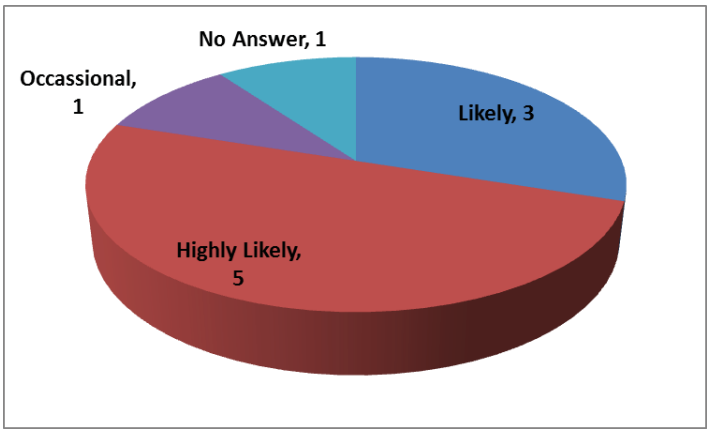
b. Tornado



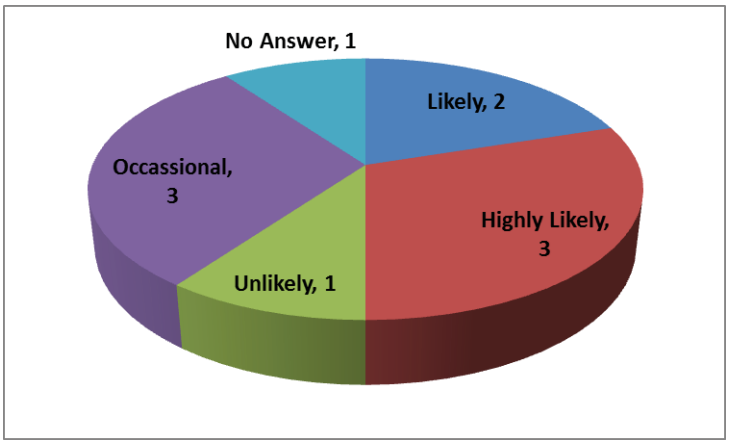
c. Hail



d. High Winds



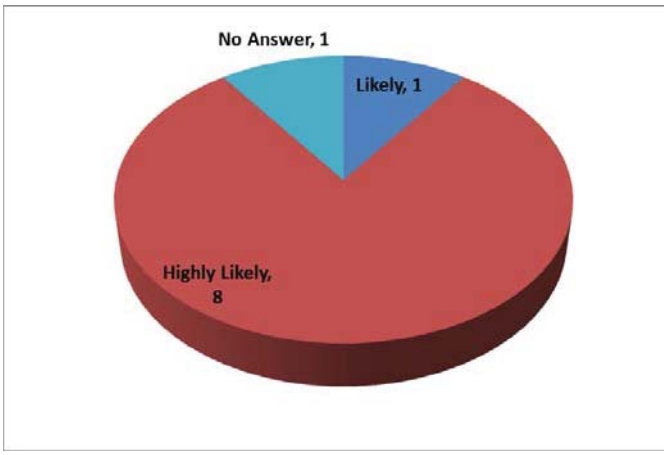
e. Winter Storms



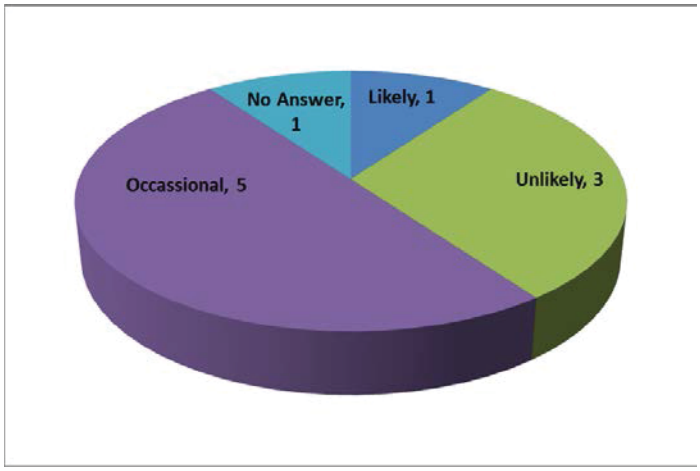
f. Extreme Heat



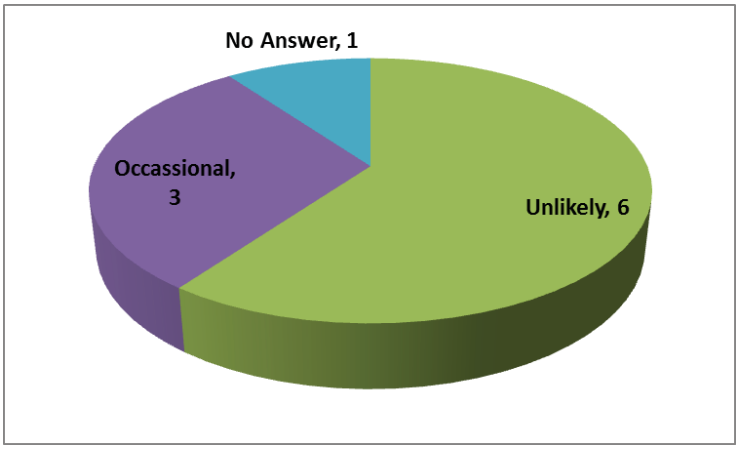
g. Drought



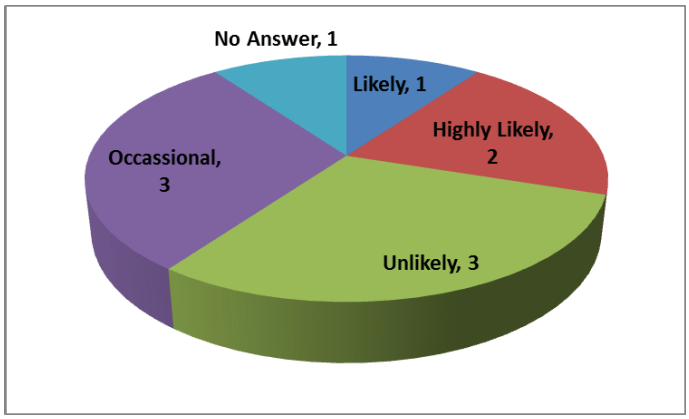
h. Flooding



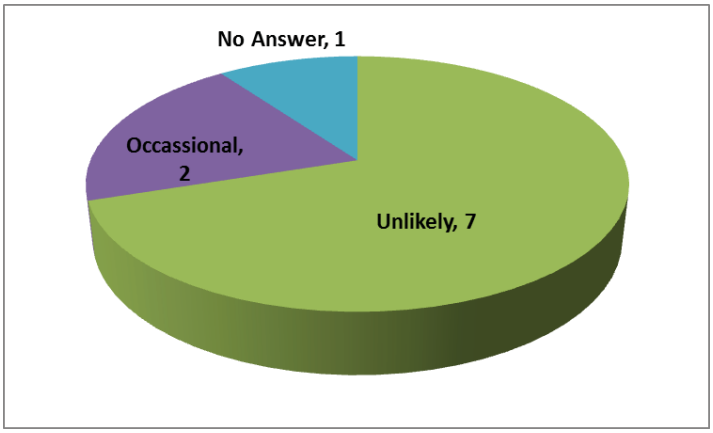
i. Dam Failure



j. Stream Bank Erosion

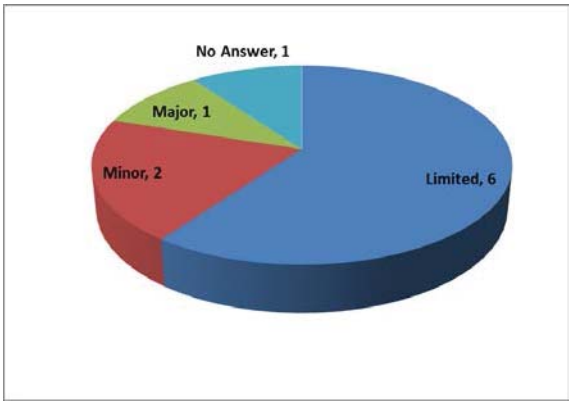


k. Levee Failure

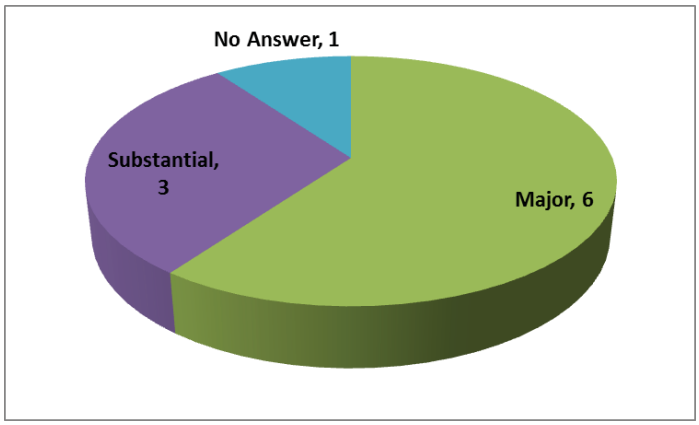


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

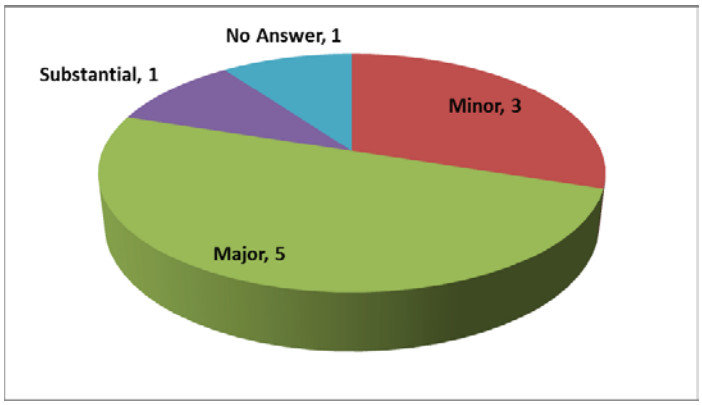
a. Earthquakes



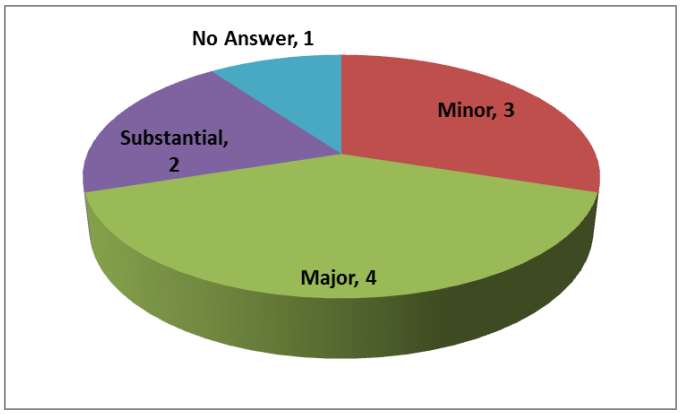
b. Tornado



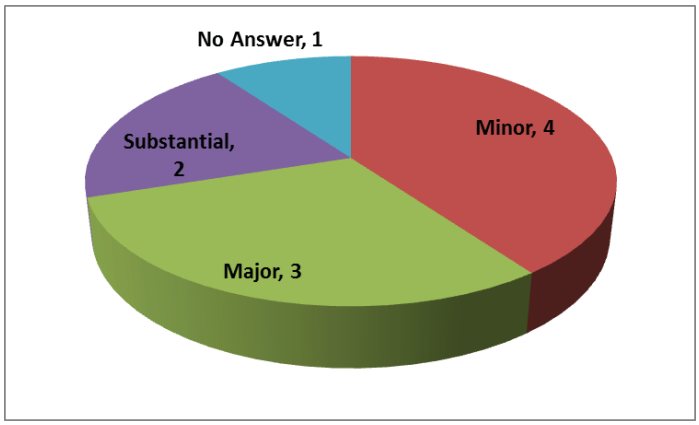
c. Hail



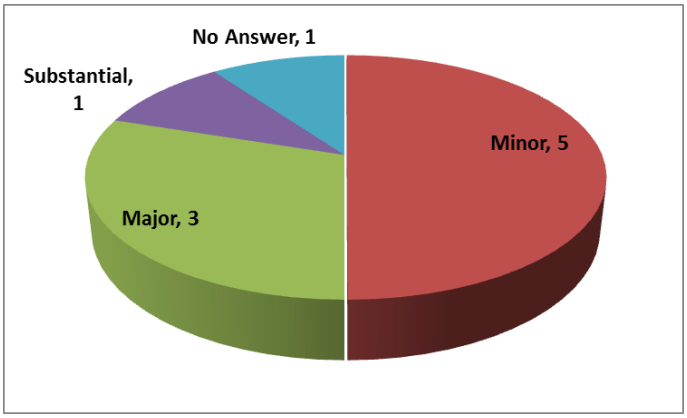
d. High Winds



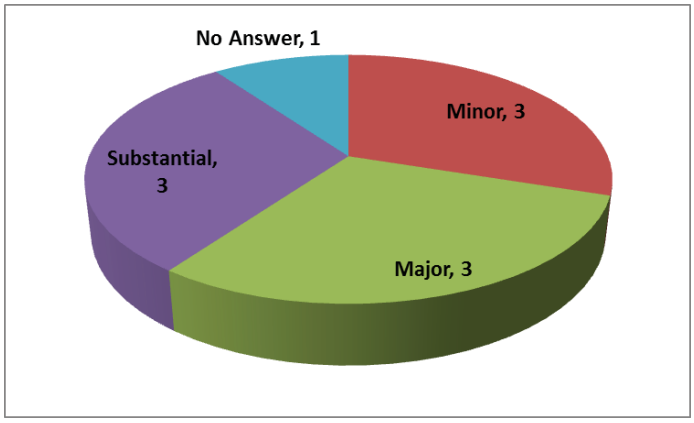
e. Winter Storms



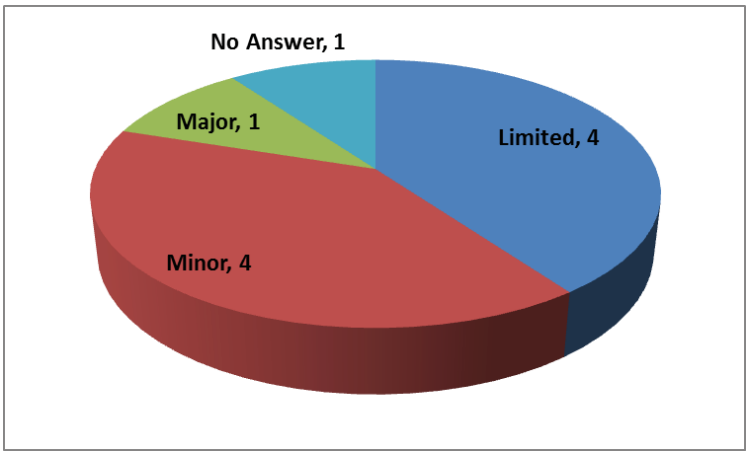
f. Extreme Heat



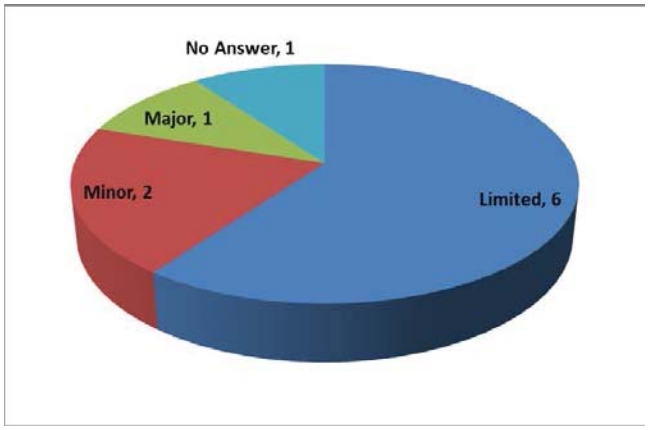
g. Drought



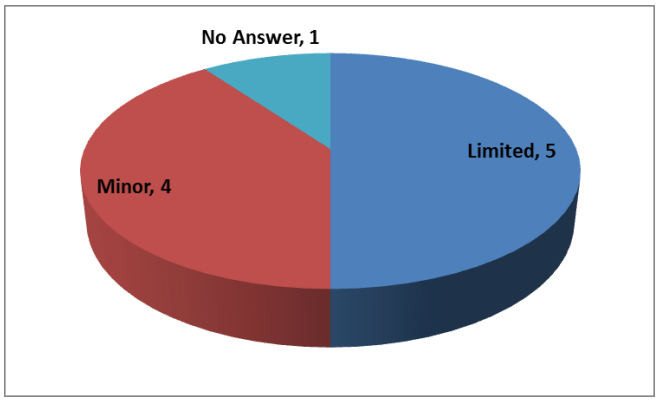
h. Flooding



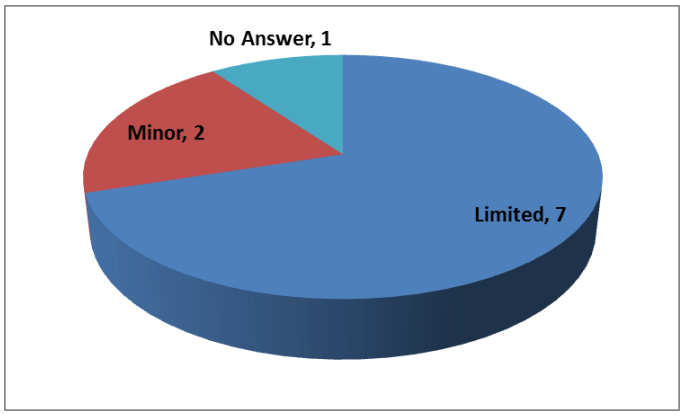
i. Dam Failure



j. Stream Bank Erosion

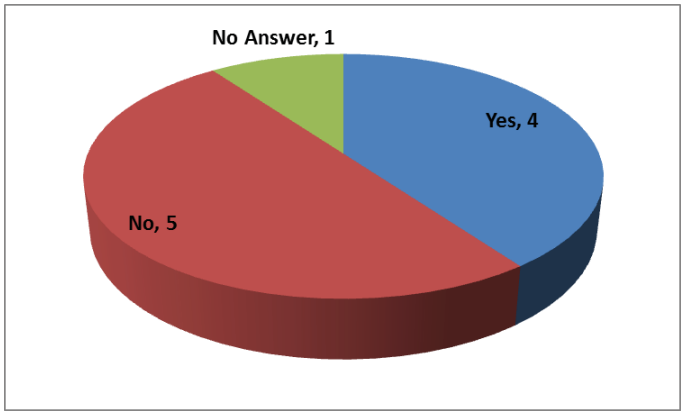


k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

- ✓ Yes (4)
- ✓ No (5)
- ✓ Skipped (1)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

- ✓ "Financial Failure"
- ✓ "Wildfire – Occasional"
- ✓ "Wildfire – Likely. High. High"
- ✓ "Concern of electrical or water outage."

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	5
Implement the Texas Individual Tornado Safe Room Rebate Program:	7
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	7
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	0
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	5
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	7
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	2
Structural Retrofitting of Existing Buildings:	1
Total Respondents:	**10**

List any other strategies you think should be included in the plan:

- ✓ “Communication after a major impact.”
- ✓ “Brush removal”
- ✓ “Wildfire awareness and homeowner wildfire mitigation training program.”

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ “Provide campaign to inform the public of where they can receive information after an impact.”

This page intentionally left blank.

City of Cockrell Hill Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Cockrell Hill participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of Cockrell Hill.

In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of Cockrell Hill It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Cockrell Hill is located at 32.4419 N and 96.5321 W. The city is completely surrounded by the city of Dallas and is located at the southwest corner of the city's limits.

Cockrell Hill was established by the pioneer Brentwood Allen Cockrell and his son, Woodrow. They established the town as a way of making a living, and ran it like a business, a tradition which continues today.



According to the United States Census Bureau (2011) the total population of City of Cockrell is approximately 4,287. The racial makeup of the city is 44.63% White, 1.67% African American, 1.04% Native American, 0.23% Asian, 0.02% Pacific Islander, 49.65% from other races, and 2.77% from two or more races. Hispanic or Latino of any race is 84.15% of the population. The city has a total area of 0.6 square miles. There are approximately 1,150 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats and RVs) units.



The City of Cockrell Hill operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

Cockrell Hills's economic development is attributed to its close proximity to surrounding cities and businesses. Being located within Dallas city limits, employment is easily accessible to its residents.

Internal Planning Process

The table below lists members of the City of Cockrell Hill Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Cockrell Hill.

Name	Title / Department or Agency	Role
Luis Carrera	Mayor	Hazard & Plan development, Hazard Identification, capabilities assessment
Bret Haney	Assistant City Manager	HMPT Coordinator, Hazard Identification, capabilities assessment
Michael Sellers	Police Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
David Pelletier	Fire Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Kevin Devine	Assistant Fire Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Stephen Barlag	Police Captain	Hazard & Plan development, Hazard Identification, capabilities assessment
Andy Baker	Public Works	Hazard & Plan development, Hazard Identification, capabilities assessment

At the time this annex was under review the membership of this team changed. Bret Haney became the City Administrator and Stephen Barlag became the Police Chief

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2012	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
08/21/2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
09/26/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to City Administration so that information about the survey and the survey itself would be made available to the public. Reviewed the Dallas County HIRA and conducted a risk assessment for Cockrell Hill in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA form
10/08/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment
02/04/2014	Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of City of Cockrell Hill Annex to the HAzMAP. Invited for public comment on the draft plan. Forwarded information to IT department, library and water billing offices to include announcements for public input and participation in the draft annex

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

In August 2012, the City of Cockrell Hill notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library.

The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of Cockrell Hill made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of one (4) survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Despite outreach efforts the city only received four responses. These respondents rated tornadoes, hail, high winds, winter storms, extreme temperatures, drought and flooding as the most likely to occur. In terms of impact the respondents of Cockrell Hill identified these same hazards as potentially having the highest impact on the community. Overall the Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. Most of the respondents indicated that they would like to see better flood management to include localized flood and soil erosion projects and expansion of the mass notification system

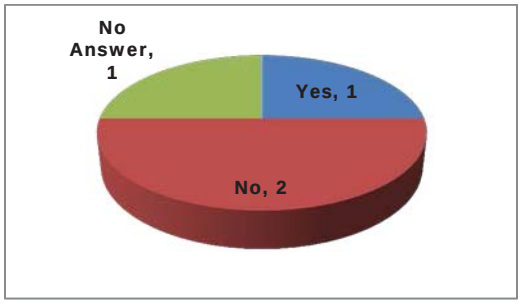
The survey provided information that will be used a benchmark for future measurements of improvement. The survey allowed the community an opportunity to expand the list of stakeholders as well as increase awareness of hazard mitigation. The city will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix CCH C-2 of this annex.

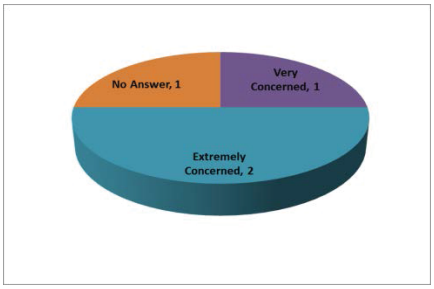
Survey Overview

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ Total number of responses submitted from the citizens of the City of Cockrell Hill – 4

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact.
   - ✓ Unlikely
   - ✓ Occasionally
   - ✓ Likely
   - ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	No Answer	Total	Average Rating
Earthquake	3	0	0	0	1	3	1.00
Tornado	1	0	0	2	1	3	3.00
Hail	0	1	0	2	1	3	3.33
High Winds	0	0	1	2	1	3	3.67
Winter Storms	0	0	2	1	1	3	3.33
Summer Heat	0	0	0	3	1	3	4.00
Drought	1	0	0	2	1	3	3.00
Flooding	0	0	1	2	1	3	3.00
Dam Failure	2	1	0	0	1	3	1.67
Stream Bank Erosion	1	1	0	1	1	3	1.33
Levee Failure	2	1	0	0	1	3	2.33

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.
   - ✓ Limited
   - ✓ Minor
   - ✓ Major
   - ✓ Substantial

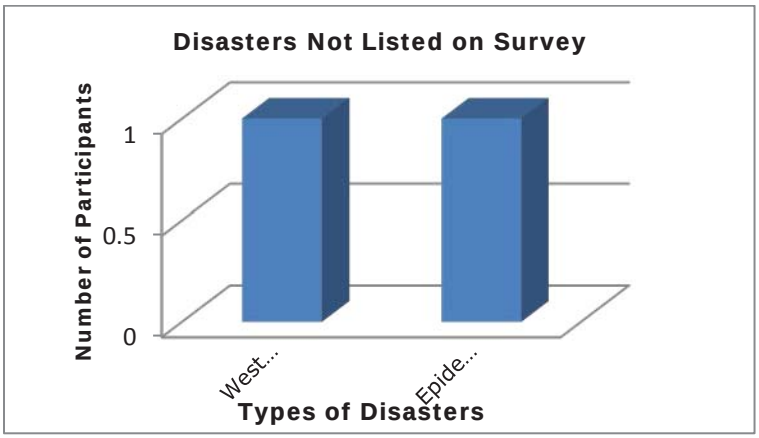
	Limited	Minor	Major	Substantial	No Answer	Total
Earthquake	2	1	0	0	1	3
Tornado	1	0	0	2	1	3
Hail	0	1	2	0	1	3
High Winds	0	0	2	1	1	3
Winter Storms	0	0	2	1	1	3
Summer Heat	0	0	1	2	1	3
Drought	1	0	1	1	1	3
Flooding	0	0	1	2	1	3
Dam Failure	2	1	0	0	1	3
Stream Bank Erosion	2	0	0	1	1	3
Levee Failure	2	1	0	0	1	3

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

Type of Hazard	Amount
Epidemic/Pandemic	1
West Nile	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	3
Improve, adopt and enforce building codes:	0
Implement the Texas Individual Tornado Safe Room Rebate Program:	0

Answer Choices	Responses
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	1
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	2
Coordinate with Dam owners to conduct inundation studies of dams:	0
Purchase and improve on the Weatherization Assistance Program (WAP):	0
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	0
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	0
Total Respondents:	4

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events.
   - ✓ "Epidemics/Pandemics"

Public Review Period

On December 23, 2013 the City of Cockrell Hill announced the availability of the City of Cockrell Hill's Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was places on the City Hall Notice Board and the Draft Base Plan and Annex were made placed in the City Administrator's main office foyer. The announcement invited the public to provide input into the draft plans. The announcement provided a 14 day public review and comment period.

The public were encouraged to submit comments prior to January 14, 2014 for consideration and possible incorporation into this draft.

The public comments were directed to the Bret Haney the City Administrator and contact person with the City of Cockrell Hill. It was indicated that any comments received after the adoption of the updated plan will be catalogued for consideration in future updates.

Invitation was made to external stakeholders via email. These included the Emergency Management Coordinator for Dallas Independent School District and the Risk Management Director for Dallas County Community College District.

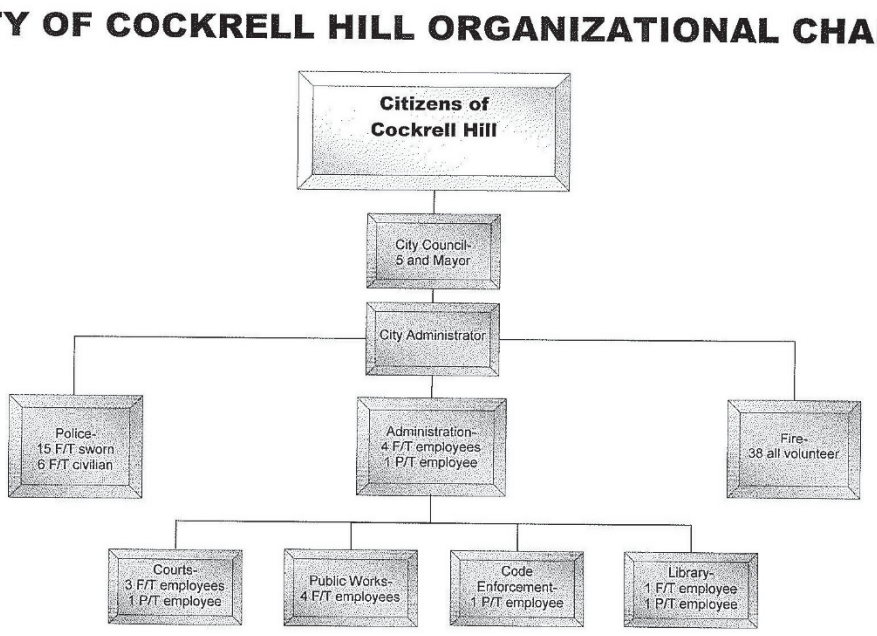
Capability Assessment:

The City of Cockrell Hill identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Cockrell Hill, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments: The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the city. The departments identified below are those that have a significant role in hazard mitigation activities in the City of Cockrell Hill. **Figure CCH1** depicts the organizational chart for the City of Cockrell Hill.

Figure CCH1: Organizational Chart for the City of Cockrell Hill



City Council: The City Council is an elected municipal body having legislative and administrative powers, such as passing ordinances and appropriating funds. In the event of emergency the council would authorize emergency spending.

Mayor: The Mayor is the chief executive officer of the municipality. The Mayor shall at all times actively ensure that the laws and ordinances of the city are properly carried out. In addition he is the Emergency Operation Manager in the event of an emergency.

City Administrator Office: Runs the day to day operations of all city departments and staff directly and through department heads, responsible for the budget and revenue projections, public relations, technical advisor to the council, oversight on all hiring, firing, discipline and suspensions. In the event of emergency he carries out the orders of the Mayor.

Cockrell Hill Fire Department (CCHFD)

Staff: The Cockrell Hill Fire Department is an all-volunteer department. The department is now staffed with Emergency Medical Technicians at the Basic and Paramedic levels They have also added an Emergency Care Attendant to the EMS Personnel.



Apparatus for the city include:

- ✓ One Command Vehicle
- ✓ One Ladder Truck
- ✓ Two Booster Trucks
- ✓ One Class A/B Engine
- ✓ Two E-One Engines
- ✓ One Support Truck

The department administration follows a traditional military organization. It is led by the Fire Chief, who is elected every two years, Assistant Fire Chief, Battalion Chief, Captain, (3) Lieutenants, and Treasurer, all of whom are elected annually. Within the organization, are various committees; each with an assigned mission. These are S.O.P. and Bylaws Committee, Equipment Committee, Website Committee, Public Relations and Fundraising Committee, and our new Fire Prevention and Safety Committee. The Cockrell Hill Fire Department is also part of the Dallas County Mutual Aid Agreement.

Public Works: Plan, design and maintain public facilities and infrastructure; included water/sewer, storm water, flooding, landscaping and road and alley maintenance. In the event of an emergency public work would be responsible for marshaling resources, debris removal and other duties as assigned.

Cockrell Hill Police Department (CCHPD): Empower by the State of Texas to enforce the laws, protect property and limit civil disorder.

Code Enforcement / Building Inspector: Evaluates substandard building and structures that pose significant threats to life, health and safety for the occupants as well as the public.

Summary of Capabilities

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	No, No, No
Capital Improvements Plan	Yes	No, No, Yes
Economic Development Plan	Yes	No, No, No
Local Emergency Operations Plan	Yes	Yes, Yes, Yes
Continuity of Operations Plan	No	N/A
Transportation Plan	Yes	No, No, Yes
Storm water Management Plan	Yes	Yes, Yes, Yes
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	
Building Code, Permitting, and Inspections	**Yes/No**	**Are codes adequately enforced**
Building Code	Yes	Version/Year: 2012 International Building Codes Yes
Building Code Effectiveness Grading Schedule (BGEGS) Score	No	Score: N/A
Fire Department ISO rating	No	Rating:
Site Plan review requirements		
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Yes; Yes
Subdivision ordinance	Yes	
Floodplain ordinance	Yes	
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	
Flood insurance rate maps	Yes	
Acquisition of land for open space and public recreation uses	No	
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Administrative and Technical

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Six members (only meet when necessary), Yes
Mitigation Planning Committee	Yes	Staff meets when needed, Yes
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Public works performs tasks, Yes
Mutual aid agreements	Yes	Countywide participation, Yes
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	Yes, Yes, Yes
Floodplain Administrator	Yes	City Administrator
Emergency Manager	Yes/FT	Yes, Yes, Yes
Community Planner	Yes/FT	Yes, Yes, Yes
Civil Engineer	Yes/PT	Yes, Yes, Yes
GIS Coordinator	No	
Other	NA	
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Outdoor Siren, Reserve 911 Yes
Hazard data and information	No	
Grant writing	Yes	Staff; Yes
HAZUS analysis	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase staff training and expand existing warning systems		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Yes – Storm water improvements, street repair, Yes
Authority to levy taxes for specific purposes	Yes	Yes – Street improvements, Yes
Fees for water, sewer, gas or electric services	Yes	Yes – Capital improvements, Yes
Impact fees for new development	Yes	No, Yes
Storm water utility fee	No	
Incur debt through general obligation bonds and/or special tax bonds	Yes	Yes – infrastructure water/sewage, Yes
Incur debt through private activities	No	
Community Development Block Grant	Yes	Yes – Infrastructure water/sewage, Yes
Other federal funding programs	Yes	Yes – Air conditioning in public buildings, Yes
State funding programs	Yes	Yes – Public safety equipment to assist in quick response
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Utilize every available funding source to reduce hazards within the community Increase funding and hire more staff		

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Yes flyers in water bills on responsible water use, safety Yes
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Reach out to groups focused on preparedness and expand public education programs Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		✓
Expand Comprehensive Plan to include hazards		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?		✓
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?		✓
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?		✓
2. Do environmental policies maintain and restore protective ecosystems?		✓
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?		✓

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		✓
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	

Subdivision Regulations	Yes	No
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?		✓
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?		✓

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to the Texas Water Development Board there are no NFIP policies in the city of Cockrell Hill
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	There have been no claims or payments reported in the community
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	According to the City of Cockrell HazMAP Team there are approximately 9 structures that are in the flood zone.
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	Yes; City Administrator
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Review of site plan to help ensure all regulations and requirements are met. Copy of engineer design required before permit is issued.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	N/A
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes; the city is compliant and in good standing
Are there any outstanding compliance issues (i.e., current violations)?		The City is complaint and has no outstanding issues
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		The community has not had any CAV
Is a CAV or CAC scheduled or needed?		None
Regulation		

NFIP Topic	Source of Information	Comments
When did the community enter the NFIP?	Community Status Book	12/07/73
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	They exceed the FEMA regulations.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Site plan approval as well as City Council approval required prior to permitting any new structure.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	N/A
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Cockrell Hill HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Cockrell Hill are as follows:

High Risk (over 65% on HIRA)	Tornado High Winds
Moderate Risk (41%- 65% on HIRA)	Hail Lightning Winter Storms Extreme Heat Flooding
Low Risk (12 %-40% on HIRA)	Drought Earthquake Wildfire
No Risk (Below 12% on HIRA)	Stream Bank Erosion Dam/Levee Failure

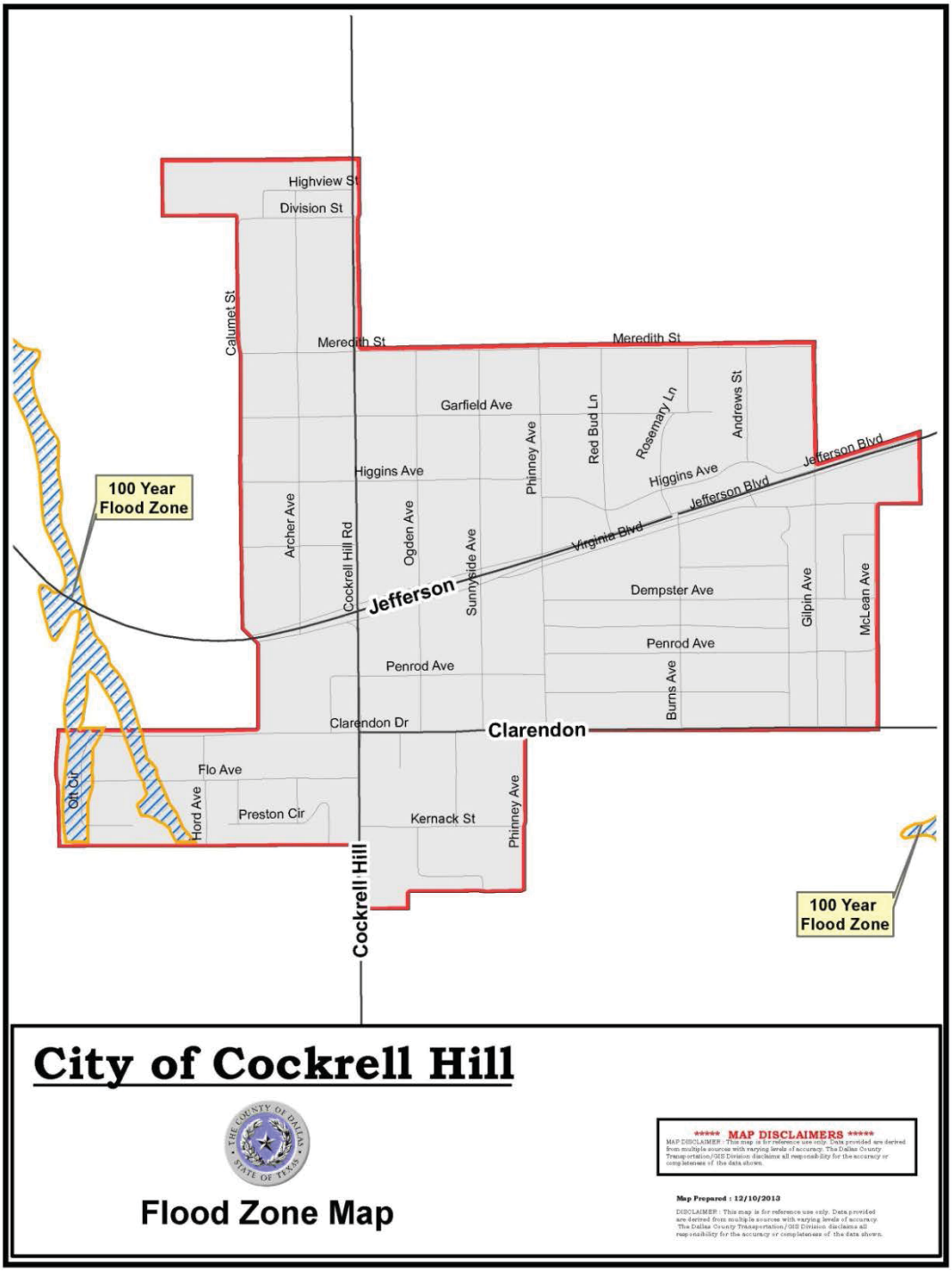
Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk as there is no property or people that have been identified as being at risk from this hazard in the jurisdiction.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Cockrell Hill. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Cockrell Hill**.**

A. Flooding: Most of the flooding that has been experienced in the City of Cockrell Hill is as a result of large rain events and these events usually the city streets. Areas prone to street flooding include the 600-900 block of Phinney and 600-900 block of Sunnyside. The areas identified within the 100 year flood zone are in the Southwest portion of the City and about 19 private properties have been identified as being potentially in the 100 year flood zone. While no flooding has occurred in these properties it is noted that this properties could be affected. Map CCH.1 depicts the flood zone map for the City of Cockrell Hill

Map CCH.1: City of Cockrell Hill Flood Zone



National Flood Insurance Program (NFIP): The City Cockrell Hill does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis. The City Administrator is listed as the Floodplain Administrator.

The City does not have any structures that have been repetitively flooded over the years, and thus repetitive flooding is not an issue for the city. See Table 5.8.1

Using this plan the City of Cockerel Hill will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding

The table below provides a summary of the land use for the City of Cockrell Hill. The city's main administration building is located on 4125 West Clarendon Drive, Cockrell Hill, Texas 75211 and houses most to the city's administrative offices, including City Hall, Police Station, Fire Station, and Administrator's Office.

Figure CCH.1: Land Use Summary for the City of Cockrell Hill - 2010

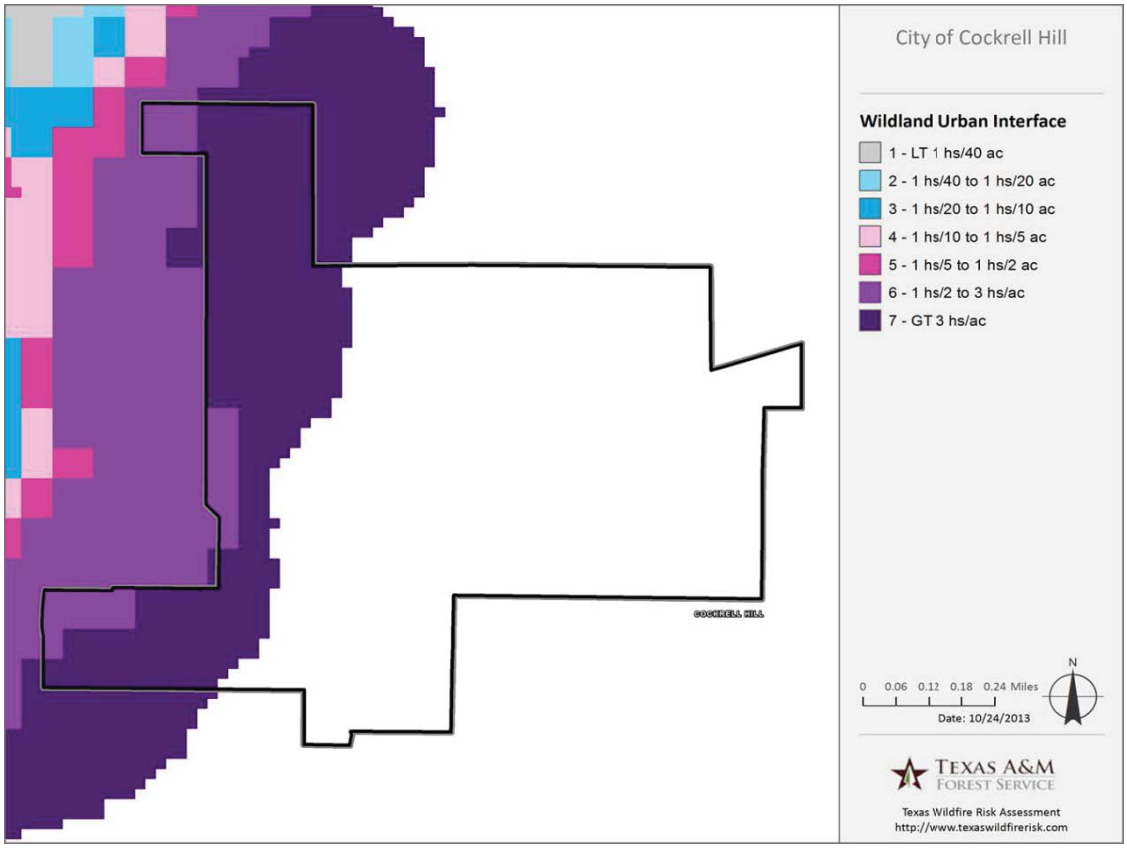
Total Acres	373
Single Family	204
Multi-Family	7
Other Residential	0
Commercial and Industrial	36
Institutional/Semi Public	6
Infrastructure	90
Dedicated Areas (Parks, Flood Plain)	0
Water	1
Under Construction	0
Vacant	29 (7.7%)

Source: North Central Texas Council of Governments

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated that 1,249 people or 25 percent of the population for the City of Cockrell Hill live within the WUI. Most of the Wildland Urban Interface (WUI) is concentrated in the Western city of the City. The WUI Map below reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. **Map CCH.2** depicts the WUI of the City of Cockrell Hill.

Map CCH.2: Wildfire Urban Interface for the City of Cockrell Hill



A vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service revealed that the Wildfire Threat for the City of Cockrell Hill ranges from Non-Burnable to Low.

A Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

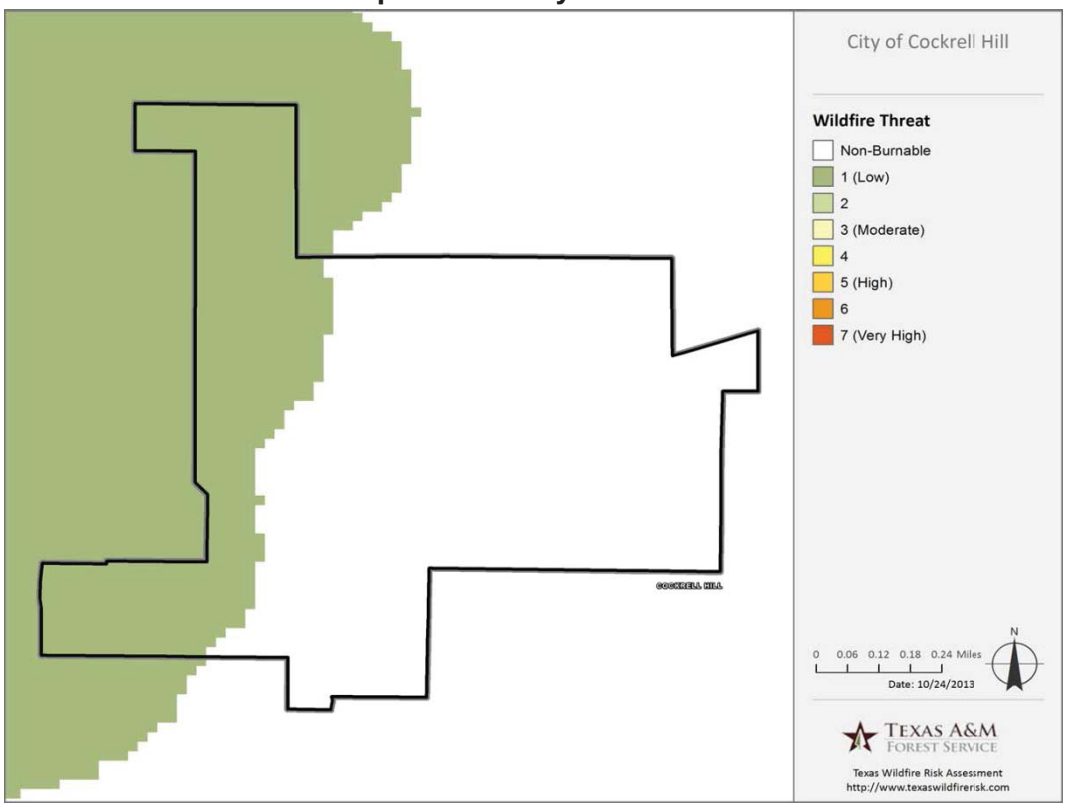
The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment.

While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map CCH.3: Wildfire Threat Map for the City of Cockrell Hill



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Cockrell Hill as there are no dams**.** None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults within Cockrell Hill and no historical data of earthquakes in the City of Cockrell Hill exists. However due to recent increase in earthquakes in the county and the lack for data, a data deficiency has been noted for this hazard. This hazard will need to be researched and studied in order to obtain data to address mitigation strategies and activities.

E. Stream Bank Erosion: The City of Cockrell Hill doesn't have any major creeks or streams. Stream bank erosion is not considered a risk in the City of Cockrell Hill. However, its risk potential will be re-evaluated as needed.

Vulnerability Assessment

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Cockrell Hill as well as the vulnerability of these properties to flooding and wildfire

Essential / Critical Facilities	Locations (GIS Coordinates)	Count
Police Stations	32.735488, -96.888253	1
Fire Station	32.735488, -96.888253	1
Police Stations	32.735488, -96.888253	1
City Hall	32.735488, -96.888253	1

Structure / Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	$ 8,100,000	100	Within
Commercial	-	N/A	N/A
Industrial	-	N/A	N/A
Government / Public	$ 100,000	500	Within

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$23,833,852	Outside	25% of population live within the WUI	Low
Commercial	-	N/A	N/A	N/A
Industrial	-	N/A	N/A	N/A
Government / Public	-	N/A	N/A	N/A

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Cockrell Hill. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Cockrell Hill as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.

- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events. All emergency facilities are exposed to this hazard.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events. All critical facilities are exposed to this hazard.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events. All critical infrastructures are exposed to this hazard.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Cockrell Hill. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Cockrell Hill.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Cockrell Hill.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Cockrell Hill.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Cockrell Hill due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Cockrell Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Cockrell Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Cockrell Hill are exposed.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Cockrell Hill is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Cockrell Hill. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Cockrell Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Cockrell Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Cockrell Hill are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Cockrell Hill have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Cockrell Hill. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Cockrell Hill are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Cockrell Hill are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Cockrell Hill are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Cockrell Hill. All the population of City of Cockrell Hill is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Cockrell Hill. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Cockrell Hill are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Cockrell Hill are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Cockrell Hill are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Cockrell Hill. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Cockrell Hill indicates that there are no expected crop losses from this event. All improved property is exposed to this hazard.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Cockrell Hill are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Cockrell Hill are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Cockrell Hill are exposed to this hazard.

Wildfire	
Population	Based on geographical data 25 % of the population in City of Cockrell Hill who live in the WUI areas and are exposed to this hazard
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved property within the WUI is exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events. No emergency facility is exposed to this hazard.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events. No critical facility is exposed to this hazard.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events. NO critical infrastructure exposed to this hazard

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the City of Cockrell Hill area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event.

Note: The period under review is from January 1, 2008 through November 30, 2013.

Mitigation Strategies:

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Continue to build capacity for hazard mitigation in the City of Cockrell Hill

- ✓ ***Objective 4-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 4-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 4*-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan.

The new actions items are as follows:

City of Cockrell Hill Action Item	Implement the Texas Safe Room in the City of Cockrell Hill to provide residents with Safe Rooms
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	3-A, 3-B, 3-C, 3-D, 4-A, 4-B,
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, donations
Potential Matching Sources	Business donations
Lead Department	City of Cockrell Hill City Administrators Office & Department of Building Inspection
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the North Central Texas Council of Governments

City of Cockrell Hill	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning,
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Cockrell Hill City Administrators Office
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Cockrell Hill	Improve the Stomwater Drainage System Capacity by installing re-routing and/or increasing the capacity of the City's Storm drainage system
Hazard(s) Addressed	Flooding
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	High
Estimated Cost	$500,00
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Cockrell Hill Administrators Office, Engineering and Public Works Departments
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	

City of Cockrell Hill Action Item	Implement a Weatherization Assistance Program (WAP) in conjunction with Dallas County
Objective(s) Addressed	3-A, 3-B, 3-C, 3-D, 4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	Implement as funding is available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

City of Cockrell Hill Action Item	In conjunction with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	1-A, 1-B, 4-A, 4-B
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	City Administrators Office in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

City of Cockrell Hill Action Item	Implement a Fuels Management Program - A fuel management program will reduce hazardous vegetative fuels on public lands, near infrastructure or on private lands by working with land owners
Objective(s) Addressed	4-B
Hazard(s) Addressed	Wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	$50,000
Potential Funding Sources	General fund expenditures, private donations, federal and state grant funds
Lead Agency/Department Responsible	Fire and Public Works Departments
Implementation Schedule	1 year upon approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is much lower compared to the benefits of the program
Discussion	A targeted fuel campaign lowers the WUI index and mitigates the risk of wildfire

City of Cockrell Hill Action Item	Implement water-saving strategies and equipment such as low flow fixtures. These will include improving water supply and delivery that will reduce mitigate against drought and converse water
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$500,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

City of Cockrell Hill Action Item	Install lightning protection equipment in critical facilities and infrastructure to prevent lighting damage
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	Medium
Estimated Cost	$50,000
Potential Funding Sources	City Budget, State and Federal funding, private donations
Lead Agency/Department Responsible	Public Works
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is low compared to the purchase of equipment
Discussion	Installing lightning protection devices such as lightning rods and grounding as well as surge protection on all city equipment and infrastructure is one of the best ways to protect against lightning

City of Cockrell Hill	Purchase and distribute hail and wind resistant window coverings to homeowners
Hazard(s) Addressed	Hail, Tornado, high winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Low
Estimated Cost	Unknown currently, based on current population and vendor
Potential Funding Sources	HMGP
Potential Matching Sources	General Fund, in-kind
Lead Department	Emergency Management
Implementation Schedule	12 Months
Effect on Old Buildings	Potentially can reduce damage caused by severe weather
Effect on New Buildings	Potentially can reduce damage caused by severe weather
Cost Effectiveness	Low cost and will provide great benefit to the community
Discussion	The City will purchase window coverings to protect residential and business windows from damage from hail and wind damage.

Plan Maintenance

The City Administrator Office will be responsible for ensuring that this plan is monitored on an on-going basis. The City Administrator or his/her designee will be the point of contact for leading, the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Cockrell Hill	City Administrator	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The City Administrator will call the Cockrell Hill Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The City Administrator will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Cockrell Hill City Council. Emergency Operations Center will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Cockrell Hill or its communities, legal changes, and other events may trigger a meeting of the Cockrell Hill Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Cockrell Hill is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Cockrell Hill will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Cockrell Hill	City Council	Budget Meetings	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Administrator	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting and Meeting Materials Documentation

c. Survey Results

Appendix CCH A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: October 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4.00	1	2	2	5	80%
Hail	4	4	3	3.00	1	3	1	5	60%
Lightning	4	4	2	2.00	1	2	1	4	50%
Winter Storms	2	4	4	2.00	2	1	1	4	50%
Tornado	4	4	4	4.00	2	3	1	6	66%
Flooding	3	3	4	4.00	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	4	4.00	4	1	1	6	66%
Extreme Temperatures/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3.00	2	2	2	6	50%
Wildfire	1	1	2	2.00	1	3	3	7	28.5%
Utility Failure	4	4	3	3.00	4	1	1	6	50%
Energy/Fuel Shortage	1	1	3	3.00	4	2	1	7	42%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Urban Fire	4	4	2	2.00	2	3	1	6	33%
Earthquake	1	1	3	3.00	3	4	3	10	30%
Levee/Dam Failure	1	2	1	.500	1	1	3	5	10%
Drought	4	3	2	2.66	2	4	4	10	26%
Aircraft Accident	1	1	2	2.00	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.500	1	1	3	5	10%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4.00	4	4	4	12	33%
Civil Disorder	2	2	3	3.00	2	2	2	6	33%

NB: This City of Cockrell Hill HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

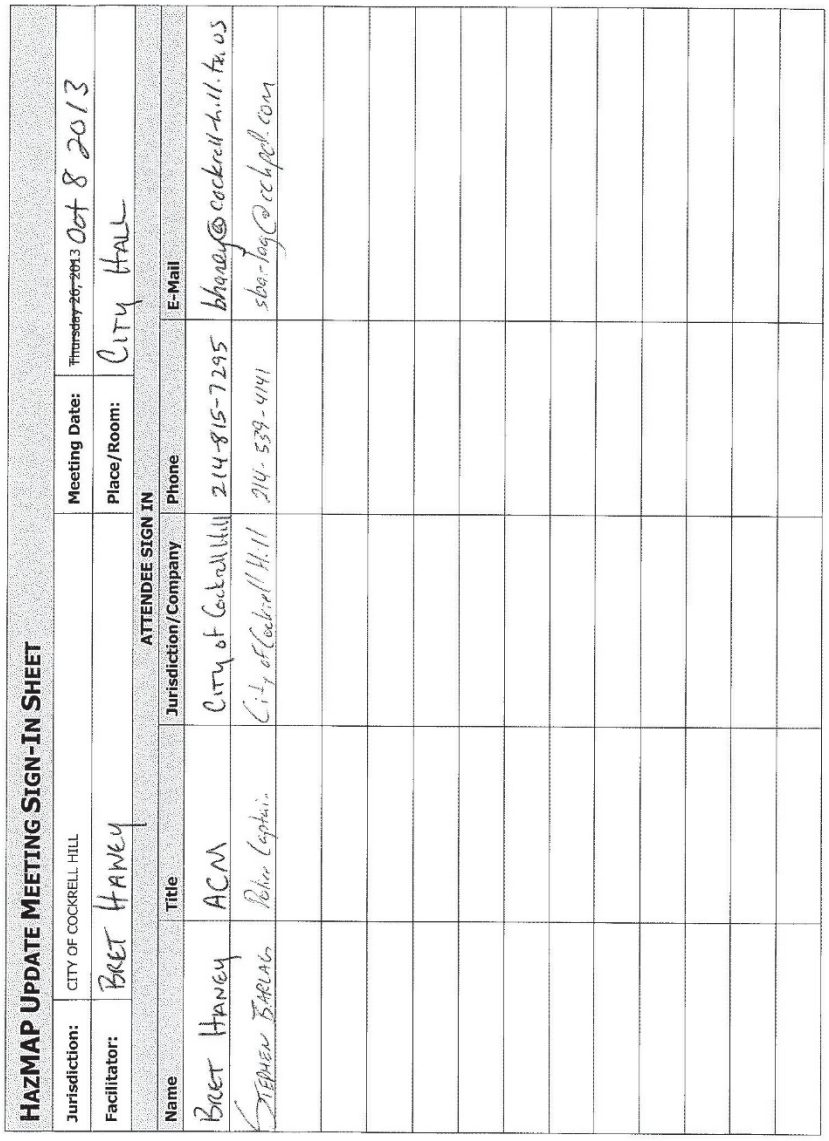
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix CCH B-1: Meeting Documentation and Outreach Materials



HAZMAP UPDATE MEETING SIGN-IN SHEET

Jurisdiction:	CITY OF COCKRELL HILL	**Meeting Date:**	~~Thursday 26, 2013~~ Oct 8 2013
Facilitator:	BRET HANEY	**Place/Room:**	CITY HALL

ATTENDEE SIGN IN

Name	Title	Jurisdiction/Company	Phone	E-Mail
BRET HANEY	ACM	City of Cockrell Hill	214-815-7295	bhaney@cockrellhill.tx.us
STEPHEN BARLOW	Police Captain	City of Cockrell Hill	214-539-4141	sbarlow@ccbpd.com

From: Bret Haney
To: David Garcia
Cc: Michael Gaciri
Subject: City of Cockrell Hill Annex (HazMap) Hazard Mitigation Action Plan
Date: Tuesday, May 12, 2015 2:49:19 PM
Attachments: 2015_Cockrell_Hill_Annex_FEMARevised.docx05112015.docx

Mr. Garcia,

I would like to express the opportunity to review our draft copy of the City of Cockrell Hill Annex to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. Please review the attached document and if necessary provide additional feedback.

Sincerely,

Bret Haney
City Administrator
City of Cockrell Hill

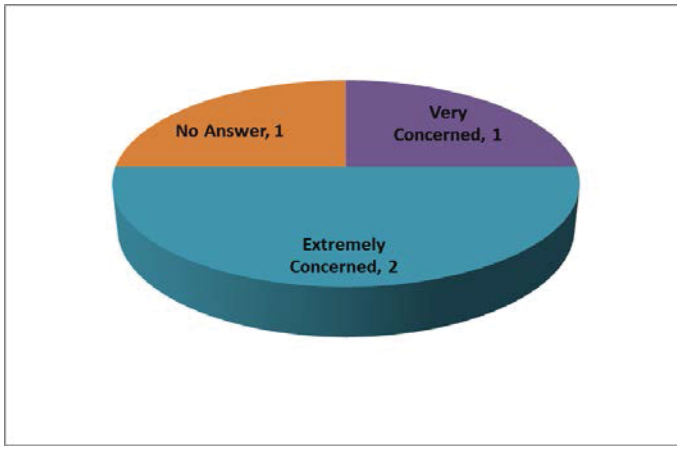
Appendix CCH C-2: City of Cockrell Hill Survey Reponses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Cockrell Hill (4 responses)

2. Have you ever experienced or been impacted by a disaster?
   - ✓ Yes (1)
   - ✓ No (2)
   - ✓ No Answer (1)

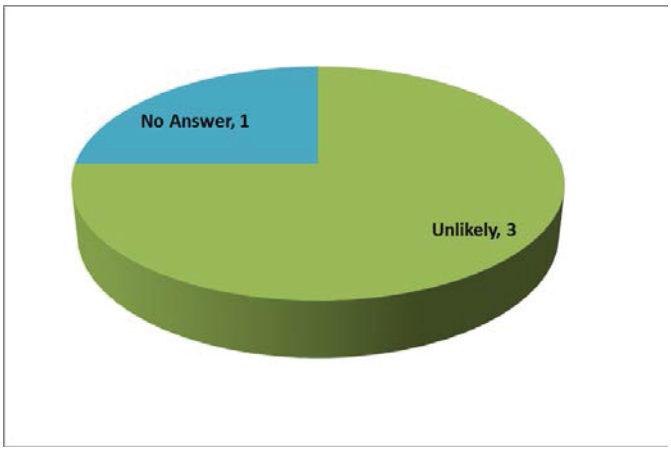
   If "Yes", please indicate what hazard you have endured and where it occurred?
   - ✓ "Severe straight line winds that knocked out trees and power lines. Impacted roads and electricity."

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

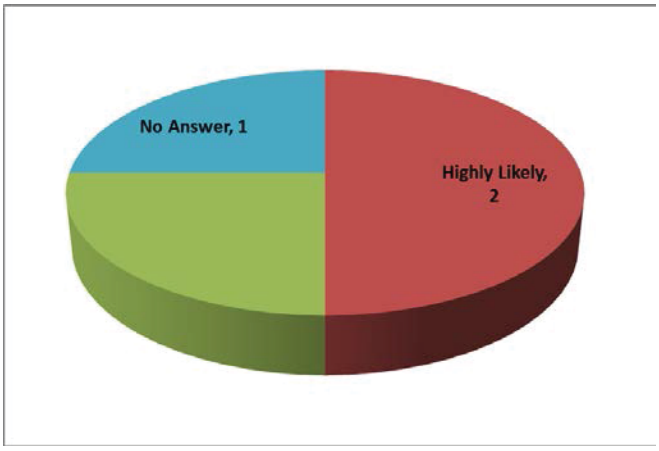


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact.

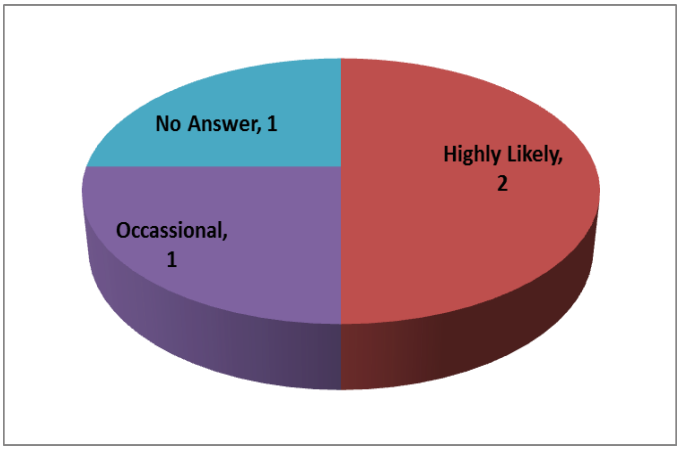
Earthquake



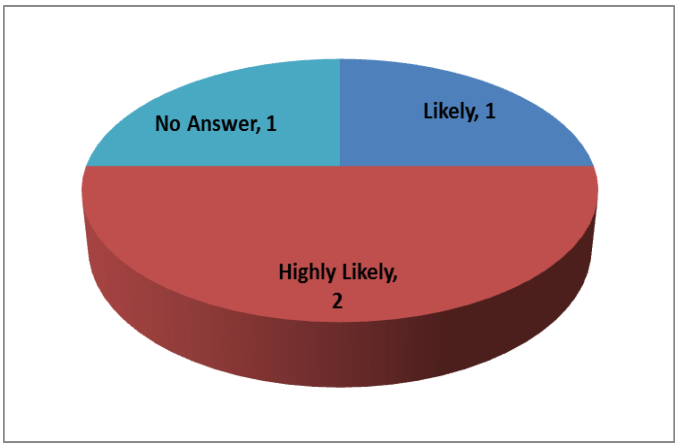
Tornado



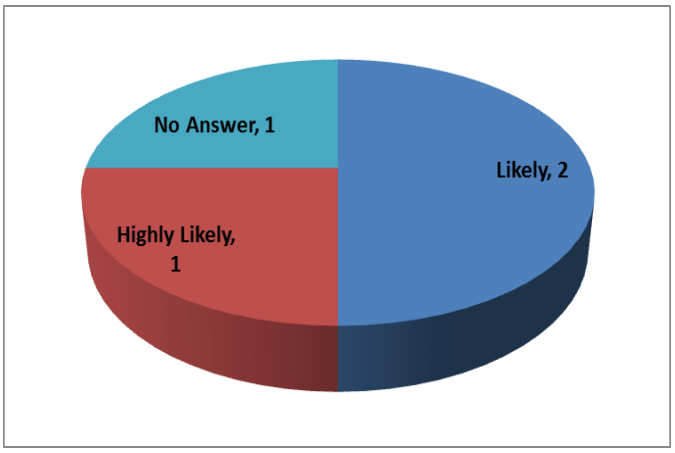
Hail



High Winds



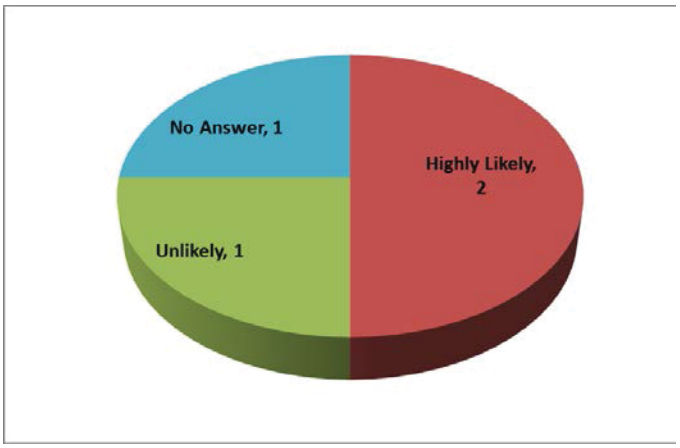
Winter Storms



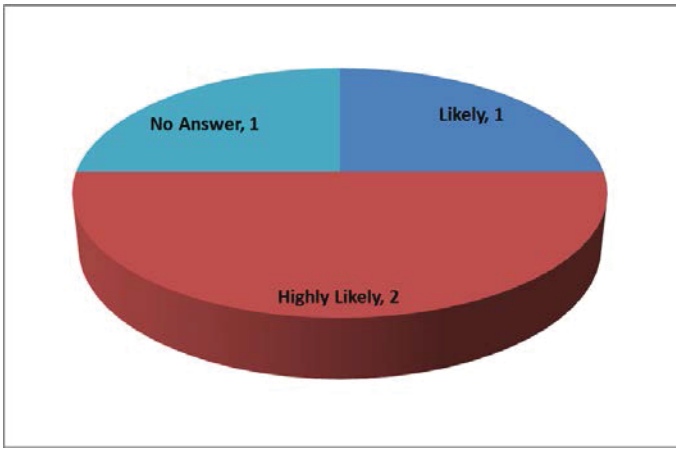
Extreme Heat



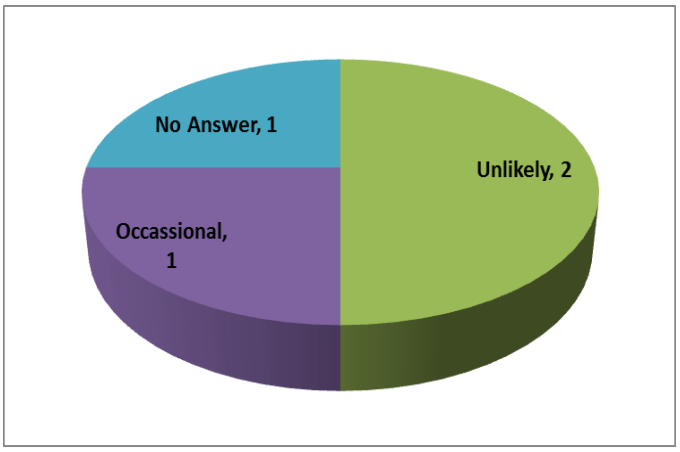
Drought



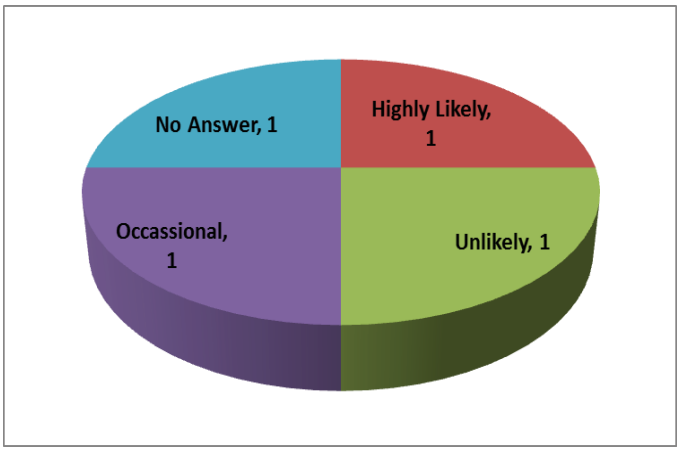
Flooding



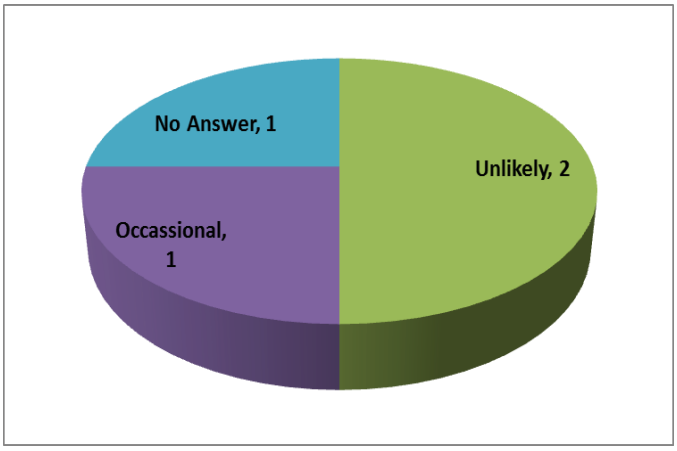
Dam Failure



Stream Bank Erosion

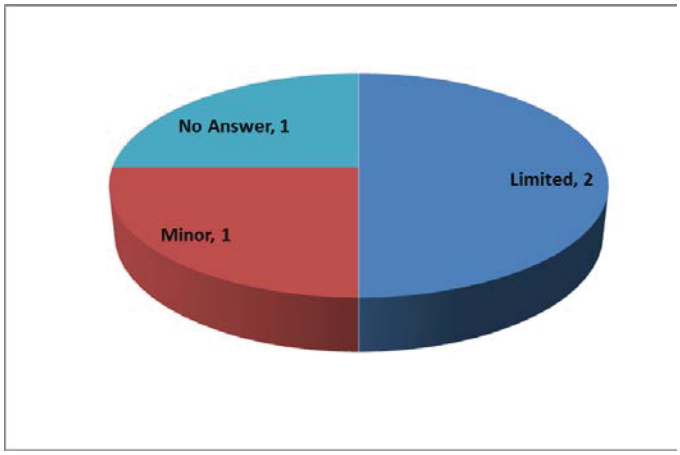


Levee Failure

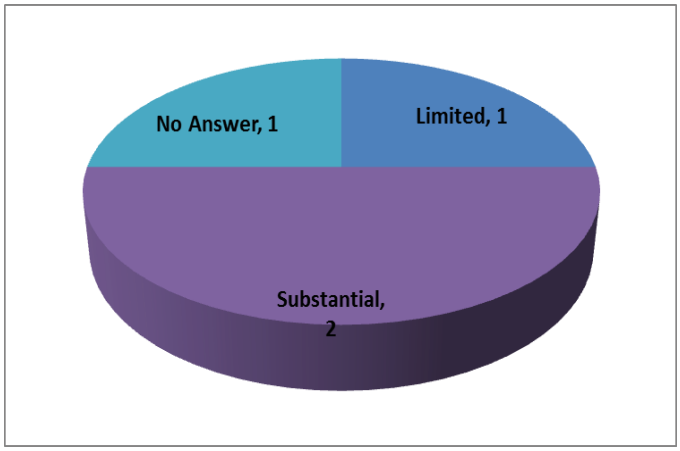


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

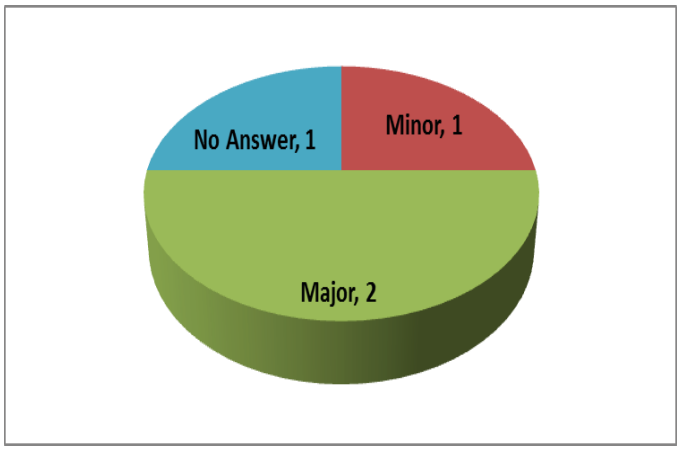
Earthquakes



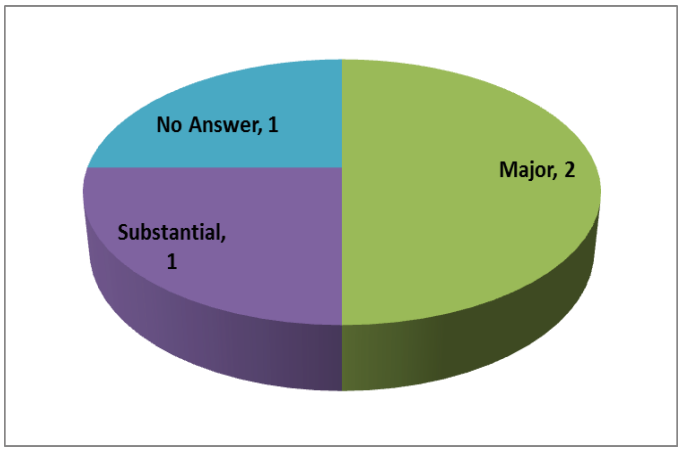
Tornado



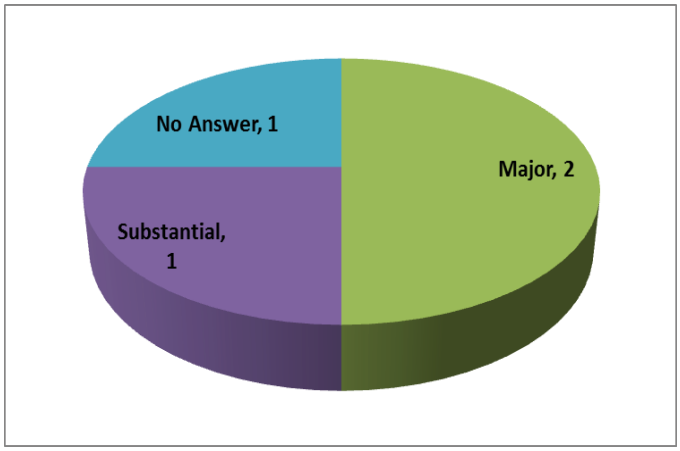
Hail



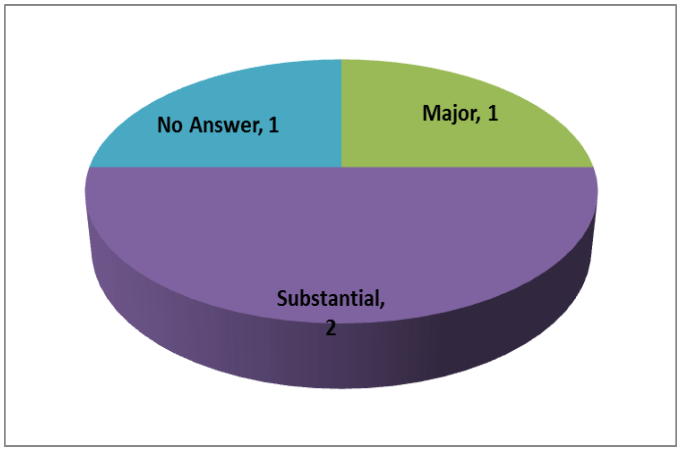
High Winds



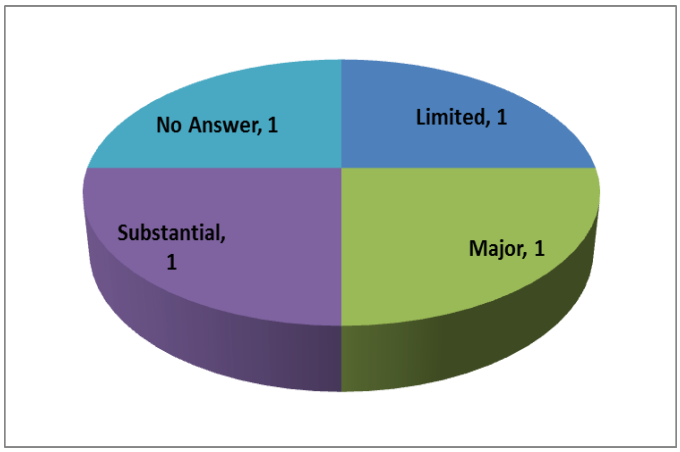
Winter Storms



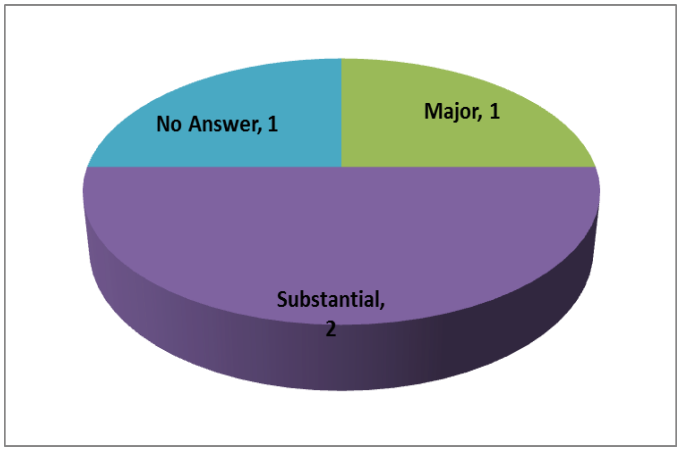
Extreme Heat



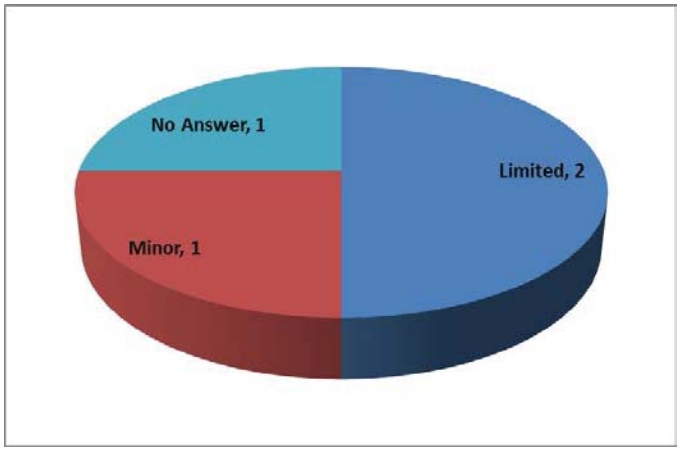
Drought



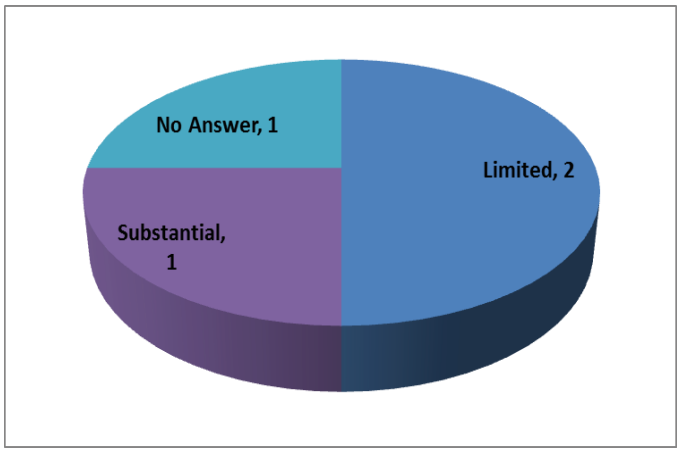
Flooding



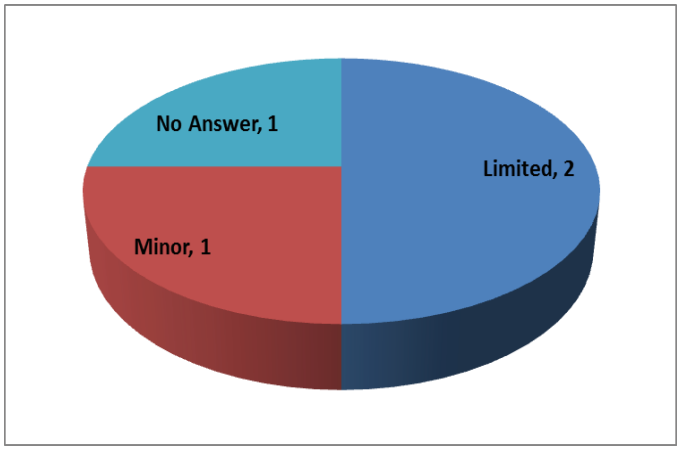
Dam Failure



Stream Bank Erosion



Levee Failure



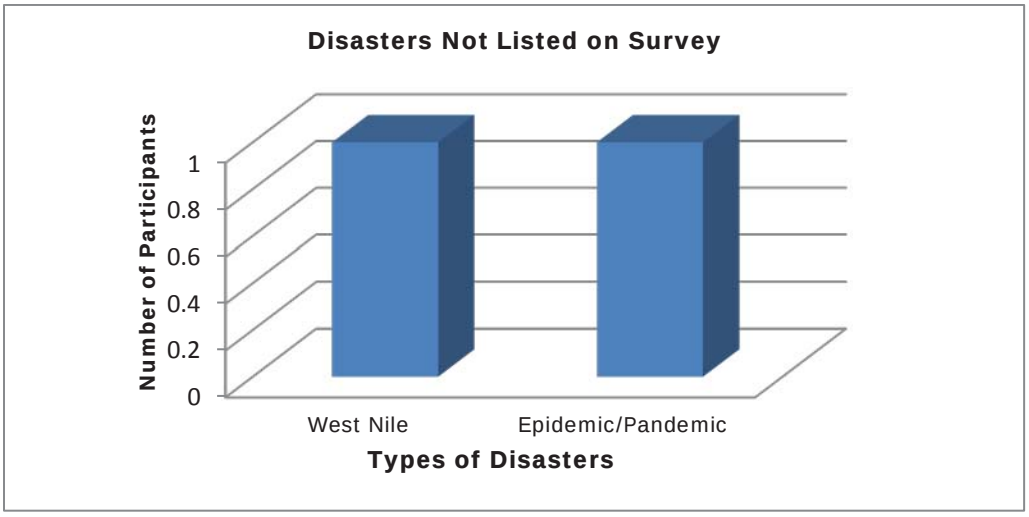
6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ Any type of health epidemics (flu, mosquitos, viral infections, etc.); Likely, High Impact and High extent.

Type of Hazard	Amount
Epidemic/Pandemic	1
West Nile	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	3
Improve, adopt and enforce building codes:	0
Implement the Texas Individual Tornado Safe Room Rebate Program:	0
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	1
Participate in the National Flood Insurance Program (NFIP) and Community Rating	1

System (CRS) program:	
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	2
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	2
Purchase and improve on the Weatherization Assistance Program (WAP):	0
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	0
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	0
Total Respondents:	4

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events.

    - ✓ “Include health epidemics”

City of Coppell Annex

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Coppell has a FEMA approved hazard mitigation plan that was adopted in 2009. The City was one of the 11 jurisdictions that participated in the initial Dallas County Hazard Mitigation Action Plan.

This annex serves as a complete hazard mitigation planning tool for the City of Coppell and is an addition to the countywide hazards and strategies discussed in the previous section. It contains updated capability assessment information, specific vulnerability assessments, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Coppell is located at latitude 32.4419 and longitude -96.5321. It sits at the northwest corner of Dallas County. It is south of Lewisville, West of Carrollton, East of Grapevine, and North of Irving. Hwy 121 bisects through the city's center.

Coppell was first settled in the 1840s by German and French immigrants. Coppell's original name was "Gibbs Stations" after former lieutenant governor Barnett Gibbs. It later received the name "Coppell" in 1892 for George Coppell, a wealthy financier. In 1955 Coppell was incorporated.

According to the North Central Texas Council of Governments (NCTCOG), the population of Coppell is estimated to be about 38,659. The city has a total area of 14.7 square miles of which 14.4 square miles is land and 0.31 square miles is water. There are approximately 12,211 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats and RVs) units.



The City of Coppell operates under a system of local government called Council - Manager, wherein all powers of the city are vested in the City Council.

The City of Coppell has established a pro-business attitude to encourage the development of high-quality businesses and corporate relocation projects. Coppell is committed to helping businesses in the city thrive. Coppell's central location, superior school system, excellent quality of life and commitment to the business community explain why over 500 businesses call Coppell home. Just driving through the community will show you the pride that the citizens and the businesses alike take in the City of Coppell. This page has been designed

to provide a variety of information to help everyone from those looking to open a business in Coppell to those trying to find an existing business in Coppell.

Internal Planning Process:

Table CPL.1 below lists members of the City of Coppell Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Coppell.

Table CPL.1: Coppell Hazard Mitigation Planning Team

Name	Title/Department or Agency	Role
Brad Simpkins	Fire Captain / Emergency Management Coordinator	HMPT Coordinator, Hazard Identification, capabilities assessment
Debbie Cravey	Administrative Asst. to City Manager	Hazard & Plan development, Hazard Identification, capabilities assessment
Jennifer Miller	Director of Finance	Hazard & Plan development, Hazard Identification, capabilities assessment
Tim Oates	Deputy Fire Chief / Fire Marshal	Hazard & Plan development, Hazard Identification, capabilities assessment
Chris Aulbaugh	Deputy Police Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Lloyd Mauch	Parks Supervisor	Hazard & Plan development, Hazard Identification, capabilities assessment
Jim Cook	Deputy Police Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Doug Kratz	Asst. Director of Recreation	Hazard & Plan development, Hazard Identification, capabilities assessment
Mike Garza	Assistant Director of Engineering	Hazard & Plan development, Hazard Identification, capabilities assessment, Hazard Identification, City Critical Infrastructure

The Hazard Mitigation Planning Team (HMPT) met during the planning process to determine needs and organize data collection. Source used for the planning process are listed in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

The meeting summary is provided below.

Meeting Dates	Summary of Discussions
10/1/2013	Formally identify planning team members; Identify overall deliverable and deadlines for the Dallas County HazMAP update; Review Dallas County HIRA; Review Capability Assessment Worksheet 4.1 and determine method for follow-up/completion; Review Coppell Goals and Action Items from the approved 2008 HazMAP and revise, if necessary.

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Coppell notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

External stakeholders invited via email to participate in the planning and review process of the City of Coppell HazMAP annex included the Emergency Management Coordinators for the Dallas-Fort-Worth International Airport and the City of Grapevine.

Survey Results

The City of Coppell made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of two (2) survey responses were collected. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the town to identify any potential actions or problem areas.

The respondents cited tornados, hail, high winds and extreme heat as the most likely to occur and impact the community. Programs that the respondents felt could be implemented in their community included improved land use programs, Texas Individual Tornado Safe Room Rebate Program, public education and outreach, water conservation strategies and the weatherization assistance programs.

The Mitigation Planning Team determined that all the hazards and mitigation strategies identified by the respondents were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the

community improve messaging and outreach efforts regarding realistic risk of these hazards.

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Coppell (2)

2. Have you ever experienced or been impacted by a disaster?
   - ☒ Yes (1)
   - ☒ No (1)

If "Yes", please indicate what hazard you have endured and where it occurred.

- ✓ "Hail Storm, April 2012"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned
☐ 1	☒ **2**	☐ 3	☐ 4	☐ 5

4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Earthquake Unlikely (2)	☐Earthquake Occasional	☐Earthquake Likely	☐Earthquake Highly Likely
Tornado	☐Tornado Unlikely	☐Tornado Occasional	☒Tornado Likely (1)	☒Tornado Highly Likely(1)
Hail	☐Hail Unlikely	☐Hail Occasional	☒Hail Likely (1)	☒Hail Highly Likely (1)
High Winds	☐High Winds Unlikely	☐High Winds Occasional	☒High Winds Likely (1)	☒High Winds Highly Likely (1)
Winter Storms	☐Winter Storms Unlikely	☐Winter Storms Occasional	☒Winter Storms Likely (1)	☐Winter Storms Highly Likely
Extreme Heat	☐Extreme Heat Unlikely	☐Extreme Heat Occasional	☒Extreme Heat Likely (1)	☒Extreme Heat Highly Likely (1)

Drought	☐Drought Unlikely	☐Drought Occasional	☒Drought Likely (2)	☐ Drought Highly Likely
Flooding	☐Flooding Unlikely	☒Flooding Occasional (1)	☒ Flooding Likely (1)	☐ Flooding Highly Likely
Dam Failure	☒Dam Failure Unlikely (1)	☐ Dam Failure Occasional	☐ Dam Failure Likely	☐ Dam Failure Highly Likely
Stream Bank Erosion	☐Stream Bank Erosion Unlikely	☒Stream Bank Erosion Occasional (1)	☐Stream Bank Erosion Likely	☐Stream Bank Erosion Highly Likely
Levee Failure	☒ Levee Failure Unlikely (1)	☐ Levee Failure Occasional	☐ Levee Failure Likely	☐ Levee Failure Highly Likely

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Limited (2)	☐ Minor	☐ Major	☐ Substantial
Tornado	☐ Limited	☐ Minor	☒ Major (2)	☐ Substantial
Hail	☐ Limited	☐ Minor	☒ Major (2)	☐ Substantial
High Winds	☐ Limited	☐ Minor	☒ Major (2)	☐ Substantial
Winter Storms	☐ Limited	☒ Minor (1)	☐ Major	☐ Substantial
Extreme Heat	☐ Limited	☒ Minor (1)	☒ Major (1)	☐ Substantial
Drought	☐ Limited	☒ Minor (1)	☒ Major (1)	☐ Substantial
Flooding	☐ Limited	☒ Minor (1)	☒ Major (1)	☐ Substantial
Dam Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Stream Bank Erosion	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial
Levee Failure	☒ Limited (1)	☐ Minor	☐ Major	☐ Substantial

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

☒ Yes (1)
☒ No (1)

If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

- ✓ "I think the possibility of ground water contamination (possibly through near-by fracking) or could impact our drinking water (human consumption water). I think this could potentially have a high impact to large groups of people, but hopeful that the extent would be medium."

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

☒ Improve on Land Use Program: (2)
☐ Identify undeveloped land within the flood plain and assess special use for conversation and recreation.

☐ Limit floodplain development

☐ Buy-out of property in the floodplain (flood-prone property acquisition)

☐ Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control)
☐ Improve, adopt and enforce building codes
☒ Implement the Texas Individual Tornado Safe Room Rebate Program (1)
☒ Expand and improve the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs such as: (1)
☐ National Flood Insurance Program (NFIP) and Community Rating System (CRS) program

☐ What to do the event of a flood, tornado, need for a weather radio

☒ Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events
☐ Coordinate with Dam owners to conduct inundation studies of dams to include:
☒ Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners (1)
☒ Purchase and improve on the Weatherization Assistance Program (WAP) (1)
☐ Conduct an earthquake vulnerability study
☐ Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure
☐ Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing
☐ Structural Retrofitting of Existing Buildings

Public Review

On January 13, 2014 the City of Coppell announced the availability of the City of Coppell's Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through the city's website inviting the public to provide input into the draft plan.

The announcement provided a 10 day public review and comment period. The public were encouraged to submit comments prior to January 22, 2014 for consideration and possible incorporation into this draft. The announcement indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex. **Figure COP 1**, provides a screen shot of the announcement. The public comments were directed to the Brad Simpkins, the Emergency Management Coordinator with the City of Coppell.

Figure COP 1: SCREEN SHOT CITY OF COPPELL OF WEBPAGE



Capability Assessment:

The City of Coppell identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments

The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the city. The administrative and technical capabilities of the city, as shown in **Table 9.1** provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan. **Figure 9.1** shows the agencies within the City of Coppell that will have a significant role in implementing the plan.

A. Coppell Fire Department

Mission: The mission of the Coppell Fire Department is to serve the citizens and business community of Coppell by preserving life, property and the environment through the efficient delivery of education, prevention, public service, emergency response, code enforcement and administrative activities.



History: Beginning in 1957, the Coppell Fire Department began providing volunteer emergency response to the community of Coppell, Texas. In the past 50 years, the department has grown from a volunteer department to a fully paid professional staff with 1 Chief, 3 Deputy Chiefs, 3 Battalion Chiefs, 12 Captains, 12 Engineers, 57 Firefighters/Paramedics, 1 Fire Investigator, 1 Emergency Management Officer, and 2 Administrative Services personnel. The department provides multiple services to the community that includes, but is not limited to:

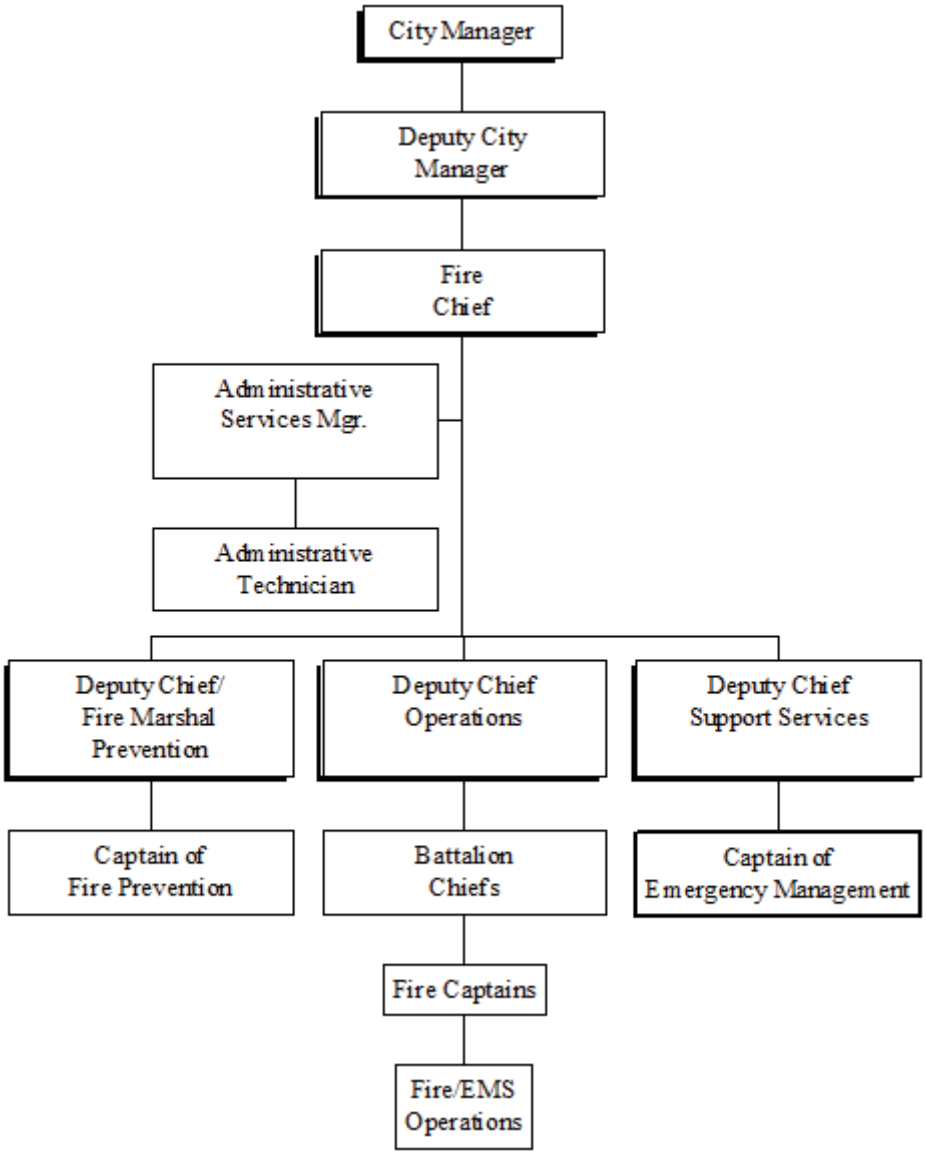
- ✓ Fire Protection
- ✓ Emergency Medical
- ✓ Public Education
- ✓ Fire Code Enforcement
- ✓ Public Assistance
- ✓ Emergency Management

Fire Department Divisions: The Fire Department provides emergency and non-emergency assistance to the community 24-hours per day, seven days a week. The Fire Department organization is composed of five divisions designed to reduce the community's risk and potential loss from everyday emergencies such as a fire or medical emergency to a wide-scale event such as a tornado. This is achieved through various preparedness efforts, planning, public education, inspections, fire code enforcement, and fire pre-planning efforts.

Each division is responsible for specific goals and objectives directly related to the services they provide. **Figure CPL.1** provides an organizational chart for the City of Coppell's Fire Department. To better serve the community, the Fire Department is divided into the following divisions:

- ✓ Executive Administration
- ✓ Operations
- ✓ Prevention
- ✓ Support Services

Figure CPL.1: City of Coppell Fire Life Services Organizational Chart



B. Coppell Police Department

Our Mission: The mission of the Coppell Police Department is to maintain a safe and peaceful community environment by providing effective and efficient law enforcement services through community partnerships, public education, and quality service.



The CPD is has two main bureaus, the administrative and operations & support. The administrative division is comprised of three distinct sections:

1) Administrative
2) Communications
3) Animal Services

There are twenty three people in the division with five assigned to the Administrative Section, thirteen assigned to Communications, and five assigned to Animal Services.

- ✓ The Administrative Section is responsible for a variety of different functions for the department including fleet operations, hiring, recruiting, training, field training, crime prevention, public information and media relations, victim's assistance, grants, internal affairs, operation of the SafeLight Coppell program, and quartermaster.
- ✓ The Communications Section is a Public Safety Answering Point (911 call center) responsible for maintaining communications for the police, fire, paramedic, and emergency management functions of the City of Coppell. The section is staffed and in operation twenty four hours a day, seven days a week year round. Members of the Communications Section answer calls for service from citizens, businesses, and other law enforcement agencies, ultimately dispatching via radio and computer the appropriate public safety agency resources to respond to routine and emergency calls for assistance.
- ✓ The Animal Services Section is responsible for maintaining a safe and healthy environment for the citizens of Coppell and their pets. The personnel of the section are responsible for the operation of the city's Animal Shelter where pets can be adopted, stray pets are kept, and animals can be held in quarantine if required. The Animal Services staff also takes a proactive approach to patrol the city to address violations of the city's ordinance concerning safe and responsible pet ownership, taking enforcement action as is necessary.

Other Division in the department include:

- ✓ Criminal Investigation Division (CID) he Criminal Investigations Division (CID) is comprised of eighteen personnel. These officers staff the Detective Unit, the Special Investigations Unit, the School Resource Officer Unit, the Crime Analysis Unit, and the Property/Evidence Unit. CID personnel also handle the registration of convicted sex offenders, provide coordination for the local Crime Stoppers program, lead the department's Honor Guard detail, and manage the department's Police Explorer Post.
- ✓ The Patrol Division consists of thirty-five sworn officers with two supervisors (one Sergeant and one Corporal) assigned to each shift. Manpower is then further divided into four twelve-hour patrol shifts. In addition to these assignments, the division also utilizes a five-member Traffic Unit, whose primary focus is the enforcement of

local/state traffic laws and investigating accidents. Duties performed by the patrol division include:

- Responding to 911 calls for service (assaults in progress, criminal mischiefs, burglary of habitation, alarms including business and residential, loud noise disturbance, family violence, reckless driving)
- Initial investigation of crime scenes
- Traffic Enforcement and Accident Investigation
- DWI enforcement
- Preparation of written incident and information reports
- Preparation of Case Reports for submission to the District Attorney
- Testimony before County Grand Juries, County Criminal Courts, Municipal Courts and Family Law Courts (on occasion)
- High visibility beat patrol (the City of Coppell is divided into four "beats", each beat has an assigned Police Officer)
- Vacation House Watch checks
- Preventive Maintenance checks on Police Equipment
- Operation of Police Department radio and computer mobile data systems.
- Operation of departmental intoxilyzer
- Maintaining a current knowledge of State and Local criminal statutes
- Maintaining a current knowledge of the Texas Code of Criminal Procedure
- Maintaining a current knowledge Departmental and City Written Directives
- Crime Prevention checks of business and residential properties

C. Finance Department

Mission: The Finance Department's function is to collect, disburse, safeguard, invest and maintain records of the city's assets. Financial records are kept on a current basis in order to provide City Officials with the information they need to make management decisions. Areas of responsibility include:

- ✓ Manage investment activities
- ✓ Debt Management as outlined in the Debt Management Policy
- ✓ Coordinate annual audit and prepare Comprehensive Annual Financial Report
- ✓ Coordinate and process departmental budget requests and prepare Annual Budget and Budget in Brief
- ✓ Maintain and update Five Year Plan
- ✓ Provide Fact Sheets
- ✓ Process and maintain accounting records
- ✓ Administrative supervision of Tax Collections and Utility Billing Departments

D. Parks and Recreation

Mission: The mission of the Parks and Recreation Department is to maintain responsible stewardship of natural and allocated resources to promote quality recreational and educational opportunities that enhance the overall health of individuals and the community.

The department's purpose is to provide a guiding plan for the Coppell Parks and Recreation Department through an extensive need assessment, community input process, a citizen's survey and comprehensive evaluation of all existing facilities and future land acquisition,

park development, open space, trails, operations maintenance, recreation programs, and service needs.

E. Engineering Department

The mission of the Engineering Department is to ensure quality, cost effective and safe private and public development that is in general compliance with the city's standards and regulations. To provide both competent management and administration of engineering, inspection, floodplain activities, traffic issues and related professional services. To provide indirect services to the citizens through internal support to other City Departments in the form of technical advice, inspection and administrative support. To continue to provide and maintain a Geographical Information System (GIS) which can be used by all departments and citizens to provide interactive and intelligent maps.

The Engineering Department provides a variety of services relating to the design and construction of the city's Capital Improvement Program (CIP) projects and subdivision development. These include plan review, inspection services and overall construction management for CIP projects constructed in the public right-of-way and plan review and inspection services for private development.

The Engineering Department provides floodplain determinations and copies of the Flood Insurance Rate Map (FIRM) which are available for review in the Engineering Department or the public library. Engineering also provides copies of the thoroughfare plan, standard construction details, water and sewer master plan, and as-built drawings of completed projects, both public and private.

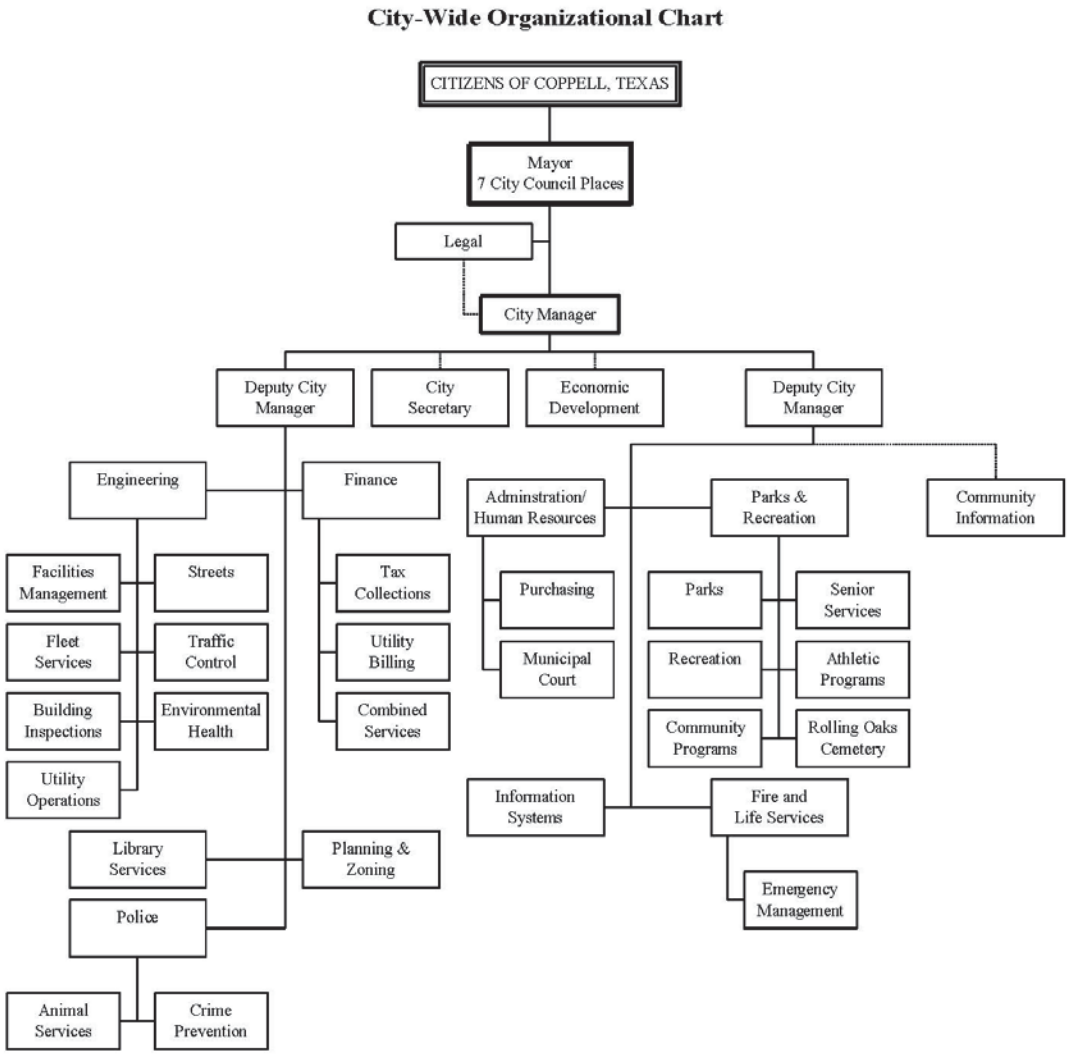
All mapping for the city is provided through the Engineering Department. This includes various types of maps for sale and special mapping services for management and coordination of subdivisions, computer generated maps which could include topographic, water, sewer and storm drainage information.

F. Public Works

Mission: The mission of the Public Works Department is to provide maintenance and repairs to city-owned infrastructure, facilities and equipment in an efficient manner to ensure that the city's investments meet or exceed maximum life expectancy. Areas of responsibility include:

- ✓ Utility Operations
- ✓ Streets
- ✓ Traffic Control
- ✓ Fleet Services
- ✓ Facilities Management

Figure CPL.2: City of Coppell Organizational Chart and Key Departments



Summary of Capabilities

The tables below identify the current capabilities in the City of Coppell.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2011	Limited reference to hazards/safety. Does not identify projects for mitigation strategy.
Capital Improvements Plan	Yes	1. No 2. No 3. Yes
Economic Development Plan	No	N/A
Local Emergency Operations Plan	Yes	1. Yes 2. No 3. Yes
Continuity of Operations Plan	No	N/A
Transportation Plan	No	N/A
Storm water Management Plan	Yes	1. Yes 2. No 3. Yes
Community Wildfire Protection Plan	No	N/a
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	Infrastructure Maintenance Plan
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	Version/Year: 2009 IBC
Building Code Effectiveness Grading Schedule (BGEGS) Score	No	Score: Could not be determined
Fire Department ISO rating	Yes	Rating:
Site Plan review requirements	Yes	Yes

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	1. Yes 2. Yes
Subdivision ordinance	Yes	1. Yes 2. Yes
Floodplain ordinance	Yes	1. Yes 2. Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Storm water Ordinance
Flood insurance rate maps	Yes	N/A
Acquisition of land for open space and public recreation uses	Yes	1. Yes 2. Yes
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Administrative and Technical

Administration	**Yes/No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	1. 7-member recommending body to the City Council on planning issues. 2. Yes
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	1. Parks currently manages tree maintenance. 2. Yes
Mutual aid agreements	Yes	1. Several agreements for both emergency and non-emergency aid exist. 2. There is no coordination
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	FT	Yes; Yes; Yes
Floodplain Administrator	FT	Yes; Yes; Yes
Emergency Manager	FT	No; Yes; Yes
Community Planner	FT	Yes; Yes; Yes
Civil Engineer	FT	Yes; Yes; Yes
GIS Coordinator	FT	Yes; Yes; Yes
Other	N/A	
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Yes
Hazard data and information	Yes	Yes
Grant writing	Yes	Yes
HAZUS analysis	Yes	Yes
Other	No	N/A
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Yes; Yes
Authority to levy taxes for specific purposes	Yes	Yes; Yes
Fees for water, sewer, gas or electric services	Yes	Yes; Possibly
Impact fees for new development	Yes	No; Yes
Storm water utility fee	Yes	Yes; Yes
Incur debt through general obligation bonds and/or special tax bonds	Yes	Yes; Yes
Incur debt through private activities	Yes	No; Yes
Community Development Block Grant	Yes	Yes; Yes
Other federal funding programs	Yes	Yes; Yes
State funding programs	Yes	Yes; Yes
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Administration is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Several existing programs Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Citizens police academy and citizen fire academy are used as public education tools for mitigation.
Natural disaster or safety related school programs	Yes	Under development of HS CERT Program
StormReady certification	Yes	Currently under re-certification
Firewise Communities certification	No	N/A
Public-private partnership initiatives addressing disaster-related issues	Yes	Currently developing program Yes
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	N/A	
2. Is transportation policy used to guide growth to safe locations?	N/A	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	N/A	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?		✓
2. Do environmental policies maintain and restore protective ecosystems?		✓
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?		✓
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?		✓

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?		✓
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		✓
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?		✓
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?		✓
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		✓
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		✓
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?		✓
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		✓
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

***Note**:* The City Council for the City of Coppell, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	Texas Water Development Board	239 policies with a total premium of $119,533
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial	Texas Water Development Board	13 claims have been made. Four were closed with payments totaling $35,845. The other nine were closed without any payments made
How many structures are exposed to flood risk within the community?	Floodplain Administrator (FPA)	Any structure adjacent to the creeks in town could be subject to flooding during a storm event. However, the city does not permit structures within the floodplain and requires all structures adjacent to the floodplain to be elevated 2 feet above the existing floodplain or 1 foot above the ultimate floodplain, whichever is higher.
Describe any areas of flood risk with limited NFIP policy		N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes, Director of Engineering and Public Works
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	We review permits, we map floodplain areas in our GIS, we provide floodplain information in water bill inserts multiple times per year, we schedule inspections when needed, and we have 4 CFMs on staff.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	N/A
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		None

NFIP Topic	Source of Information	Comments
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Texas Water Development Board	8/28/2000
Is a CAV or CAC scheduled or needed?		No
Regulation		
When did the community enter the NFIP?	Community Status Book	1978
Are the FIRMs digital or paper?	Community FPA	Paper, however floodplain information can be found digitally on our GIS.
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceeds FEMA requirements. City of Coppell requires 2 feet of freeboard above the floodplain or 1 foot above the ultimate floodplain, whichever is higher. No development in the floodplain is allowed and no increase in velocity or surface elevation is allowed.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Plan review, floodplain determination, flood study, and issue floodplain permit if necessary.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	Yes
What is the community's CRS Class Ranking?	Flood Insurance Manual	7 (15% discount)
What categories and activities provide CRS points and how can the class be improved?		8 activities under 4 main categories: 1. Public Info, 2. Mapping and Regulation, 3. Flood damage and reduction, and 4. Flood preparedness. Accruing points will improve the class ranking.
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Yes

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Coppell HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Coppell are as follows:

High Risk (over 65% on HIRA)	Tornado
Moderate Risk (41%- 65% on HIRA)	Flooding Hail Winter Storms Extreme Heat Dam/Levee Failure
Low Risk (12 %-40% on HIRA)	Drought Earthquake High Winds Lightning Wildfire
No Risk (Below 12% on HIRA)	Stream Bank Erosion

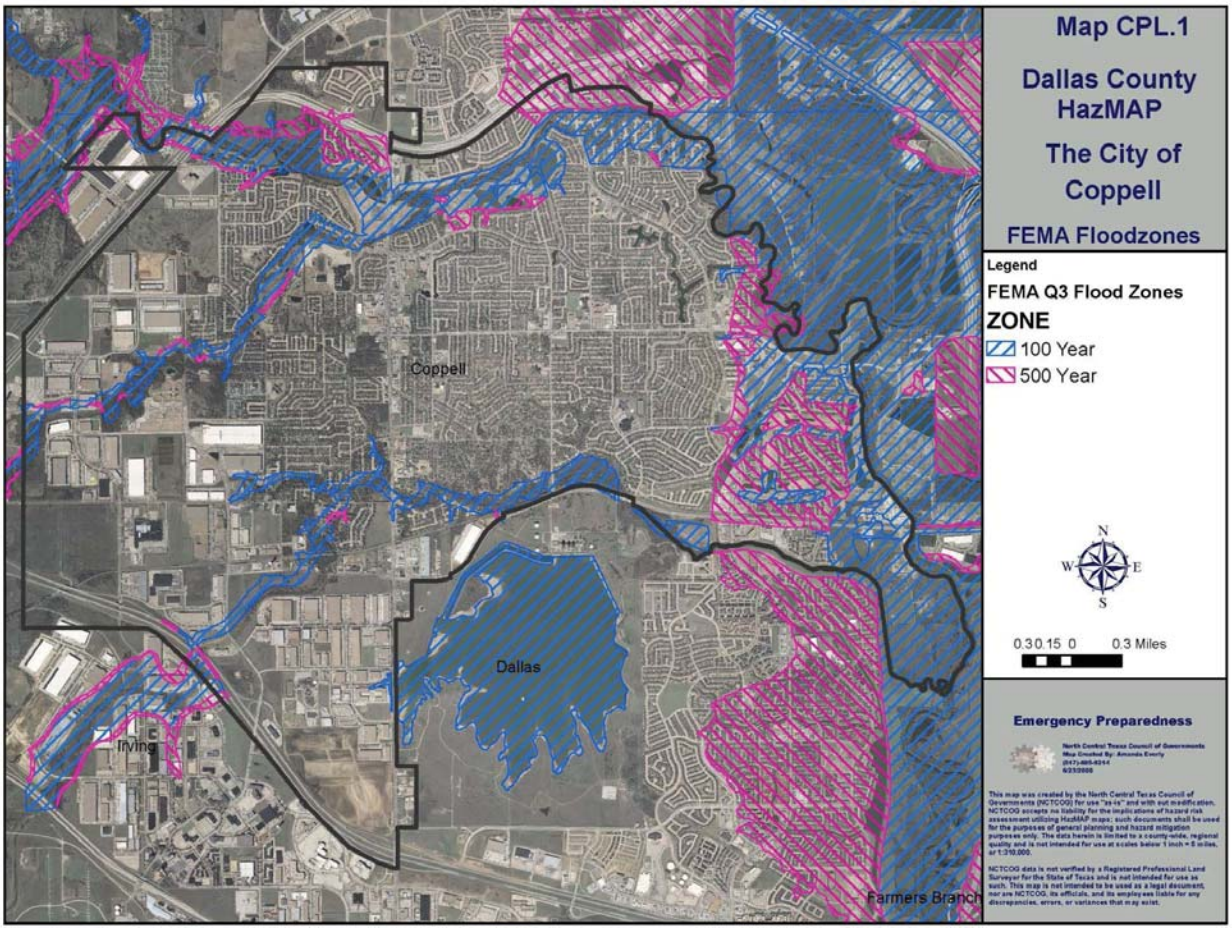
Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk as there is no property or people that have been identified as being at risk from this hazard in the jurisdiction.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Coppell. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

A. Flooding: The City of Coppell contains three major tributaries that ultimately drain into the Elm Fork of the Trinity River along the eastern City limits. Approximately 5.4 square miles of the City is drained by Grapevine Creek, and approximately 7.9 square miles of the City is drained by Denton Creek, including 2.8 square miles drained by Cottonwood Branch, a major tributary of Denton Creek. The remaining 1.7 square miles drains directly into the Elm Fork of the Trinity River. The Northwest Dallas County Flood Control District, the Denton County Levee Improvement District No. 1, and the Irving Flood Control District are all located within the City limits. Map CPL.1 depicts the Flood Zones for the City of Coppell.

Having experienced a history of flooding, with the most recent events in 2004, 2005 and September of 2010, the City of Coppell actively engages in measures to reduce the impact of flooding on the community. The City's active mitigation efforts include participation in National Flood Insurance Program, public education, floodplain management and storm water management. Coppell promotes public education through the posting of ordinances and information on the City’s website and in common areas.

Map CPL.1 City of Coppell FEMA Flood Zone Map



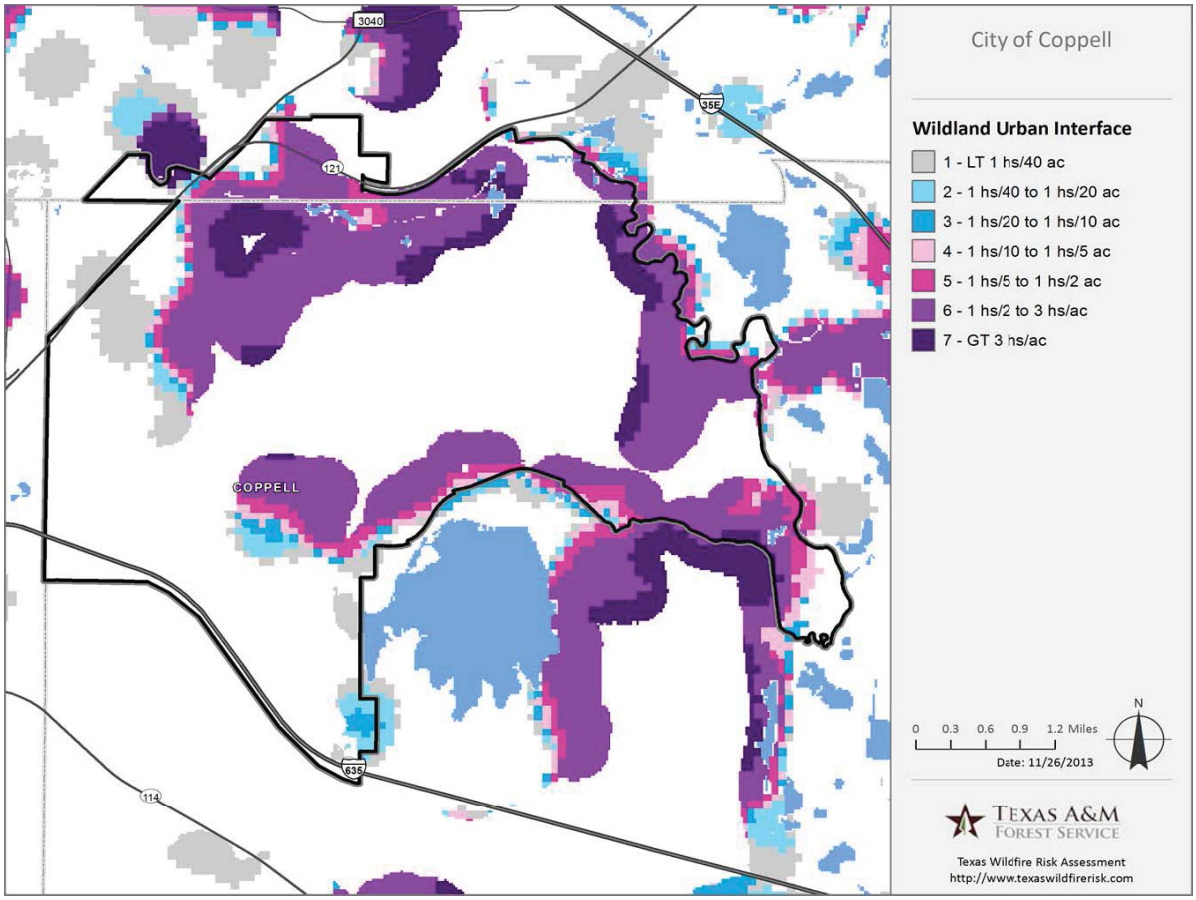
The City has also enacted ordinances and guidance with roles in flood mitigation which include: Subdivision Ordinance, Erosion and Sedimentation Control Ordinance, Comprehensive Zoning Ordinance, Storm Drainage Design Criteria, Standard Construction Details Code and Floodplain Management Ordinance.

As indicated in this annex, the City of Coppell participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 13,647 people or 35 percent of the total population of the City of Coppell live within the WUI. Map CPL.2 depicts the Wildland Urban Interface (WUI) for the City of Coppell.

Map CPL.2: City of Coppell Wildland Urban Interface



The Wildfire Threat for the City of Coppell ranges from Non-Burnable to Low. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

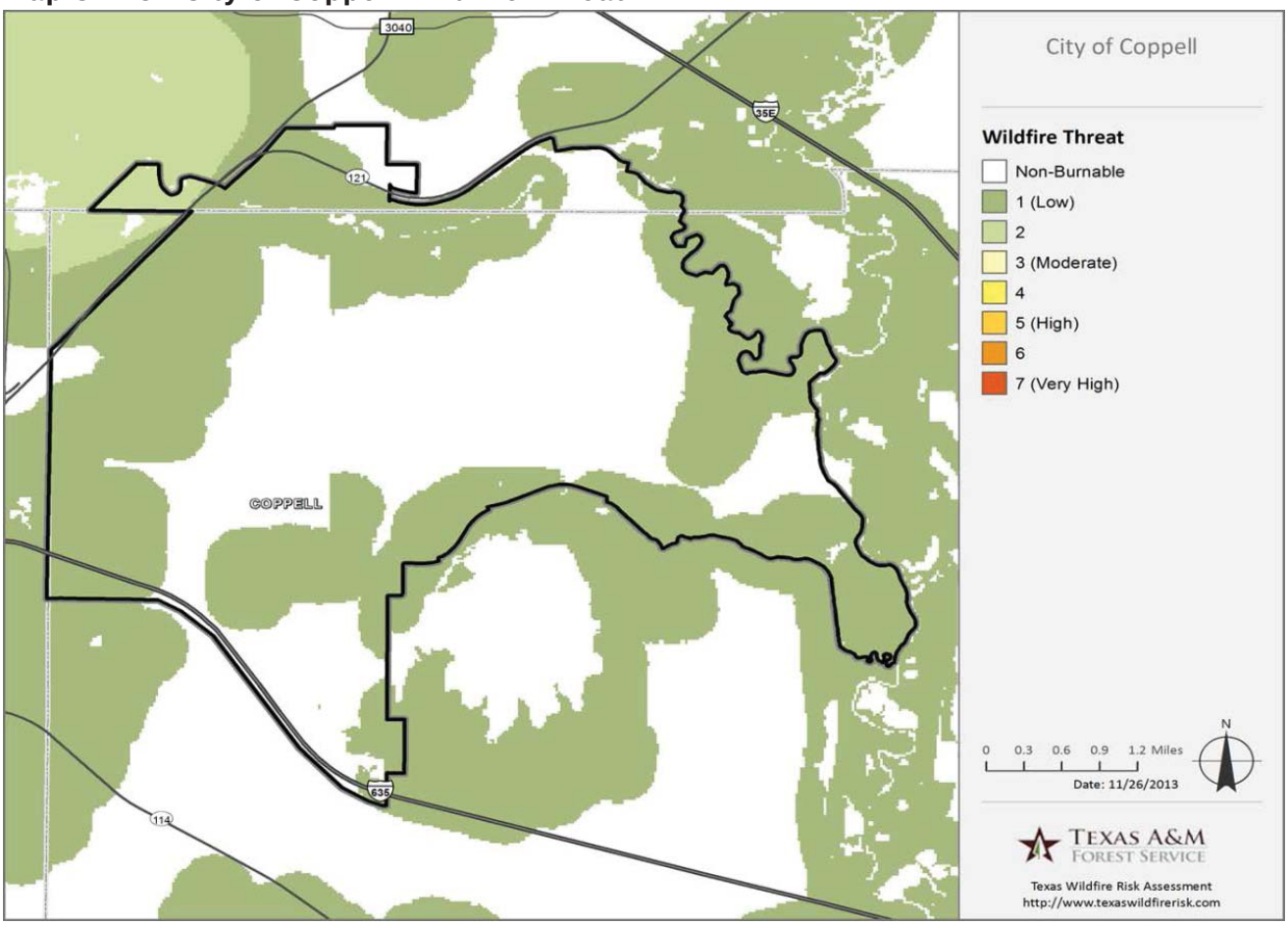
Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map CPL.3: City of Coppell Wildfire Threat



C. Dam and Levee Failure: There are no high risk dams or levees within the City of Coppell. However, it is assumed that part of the City is in the inundation zone for the North Lake Dam. North Lake Dam is privately owned and lies in the Southern part of the City. There are no inundation maps that exist for the North Lake Dam and as such a data deficiency has been identified for this particular risk.

The city is downstream of the Lewisville Lake Dam. Lewisville Lake Dam is located in Denton County and borders Dallas County to the northwest. Lewisville Lake Dam was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1955. USACAE operates and maintains the dam and it is used for flood damage reduction, water supply, recreation and non-federal hydropower.

The main components of the dam include an earthen embankment section, which serves as the main water barrier composed of compacted earth; a concreter spillway, a segment of the structure used to provide additional release of water from the dam during major flood events; and an outlet works used to release water from the dam. The earthen dam is 32,888 feet in length, 125 feet in height and the top of dam is 20 feet wide.

The design elevation of the top of the embankment is 560 feet (*Mean Sea Level (MSL) is the same as North American Vertical Datum 19880 or NAVD88)*. The foundation is made up of

homogeneous fill constructed of impervious clays and shale. The concrete spillway is located on the left abutment section, and is 560 feet wide. The spillway has an elevation of 532 feet. The spillway can pass up to 1.8 million gallons per second approximately two and a half times the volume of an Olympic size swimming pool each second.

Dams reduce risk but they do not eliminate risk. Large amounts of water that could cause flooding downstream might have to be released when a flood exceeds the reservoir's storage capacity such as during a flood or storm event. Such a release could be damaging. In the event of a overtopping or breach of the dam an inundation risk has to be managed and to this end the USACE has programs in place to inspect and monitor the dam and implements short and long term actions on a prioritized basis when unacceptable risks are found.

For Lewisville Lake Dam, the primary areas impacted should the dam breach due to a full reservoir during a rare flood event; or major spillway/outlet works flows would include areas that are in the flood plain of the Elm Fork, a tributary of the Trinity River, that flows Southwest through Dallas County. The City of Coppell is one of the jurisdictions that can be affected. The potential for loss of life is highest within a couple of miles of the dam with loss concerns decreasing substantially beyond 60 miles downstream of the dam.

The extent of Lewisville Lake Dam failure to the City of Coppell has not been determined as a result of a lack of data regarding inundation levels. While there is some information on Lewisville Lake Dam, this information is owned and maintained by the USACE. The City of Coppell sees the need to work more closely with the USACE and conduct additional studies to determine the extent of damage to the City of Coppell.

D. Earthquake: There are no known active geological faults within the City of Coppell and no historical data of earthquakes in the city. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

E. Stream Bank Erosion: There are no areas of the City of Coppell where stream bank erosion is considered to be a hazard nor is there any history of stream bank erosion in Coppell. Stream Bank Erosion is not considered a hazard that affects Coppell though its risk potential will be re-evaluated as needed.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Coppell. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population in exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Coppell. The population is exposed to this hazard. The entire population in exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in city

Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in city
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Coppell.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population in exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Coppell due to winter storm events. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Coppell are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Coppell are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Coppell are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Irving is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $21,000 of property damage has been recorded due to high wind events in the City of Irving. All improved property is exposed to this hazard
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Irving are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Irving are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Irving are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Coppell have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $500 of damage have been reported as a result of lightning in the City of Coppell and all improved property is exposed to this hazard
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Coppell are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Coppell are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Coppell are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Coppell. All the population of City of Coppell is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $150,000 in property damage has been reported from tornados in the City of Coppell and all improved property is exposed to this hazard
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Coppell are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Coppell are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Coppell are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), $13.54 million of property damage was reported for City of Coppell. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Coppell indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Coppell are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Coppell are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Coppell are exposed to this hazard.

Wildfire	
Population	Based on geographical data, approximately 35% of Coppell is vulnerable to wildfires. Approximately 30,000 people live in the WUI area
Improved Property	Based on geographical data there have been no reported wildfires in the city and no property loss has occurred. 15% – 20% of improved property is exposed to this hazard
Emergency Facilities	Based on geographic information there are zero fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are four bridges, zero dams, zero wastewater treatment facility, and zero water treatment facility at risk from wildfire events.

Flooding	
Population	Flooding produces an expected annualized count of zero fatalities and injuries per year. Approximately 10% of the population of Coppell is located within the 100-year floodplain.
Improved Property	A loss of $350,000 per year can be expected in property loss due to flooding, and 0% of the total assessed value of improvements in Coppell is at risk from the 100-year storm event.
Emergency Facilities	There are 0 emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are 6 critical facilities located within the 100-year storm event.
Critical Infrastructure	10% of railways/highways and bridges, 0% of dams, 0% of water treatment works, and 0% waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain due to unavoidable circumstances. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Changes in Population and Development

The City of Coppell was a participant in the last Dallas County Hazard Mitigation Action Plan. Table 3.1 shows that the estimated population for the City of Coppell grew from 38,659 to 39,550, an increase of 2.3%. There were 626 new housing developments and 11 new commercial developments in the city between 2008 and 2014. Major structural and economic development, include a secondary school, higher education facility, warehouse, mixed used facilities and an office park developments. These new commercial developments total to over 3.5 million square feet. None of the developments have been built in floodplains.

To help mitigate the impacts of the hazards identified the City of Coppell has identified broad mitigation strategies to lower the vulnerability on the population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stricter rules and regulations such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

Mitigation Strategies

Based on the results of the risk and capability assessments, the City of Coppell Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural hazards

Goal 4: Continue to build capacity for hazard mitigation in the City of Coppell

- ✓ ***Objective 4-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 4-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 4*-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP Update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Coppell Action Item	Retrofit Public Buildings and Critical Infrastructure: Improve wind engineering measures and construction techniques. This can include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, window shutters, or interlocking roof shingles
Hazard(s) Addressed	Tornado, High Winds, Hail
Goal/Objective	2-B, 2-C
Priority	Medium
Estimated Cost	TDB
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	Old buildings will be retrofitted to reduce future damage from severe weather
Effect on New Buildings	New buildings will meet the new requirements when being constructed
Cost Effectiveness	The cost of the is much less than the benefit
Discussion	Retrofitting public buildings and critical infrastructure to FEMA 361 standards will help mitigate the loss of life and property

Coppell Action Item	Limit Floodplain Development: Do not allow development into areas that are within the floodplain through regulatory and incentive based measures
Hazard(s) Addressed	Flooding
Goal/Objective	1-C
Priority	High
Estimated Cost	No real costs
Potential Funding Sources	No funding sources
Lead Department	Engineering
Implementation Schedule	As soon as
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The
Discussion	Flooding can be mitigated by limiting or restricting how development occurs in the floodplain

Coppell Action Item	Implement a Weatherization Program that coordinates and complements that Dallas County assists eligible elderly and/or disabled residents with repairing or replacing their heating and cooling system
Hazard(s) Addressed	Extreme Heat and Winter Storms
Goal/Objective	3-C
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget/TBD
Lead Department	Dallas County
Implementation Schedule	As funding is available
Effect on Old Buildings	Repairs cooling and heating systems so at risk population within the City can avoid the Extreme Temperatures/Heat
Effect on New Buildings	None
Cost Effectiveness	This program will save lives especially during extreme weather conditions.
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work

Coppell Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	3-A
Priority	Low
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	Building Inspections Department
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the NCTCOG

Coppell Action Item	Conduct studies to develop dam inundation maps for all dams that affect the City of Coppell. These studies will be done in coordination with the owners and operators of the dams. Data obtained from the studies will assist the city in developing the most appropriate mitigation actions to save lives and property.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levee's.
Discussion	As noted in this annex a data deficiency was identified for North Lake Dam and Lake Lewisville Dam. Such a study can include procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

City of Coppell	Buyout structures that are in the floodplain
Hazard(s) Addressed	Flooding and dam/levee failure
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Low
Estimated Cost	$5 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Coppell Administration, Engineering and Parks and Recreation
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	Remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners

Coppell Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Coppell Action Item	Incorporate of drought tolerant, fire resistant and xeriscaping practices for existing and new city facilities. This program will also be expanded to include residential areas through regulatory and incentive measure mitigate the risk
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire.

Coppell Action Item	Purchase a series of lightning prediction devices to be deployed around Parks and Schools. Not only would these provide advance warning to those in the area but the cumulative data collected by these devices will allow the City of Coppell identify additional action items tailored to mitigating the lightning hazard.
Hazard(s) Addressed	Lightning
Goal/Objective	5-A
Priority	Medium
Estimated Cost	$30,000
Potential Funding Sources	City Budget, HMGP, PDM
Lead Department	Office of Emergency Management (OEM), Parks and Recreation, Public Works
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during weather conditions that comes with lightning.

Coppell Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Coppell Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Plan Maintenance

The City of Coppell Department Fire Department through the Emergency Management Division will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator (EMC) will be responsible for coordinating these efforts.

The EMC will call the Coppell Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Coppell	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Coppell's HMPT will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Coppell or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Coppell is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Coppell will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Coppell will engage stakeholders in community emergency planning.

Plan Incorporation

Existing plans and studies that would impact pre-existing hazard mitigation efforts were reviewed by the Engineering Department to determine if they would negatively impact our hazard mitigation efforts. These plans included building and fire codes, Capital Improvement Plan, and zoning ordinances. These plans were utilized to determine mitigation objectives and to provide a collaborative approach in developing action items to address hazard vulnerabilities.

The City of Coppell Engineering Department has done due diligence in the hazard mitigation for the city to the point that very few buildings, infrastructure and critical facilities are within

a geographically defined hazard area. The city does not allow new development in the floodplain; however, any structures that existed prior to Coppell being initially mapped (pre-FIRM) could be FEMA concerning floodplain development. Currently there are 10 structures in a designated floodplain. Those structures are all pre-FIRM. The Engineering Department will ensure all plans, particularly Capital Improvement Plans will continue to incorporate the city's proactive approach to mitigating hazards before they become hazards by ensuring all projects meet or exceeds existing requirements of the city and the HazMAP.

The City will integrate other planning mechanism the planning integration tables below shows how this will be done.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Coppell	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

A. HIRA

B. Supporting Documentation – Meeting and Outreach

Appendix CPL A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Coppell
Hazard Identification and Risk Assessment (HIRA)
Date: JULY 29, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4.00	1	2	2	5	80%
Hail	4	4	3	3.00	1	3	1	5	60%
Lightning	4	4	2	2.00	1	3	1	5	40%
Winter Storms	2	4	4	2.00	2	1	1	4	50%
Tornado	4	4	4	4.00	2	3	1	6	66%
Flooding	3	3	4	4.00	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	4	4.00	4	1	1	6	66%
Extreme Temperatures/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3.00	2	2	2	6	50%
Wildfire	2	2	3	3.00	1	3	3	7	42%
Utility Failure									
Energy/Fuel Shortage	1	1	3	3.00	4	2	1	7	42%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Urban Fire	4	4	2	2.00	2	3	1	6	33%
Earthquake	4	4	1	1.00	1	2	1	4	25%
Levee/Dam Failure	1	1	4	4.00	4	4	3	11	36%
Drought	3	3	2	2.00	1	2	2	5	40%
Stream Bank Erosion	1	2	1	0.5	1	2	2	5	10%
Civil Disorder	2	2	3	3.00	2	2	2	6	33%

NB: The City of Coppell HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

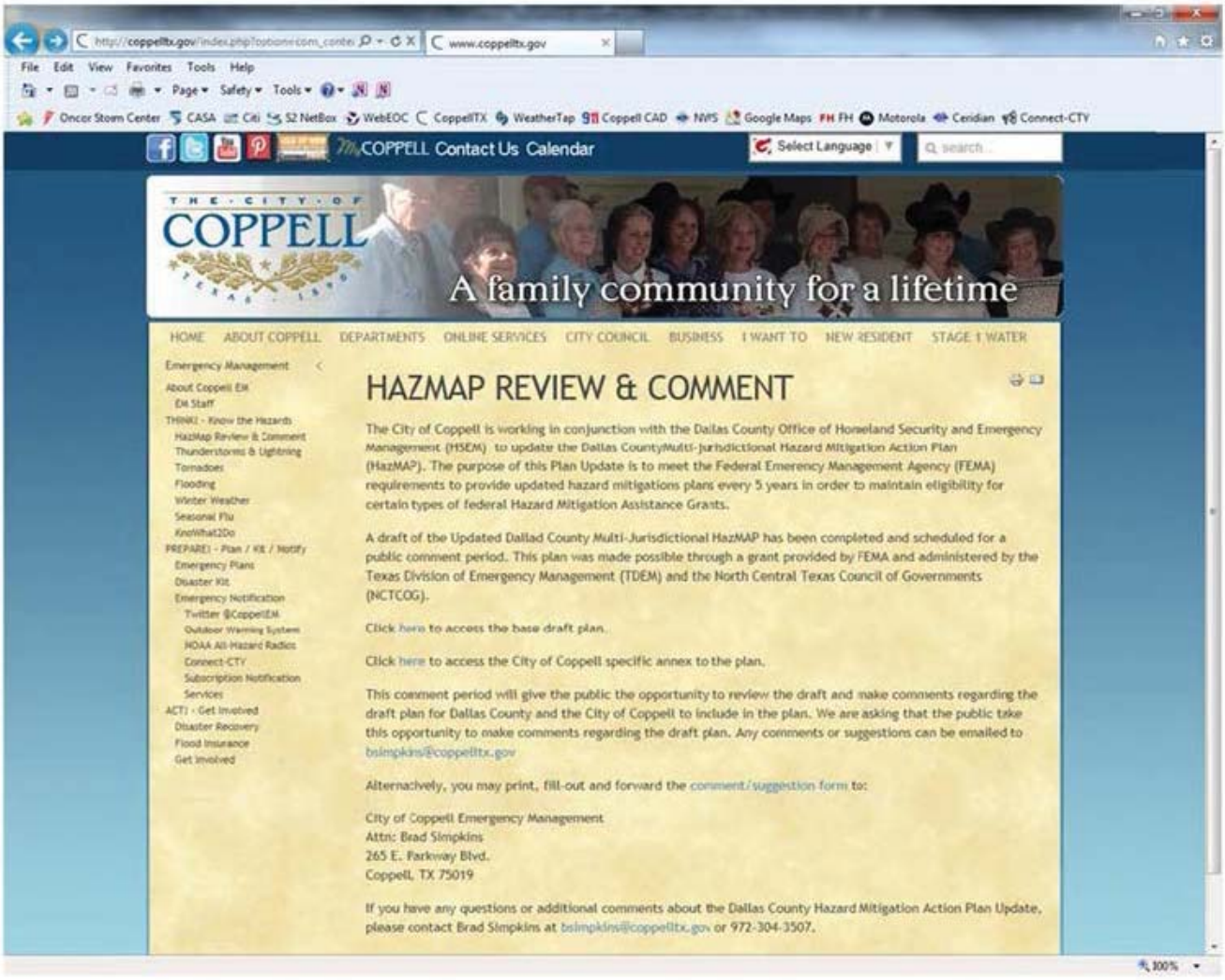
Appendix B-1: Supporting Documentation

Local Mitigation Strategy Planning Team Meeting Sign-In Sheet

Jurisdiction:	Coppell	**Meeting Date:**	October 1, 2013
Facilitator:	Brad Simpkins	**Place/Room:**	Town Center – 2nd Floor

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
Debbie Cravey	Adm Asst. to CM	City of Coppell	972 304 3618	dcravey@coppelltx.gov
Jennifer Muller	Director of Finance	City of Coppell	3689	jmuller@coppelltx.gov
Tim Oates	Fire Marshal	City of Coppell	x 7055	toates@coppelltx.gov
Chris Aulbaugh	Deputy Chief	City of Coppell Police	3603	caulbaugh@coppelltx.gov
Lloyd Mauch	Parks Supervisor	City of Coppell	5119	lmauch@coppelltx.gov
Jim Cook	Police Captain	City of Coppell Police	972-304-3596	jcook@coppelltx.gov
Doug Kratz	Asst. Dir. of Recreation	City of Coppell	972-462-5150	dkratz@coppelltx.gov
Mike Garza	AD of Engineering	City of Coppell	972-304-3619	mgarza@coppelltx.gov



http://coppelltx.gov/index.php?option=com_content&view=article&id=1722&Itemid=1918

THE · CITY · OF
COPPELL
TEXAS · 1890

Hazard Mitigation Planning Team Meeting
Coppell Town Center, 2nd Floor Conference Room
October 1, 2013

I. Call to Order

- Brad Simpkins called the meeting to order at 9:34 a.m.

II. Members Present

- Please see attached sign-in sheet.

III. Objectives

A. Formally identify planning team members

-

B. Identify overall deliverables and deadlines for the Dallas County Hazard Mitigation Plan update

- Plan is due end of October 2013.

C. Review Dallas County Hazard Identification and Risk Assessment (HIRA) for applicability to Coppell and determine method for revision/adaptation, if necessary

- Group reviewed the Dallas County Hazard Identification and Risk Assessment (HIRA).
- Doug Kratz expressed concern about Drought Risk Factor and raising the frequency to a level 4 from a 3.
- Discussed benefits of staying with a regional assessment over creating our own due to the fact that Coppell would be a small cross-section of data that would not be necessarily accurate.

D. Review Capability Assessment Worksheet 4.1 and determine method for follow-up/completion

- Determined who might have answers to questions and where to locate information needed.
- Please see attached Capability Assessment Worksheet 4.1.

E. Review Coppell Goals and Action Items from the approved 2008 HazMAP and revise, as necessary.

- Group reviewed Coppell Goals and Action Items from the approved 2008 HazMAP.
- Discussion regarding structures and park structures in floodplains.
- Add outdoor warning sirens and early communication with citizens (ConnectCTY or similar) into the action items since we are already participating in that mitigation action item.
- Add drainage improvements to older parts of town in infrastructure maintenance plan.

From: Brad Simpkins
To: Josh Roberts (joshuaroberts@cityoflewisville.com); Liz Dimmick (edimmick@grapevinetexas.gov); dmccurdy; Joseph Gozalez
Cc: Michael Gaciri
Subject: Coppell and Dallas County HazMAP Review
Date: Friday, June 12, 2015 3:57:08 PM

Greetings,

The City of Coppell and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite your agency to provide input to our draft. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.
http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Brad Simpkins
Coppell Fire Department
Captain - Emerg. Mgmt. Coord.
(972) 304-3507 Work
bsimpkins@coppelltx.gov
265 E. Parkway Blvd.
Coppell, TX 75019
www.coppelltx.gov/em

City of Dallas Annex

Introduction

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Dallas has a FEMA approved hazard mitigation plan. The city was one of the 11 jurisdictions that participated in the Dallas County Hazard Mitigation Action Plan that was adopted in 2009.

This annex serves as a complete hazard mitigation planning tool for the City of Dallas and is an addition to the countywide hazards and strategies discussed in the previous section. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Internal Planning Process

Table 1 lists the City of Dallas Local Planning Team. These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of city mitigation actions and provide suggestions for new mitigation actions.

Table 1.1 City of Dallas Local Planning Team 2013

Name	Department	Position	Role
Joseph Ellis	Emergency Management	Sr. EM Specialist	HMP Coordinator
Kevin Oden	Emergency Management	Asst. EM Coordinator	Hazard and Plan Development
Rocky Vaz	Emergency Management	Director	Hazard and Plan Development
Nicholas F. LaGrassa	Emergency Management	EM Specialist	Hazard and Plan Development
Don Knight	City Attorney's Office	Attorney	Legal Review
Sana Syed	Public Information Office	PIO	Public Outreach
Jo Puckett	Dallas Water Utilities	Director	Public Alerting / Floods
Dhruv Pandya	Trinity Watershed	Asst. Director	Dams and Levees
Theresa O'Donnell	Development	Director	Hazard Plan and Development
Steve Parker	Trinity Watershed	Floodplain Manager	NFIP / CRS
Jessica Baker	Halff Consultants*	Project Manager	Dam EOP/CRS

* Hallff Consultants is an external stakeholder invited by the City of Dallas to participate to be part of the planning team. The invitation to participate was made via email and telephone.

Public Involvement

In August 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions how local government could minimize the risk. The City of Dallas notified residents and businesses of the opportunity to participate in the survey through posting it on the city's website and sending public announcements to neighborhood watch groups and home owners associations.

On October 4, 2013, the city posted a notification announcing the availability to participate in a hazard mitigation survey on the city's website http://www.dallascityhall.com/oem. The public was encouraged to submit comments prior to October 8th, for incorporation into this draft. No comments were received by this date. Any comments received after the adoption of this annex will be catalogued for consideration in future updates to this annex. Copies of the website survey posting and plan review posting are included in Section 1.4.5, Dallas Attachment 1: Outreach materials.

Survey Results

The survey respondents from the City of Dallas identified tornadoes and severe weather as the two hazards of primary concern. Extreme heat and flooding follow as secondary concerns. Overall, the City of Dallas's Hazard Mitigation Planning Team deemed these hazards as significant (tornado, severe weather and extreme heat) or moderate (flood) planning consideration. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. A significant number of Dallas respondents indicated they would like to see an increase in the grants awarded thru the Individual Tornado Safe Room Rebate Program and an increase in public outreach programs (i.e. CERT).

The results of the survey provide valuable information for the City of Dallas as they continue in their mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

The City of Dallas will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively.

The survey responses received from the City of Dallas residents are summarized below:

1. 194 out of 1,008 survey responses were from the City of Dallas
2. Respondents were asked which of the 11 hazards are of most concern to them. Below are responses.

Table 1.1.2 Mitigation Survey Results

Hazard	Occasional	Unlikely	Likely	Highly Likely
Earthquake	50	82	32	30
Tornado	59	0	62	73
Hail	47	0	63	84
High Winds	48	0	66	80
Winter Storms	49	28	46	51
Extreme Heat	51	0	64	79
Drought	43	0	59	92
Flooding	53	45	54	42

Hazard	Occasional	Unlikely	Likely	Highly Likely
Dam Failure	61	92	41	0
Stream Bank Erosion	53	87	51	3
Levee Failure	66	84	44	0

Figure 1.2.1: City Website with Public Survey Link

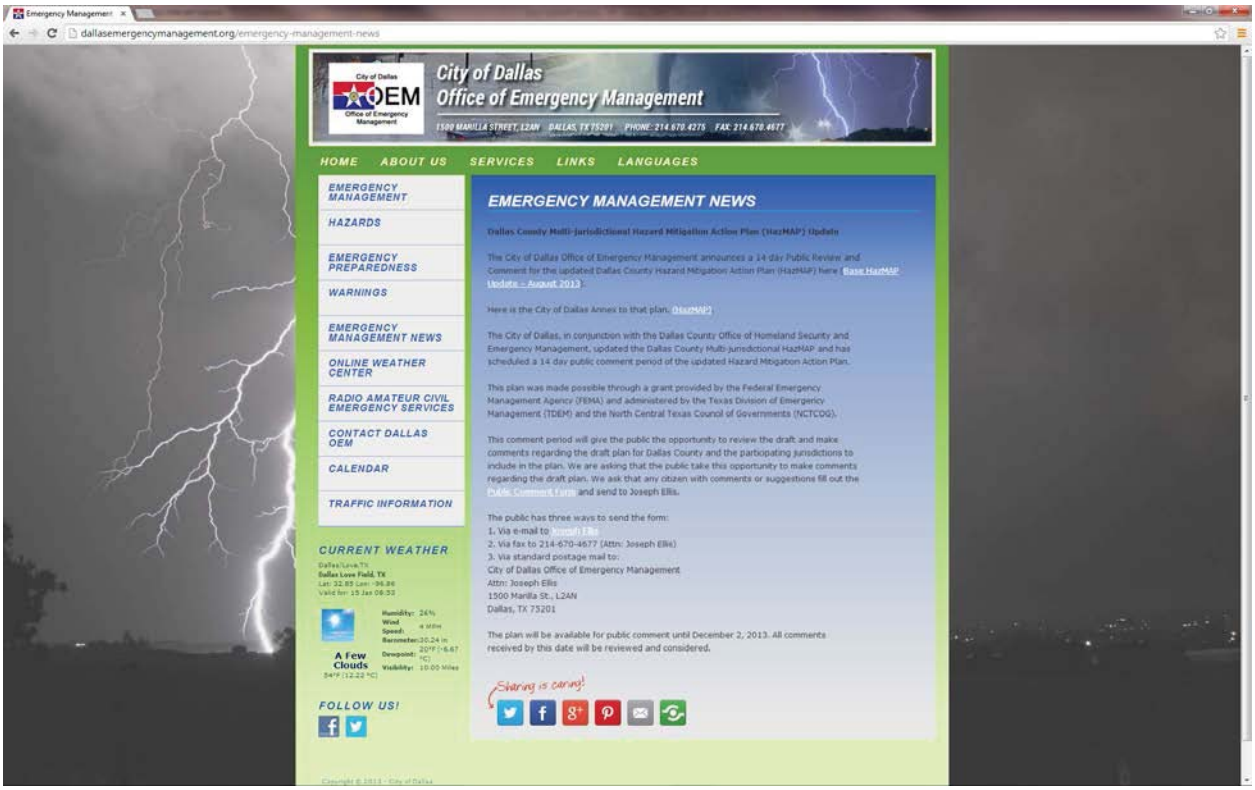


Public Review Period

On November 4, 2014 the City of Dallas announced the availability of the City of Dallas' Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through the City of Dallas Office of Emergency Management website and invited the public to provide input into the draft plan.

The announcement provided a 14 day public review and comment period. The public were encouraged to submit comments prior to December 2, 2014 for consideration and possible incorporation into the draft. Figure 1.2.2 provides a screen shot of the announcement.

Figure 1.2.2: City Website Announcement of Public Review and Comment



The public comments were directed to the Joseph Ellis, a Senior Emergency Management Specialist with the City of Dallas. The public were advised that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

Capability Assessment

The city identified current capabilities and mechanisms available for implementing hazard mitigation activities. This section presents a discussion of the roles of key departments, administrative and technical capability, fiscal resources, and summaries of relevant planning mechanisms, codes, and ordinances.

Jurisdiction	Chief Administrative Officer	Ability to Implement Capabilities
City of Dallas	City Manager	The City Council for the City of Dallas, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments

The following is a summary of existing departments in Dallas and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the community. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural, floodplain managers, personnel with GIS skills and scientists familiar with hazards in the community. The organizational chart below presents the structure of the city's government.

Office of Emergency Management: The Office of Emergency Management (OEM) coordinates the activities of volunteer, public and private agencies in all phases of emergency management (Preparedness, Response, Recovery, and Mitigation). The OEM develops plans and exercises, and coordinates emergency management training for the City of Dallas and allied agencies. The OEM obtains assistance and resources to accomplish their mission from federal, state, local and private agencies.

The Office of Emergency Management (OEM) also assists City, State, and Federal officials and their respective constituents with disaster preparedness, response, mitigation, and recovery programs. Because a close working relationship with elected officials is crucial to the success of our mission, the Agency serves as a repository of information concerning

hazard identification and mitigation procedures. OEM also provides the public and media organizations with accurate and timely information regarding emergency management programs and issues in the City of Dallas.

Dallas Police Department: The City of Dallas Police Department comprises of over 4,200 employees (3,600 sworn). The department is organized into six primary bureaus. These include:

- ✓ Administrative Services Bureau
- ✓ Investigations Bureau
- ✓ Patrol Bureau
- ✓ Special Projects Bureau
- ✓ Strategic Deployment Bureau
- ✓ Fire Rescue Department

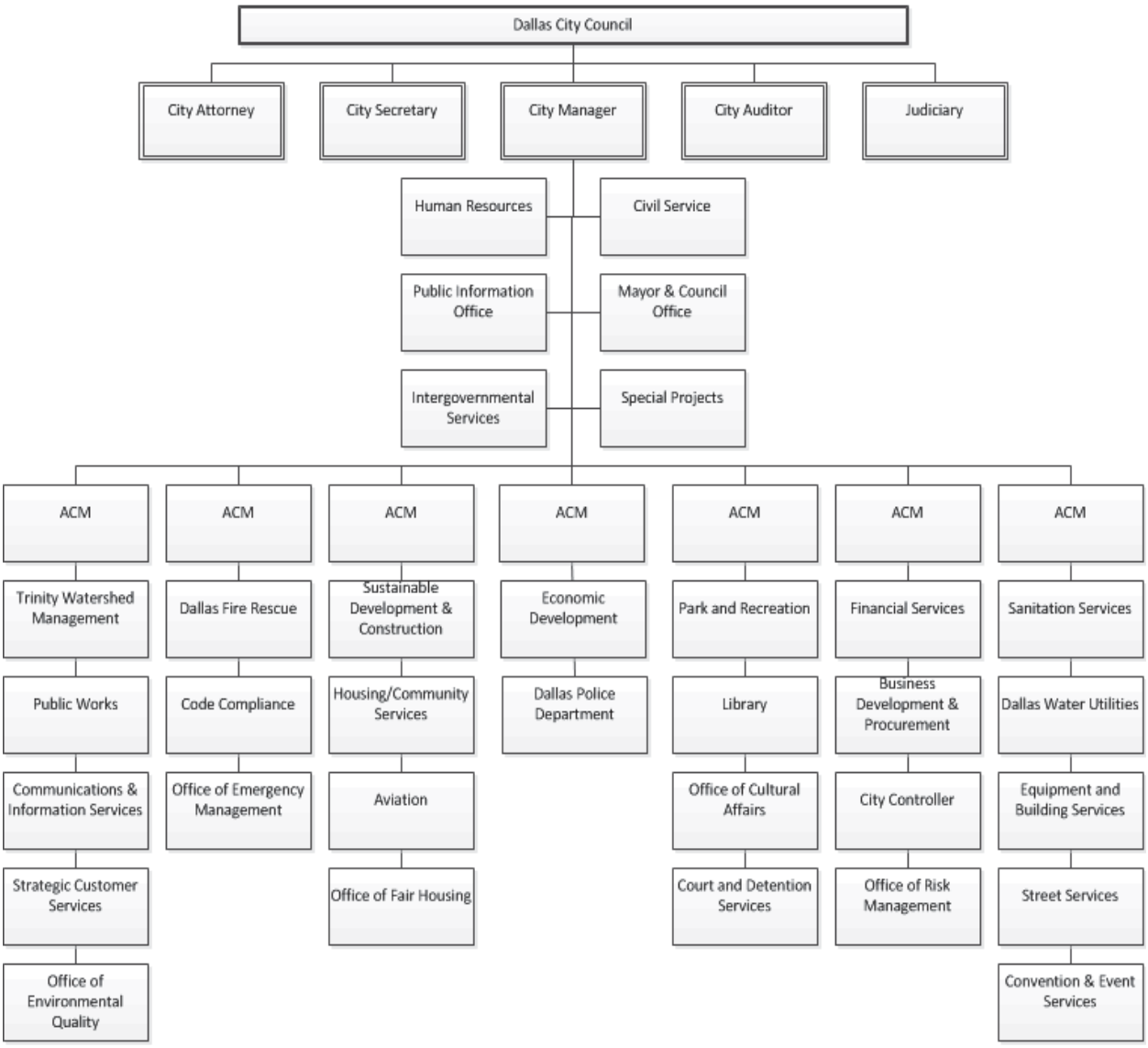
Several units fall under these primary bureaus, with the focus being service to the people of Dallas, while reducing crime and providing a safe city. This done by:

- ✓ Recognizing that the department's goal is to help people and provide assistance at every opportunity;
- ✓ Providing preventive, investigative, and enforcement services;
- ✓ Increasing citizen satisfaction with public safety and obtaining community cooperation through the Department's training, skills, and efforts; and
- ✓ Realizing that the Police Department alone cannot control crime, but must act in concert with the community and the rest of the Criminal Justice System.

Public Works: The Public Works Department is responsible for Capital Improvement Projects funded through voter approved Bond Programs. From building and replacing sidewalks, street resurfacing and reconstruction, building and remodeling libraries and fire stations, to large scale projects such as the American Airlines Center, the City Performance Hall, the Winspear Opera House and the Latino Cultural Center.

Sustainable Development and Construction: Sustainable Development and Construction is a combination of former departments — and divisions within other departments — that provided permit and plan review, approval and inspection services for private development. The department is designed to be more responsive to customers and more effective and efficient in internal communications. The Sustainable Development and Construction Department is structured such that a person wanting to build in Dallas can conduct business within one department, under the leadership of one director and one assistant city manager.

City of Dallas Organizational Chart



Administrative and Technical Capacity

The administrative and technical capabilities of Dallas, as shown in **Table 1.3** provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan.

Table 1-3
City of Dallas: Administrative and Technical Capability

Staff/Personnel Resources	Y/N	Department
Planner(s) or engineer(s) with knowledge of land management practices	Y	Sustainable Development, Trinity Watershed Management, Public Works
Engineer(s) or professional(s) trained in constructions practices related to buildings and/or infrastructure	Y	Public Works, Code Compliance, Equipment and Building Services, Street Services.
Planners or Engineer(s) with an understanding of natural hazards	Y	Trinity Watershed Management, Dallas Water Utilities, Public Works
Floodplain Manager	Y	Trinity Watershed Management
Surveyors	Y	Public Works
Staff with education and experience to assess the community's vulnerability to hazards	Y	Trinity Watershed Management, Public Works, Office of Emergency Management.
Personnel skilled in GIS	Y	Dallas Water Utilities
Scientists familiar with hazards of the community	Y	National Weather Service, SMU
Emergency Manager	Y	Office of Emergency Management

Legal and Regulatory Capabilities

The legal and regulatory capabilities of Dallas are shown in **Table 1-4**, which presents the existing ordinances and codes that affect the physical or built environment of Dallas. Examples of legal/or regulatory capabilities can include: building codes, zoning ordinances, subdivision ordinances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, and emergency response plans.

Table 1-4
City of Dallas: Legal and Regulatory Capability

Regulatory Tools (ordinances, codes, plans)	Local Authority (Y/N)	Does State Prohibit? (Y/N)
Building Code	Y	N
Zoning Ordinance	Y	N
Subdivision ordinance or regulations	Y	N
Grown management ordinances	Y	N
Site plan review requirements	Y	N
General Plan	Y	N
Capital improvements Plan	Y	N
Economic Development Plans	Y	N
Emergency Response Plan	Y	N

Risk and Vulnerability Assessment

The City of Dallas's Hazard Mitigation Plan Stakeholder Committee prepared a general assessment of the hazards that have potential to impact the city. The following sections provide an overview of past hazard events in the city and brief descriptions of the potential for future losses. The term planning area is used frequently in this section. This term refers to the geographic limits of the City of Dallas. The Risk Assessment section addresses the effects of hazards on the City of Dallas, its assets and residents.

a.) Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect The City of Dallas, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for the City of Dallas. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, City of Dallas employees, City of Dallas facilities, and City of Dallas Continuity of Government Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next 1 year	4

2.) Probability

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity

Low	1	Very few injuries, if at all none
Medium/Moderate	2	Minor Injuries
High	3	Multiple deaths/injuries
Catastrophic	4	High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to people, property, environment, City of Dallas employees, City of Dallas facilities, and City of Dallas Continuity of Government:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential damage: the potential damage was calculated by adding the numerical value given to people, property, and the environment (city of Dallas employees, City of Dallas facilities, and City of Dallas businesses processes) will equal the potential damage. (People + property + environment = potential damage (pd) or City of Dallas employees + City of Dallas facilities + City of Dallas business processes=potential damage (pd).

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	**Degree of Risk**		
	Level	**Criteria**	**Index Value**
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area	2

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
		damaged/destroyed. Complete shutdown of critical facilities for more than one day.	
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4



Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: **JUNE 2013**

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
High Winds	4	4	4	4.00	1	2	2	5	80%
Tornado	4	4	4	4.00	2	3	1	6	66%
Pandemic/Public Health Emergency	1	1	4	4.00	4	1	1	6	66%
Hail	4	4	3	3.00	1	3	1	5	60%
Flooding	3	3	4	4.00	1	3	3	7	57%
Extreme Temperatures/Heat/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3.00	2	2	2	6	50%
Winter Storms	2	4	4	2.00	2	1	1	4	50%
Lightning	4	4	2	2.00	1	3	1	5	40%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Earthquake	1	1	3	3.300	3	4	3	10	30%
Levee/Dam Failure	1	1	2	2.00	1	3	3	7	28%
Drought	4	3	2	2.66	2	4	4	10	26%
Aircraft Accident	1	1	2	2.00	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.500	1	1	3	5	10%
Wildfire	1	2	1	.500	1	1	3	5	10%

The following natural and technological hazards were identified for the City of Dallas.

Table 2.1.2: Hazards Included in Risk and Vulnerability Assessment

Hazard	Justification for Inclusion
Biological	Frequency, previous incidents, citywide hazard
Drought	Frequency, previous incidents, citywide hazard
Flooding	Frequency, previous incidents, citywide hazard
Hazardous Materials (Fixed and Transport)	Previous incidents, citywide hazards
Lightning	Frequency, citywide hazard
Terrorism	Potential adverse impact
Aircraft Crash	Potential adverse impact
Tornado	Frequency, previous incidents, citywide hazard
Severe Thunderstorms and High Winds	Frequency, previous incidents, citywide hazard
Lightning	Frequency, citywide hazard
Earthquake	Potential adverse impacts
Dam Levee Failure	Potential adverse impacts
Winter Storms	Frequency, previous incidents, citywide hazard
Hail	Citywide hazard

The following hazards were not profiled due to geographic location, low occurrence, or low potential damage.

Table 2.1.3: Hazards Not Included in the Risk and Vulnerability Assessment

Hazard	Justification for Omission
Civil Disturbance	Low occurrence, low vulnerability
Coastal Erosion	Geographic proximity
Hurricane/Tropical Storms	Geographic proximity
Landslides	Low occurrence
Sinkholes	Low vulnerability
Wildfire	Low vulnerability

The following information was included in each hazard profile:

- ✓ Hazard Definition: Definition of the hazard will include a description of the hazard and the general threats that they pose. All hazards were identified using statistical data and records from a variety of sources, including National Weather Service data, maps, and hazmat response data. The lists of hazards are based on frequency, severity, probability, potential loss, vulnerability, and large scale effect on City of Dallas.
- ✓ Hazard Identification: Each hazard will be profiled to explain how it will affect or has affected the City of Dallas. This will include areas prone to specific hazards and the effects that they have had on the City of Dallas infrastructure. It also includes previous incidents that have affected the City of Dallas.

The Hazard Mitigation Planning Team (HMPT) held discussion on each of the hazards, and was able to come to consensus on the disposition of each hazard. The HMPT also took into account the changes in development and population while conducting this assessment. After these discussions and reviews, the following hazards were selected for inclusion in the plan:

Natural Hazards is a naturally occurring event that might have a negative effect on people or the environment. Natural hazard include meteorological phenomena drought, tornadoes, and severe thunderstorms. Natural hazards have had a devastating effect on human lives, property, and the economy. The natural hazards considered in this plan include:

- ✓ Tornado
- ✓ Flooding
- ✓ Severe Thunderstorm Extreme Wind Event (Includes Straight Line and Thunderstorm Wind)
- ✓ Hail
- ✓ Lightning
- ✓ Winter Storm
- ✓ Earthquake
- ✓ Drought
- ✓ Extreme Heat

Other hazards will include technological or man-made or hazards such as:

- ✓ Biological
- ✓ Hazardous Materials (Fixed and Transport)
- ✓ Airport/Aircraft Crash
- ✓ Terrorism
- ✓ Dam/Levee Failure

Each of these identified were put into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Dallas are as follows:

High Risk (over 65% on HIRA)	Tornado Biological High Winds
Moderate Risk (41%- 65% on HIRA)	Flooding Hail Winter Storms Extreme Heat Hazardous Materials Lightning
Low Risk (12 %-40% on HIRA)	Drought Earthquake Dam/Levee Failure Terrorism Aircraft Accident
No Risk (Below 12% on HIRA)	Wildfire Stream Bank Erosion

Tornado

Description of Tornado Hazard: A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity (but sometimes result from hurricanes and other tropical storms) when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, accompanied by lightning or large hail.

According to the National Weather Service, tornado wind speeds normally range from 40 to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

On average, over 900 tornadoes are reported nationwide each year, resulting in an average of 80 deaths and 1,500 injuries (NOAA, 2013). They are more likely to occur during the months of March through May and can occur at any time of day, but are most likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small short-lived tornadoes can inflict tremendous damage.

Extent of the Tornado Hazard: The Fujita scale and the Enhanced Fujita Scale rate tornadoes by damage caused. The Enhanced Fujita Scale was an upgrade to the older Fujita scale but was designed so that a tornado rated on the Fujita scale would receive the same numerical rating. An EF0 tornado will probably damage trees but not substantial structures; whereas an EF5 tornado can rip buildings off their foundations leaving them bare and even deform large skyscrapers.

Tornadoes vary in intensity regardless of shape, size, and location, though strong tornadoes are typically larger than weak tornadoes. The association with track length and duration also varies, although longer track tornadoes tend to be stronger. In the case of violent tornadoes, only a small portion of the path area is of violent intensity, most of the higher intensity is from sub vortices. In the United States, 80% of tornadoes are EF0 and EF1 tornadoes. The rate of occurrence drops off quickly with increasing strength -less than 1% are violent tornadoes (EF4 or stronger).

The Enhanced Fujita Scale

EF Scale	Intensity Phrase	MPH	Type of Damage Done
EF0	Gale	65 - 85	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted trees; damage to sign boards
EF1	Moderate	86-100	The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF2	Significant	111 - 135	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light object missiles generated.
EF3	Severe	136 - 165	Roof and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted.
EF4	Devastating	166 - 200	Well-constructed houses leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.
EF5	Incredible	Over 200	Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-enforced concrete structures badly damaged.

Source: National Weather Service

Occurrences of the Tornado Hazard: It is important to note that only reported tornadoes have been factored into this risk assessment. Figure 1.3-14-1 presents a map of historical tornado point locations that hit the City of Dallas study area from 1950 to 2008. Tornado storms can occur at any time of year and at any time of day, but they are typically more common in the spring months during the late afternoon and evening hours.

Historical Tornado Events 1996 - 2012

Date	EF Rating	Injuries	Property Damage
01/17/1996	EF1	1	$750,000.00
01/17/1996	EF2	0	$750,000.00
10/21/1996	EF1	0	0
10/21/1996	EF1	7	$3,000,000.00
10/21/1996	EF0	1	$120,000.00
03/28/2000	EF2	0	0
03/28/2000	EF2	0	0
03/28/2000	EF0	0	0
09/05/2001	EF1	0	$125,000.00
04/05/2003	EF0	0	$1,000.00
04/25/2005	EF0	0	0
04/13/2007	EF0	0	0
06/26/2007	EF0	0	$60,000.00
04/10/2008	EF1	0	$1,000,000.00
09/08/2010	EF1	0	$200,000.00
09/08/2010	EF2	1	$750,000.00
05/24/2011	EF1	0	$150,000.00
05/24/2011	EF1	0	0
04/03/2012	EF2	10	$400,000,000.00
04/03/2012	EF0	0	$4,000.00
04/03/2012	EF0	0	$100,000.00
04/03/2012	EF0	0	$150,000.00

Source: NCDC

April 3, 2012 Tornado Outbreak: A historic North Texas tornado outbreak occurred on April 3, 2012, with 17 tornadoes developing from the DFW Metroplex east to Hopkins County. An EF-3 tornado tore through the town of Forney, heavily damaging homes in the Diamond Creek subdivision. Three EF-2 tornadoes damaged parts of Arlington and Kennedale in Tarrant County; Red Oak, Lancaster, Dallas, Ellis and Dallas counties; and Royse City in Rockwall and Hunt counties. An EF-1 tornado caused damage near Joshua in Johnson County, and the remaining 12 tornadoes were rated EF-0s. In addition to the tornadoes, large hail damaged many parts of the DFW Metroplex. Approximately 110 airplanes at DFW International Airport were damaged by the hail and taken out of service until repaired. No fatalities occurred and only 29 people were injured. Of the 29 injuries, only 3 were considered serious.

1957 Dallas Tornado: The 1957 Dallas Tornado might easily be dismissed as just one out of scores of common Texas twisters, each in its time having done some damage and, perhaps, killed a few unfortunate people. The Dallas tornado was no monster to rival, for instance, the F4 that ravaged Wichita Falls in 1979. Retrospectively it has been determined to have been a category F3 (the original Fujita-Pearson scale was not developed until 1971). As it carved a sixteen mile path through Oak Cliff and West Dallas over a time span of about forty minutes, it took the lives of ten people, including three children from a single family (the highest death toll from a tornado to date in the DFW area), injured approximately 200 and left 500 homeless.

Five-hundred seventy-four structures were damaged, including between 131 and 154 homes and between 9 and 28 apartment buildings that were completely destroyed. Property

losses totaled $4 million (in 1957 dollars). It was one of about twenty-five tornadoes spotted around north central Texas and southern Oklahoma that day.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been 14 recorded injuries or fatalities from tornado events in the City of Dallas. All the population of the City of Dallas is exposed and vulnerable to this hazard. Therefore, the probability of future occurrence can be rated as high.
Improved Property	According to National Climatic Data Center (NCDC), an average loss of $1.1 million per year in property losses is expected to result from tornado events. Zero crop losses are expected from this hazard in The City of Dallas. All improved property is equally at risk for impact by tornado events.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Dallas County are exposed to this hazard.

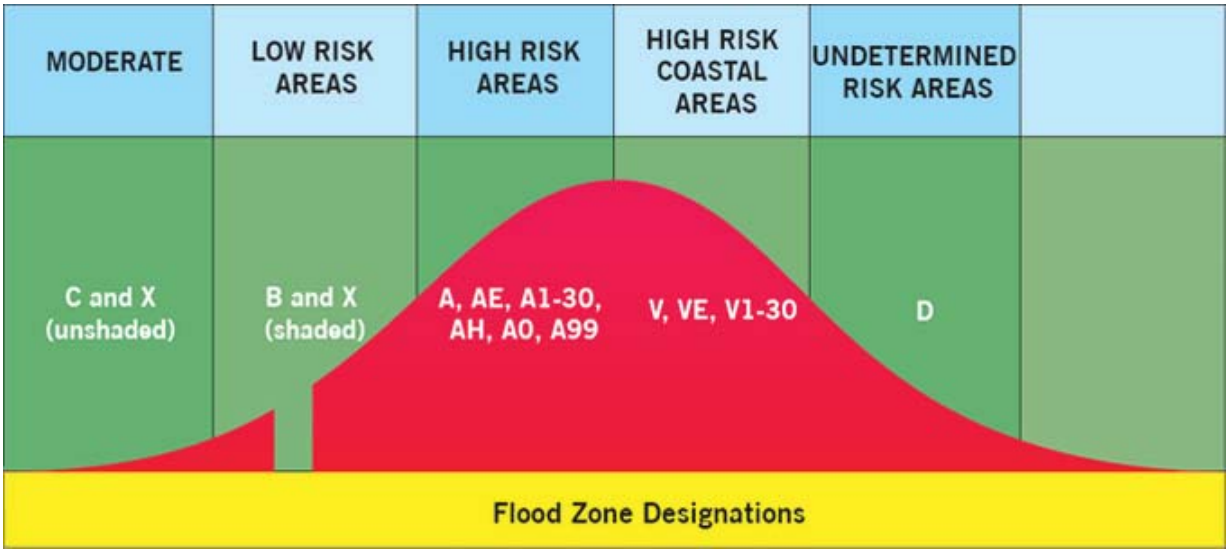
Flooding

Description of the Flooding Hazard: Floods are naturally occurring events. Excess water from snowmelt, rainfall, or storm surge accumulates and either overflows onto banks or backs up into adjacent floodplains. Flooding in coastal environments can be exacerbated by tidal influence in low lying areas.

The National Flood Insurance Program (NFIP) defines flood as a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waters, from unusual and rapid accumulation or runoff of surface waters from any source, or from mudflow.

The City of Dallas does participate in the NFIP. In support of the NFIP, FEMA identifies those areas that are more vulnerable to flooding by producing Flood Hazard Boundary Maps (FHBM), Flood Insurance Rate Maps (FIRM), and Flood Boundary and Floodway Maps (FBFM). Several areas of flood hazards are commonly identified on these maps. One of the areas identified in the Special Flood Hazard Area (SFHA), which is a high risk area defined as any land that would be inundated by a flood having a 1% chance of occurring in any given year (also known as the base flood). The flood zone designations are defined as follows:

Flood Zone Designations



Source: FEMA

Impact on Life and Property from the Flooding Hazard: Flooding is the most common natural disaster in the United States, and in the State of Texas. According to floodsmart.gov, in 2012 there were 36,127 NFIP claims paid in the State of Texas.

According to the Texas Water Development Board, the City of Dallas has 3525 NFIP active policies as of January 2015, with a total premium of $3,019,794 being paid out. 917 claims have been made in the city and a total of $11,751,312 has been paid out in closed claims.

NFIP Program: The City of Dallas has a Repetitive Loss Plan which is updated annually for the Community Rating System (CRS) recertification and is maintained by Floodplain Management. The City has mapped the Repetitive Loss (RL) structures and does a separate outreach to the area they are in each year. The City also has a project on the needs inventory to purchase as many of them as the city can, but it is not currently funded.

The City of Dallas Floodplain Management maintains and enforces the City's floodplain ordinance. Residential and commercial development, including earthwork, existing or new structures within the 1% Annual Chance (100-year) floodplain are reviewed and evaluated by the City of Dallas to ensure that floodplain criteria are met. The floodplain map depicts map detailing these locations can be found on G-23.

Occurrence of Flood Hazard in the City of Dallas

Date	Type of Flooding	Fatalities	Injuries	Estimated Damage	Notes
07/01/2005	Urban	0	0	0	Street flooding in South East Dallas.
03/19/2006	Flash Flood	0	0	0	Water was flowing over Northwest Highway from White Rock Creek
07/02/2007	Flash Flood	0	0	0	Upper level energy combined with high moisture to create several rounds of showers and thunderstorms. This resulted in flooding as rain fell on already saturated grounds minor street flood reported.
09/05/2007	Flood	0	0	0	An upper level low lingered in the area creating conditions ripe for flooding. Several instances of flash flooding were reported as a large area of rain persisted through mid-morning.
09/13/2009	Flood	0	0	0	A slow moving tropical upper level system brought rainfall to north Texas for 5-6 days. Total rainfall accumulations across north Texas ranged from less than an inch to nearly 15 inches. Most locations picked up 2-10 inches over the entire event. Periods of heavy rainfall and training of echoes resulted in significant flash flooding in some areas. Significant flooding continued across the southern and southwestern portions of Dallas County. Several roads remained closed. The area north of Interstate 30 and south of the Trinity River in west Dallas remained flooded.

Dallas Flood of 1908: Dallas was settled in close proximity to the Trinity River as trade and commerce were primary motivating factors behind establishing the city close to a body of water. The disadvantage was that the river was prone to flooding, especially during severe rainstorms. Major Dallas floods took place in 1844, 1866, 1871, and 1890. However, the worst flood in Dallas history was in May of 1908, when the Trinity rose to 52.6 feet and

where five people perished, 4000 more were displaced and thousands of cattle drowned in the disastrous overflow. In addition, essential utility and communication services were disrupted and downtown bridges and train lines were flooded, preventing transportation between the downtown business sector and Oak Cliff. Although property loss reached $2.5 million, an astronomic amount at the time, the 1908 flood had another significant historic repercussion for Dallas.

As Dallas experienced an unexpected economic and population boom in the late 19th and early 20th centuries, city leaders wrestled with how to structure the municipality into a hub of commerce and an economic, cultural and political center. However, the historic 1908 Dallas flood provided a decisive impetus to devising a managed growth plan for the city. In fact, the devastating flood put an end to a decade old debate about reining in and containing the haphazard growth and outward extension of the municipality. A multifaceted city plan had to be devised.

To restrain the Trinity and curb the potentially catastrophic consequences of flooding, as well as draft a long-term improvement plan for Dallas, city leaders hired the German-born George Kessler, a city planner who earlier designed Fair Park. Kessler devised a comprehensive, far-reaching proposal, including building a levee system to redirect the Trinity River, centralizing train terminals, opening up and broadening various narrow downtown streets, developing city parks and constructing Central Expressway. Although not all the elements of the Kessler Plan were actualized immediately, many were seen as important and beneficial and were eventually put in place, to the great advantage of Dallas and its residents.

Structure / Property Flood Vulnerability

Category of Property in Jurisdiction	FEMA 100 Parcels	FEMA 100 or 500	FEMA 100 Parcels with buildings	FEMA 100 and 500 Parcels with buildings
Residential				
Count	11,595	24,368	9,318	19,575
Value	$4,628,411,970	$5,450,406,560	$3,634,097,450	$4,382,020,090
Commercial				
Count	1,324	4,509	805	2,986
Value	$3,095,219,000	$5,564,761,390	$2,839,545,440	$5,128,349,800
Industrial				
Count	2044	4663	933	2838
Value	$1,667,444,090	$2,687,006,710	$1,600,192,780	$2,595,576,550
Government / Public*				
Count	1431	1905	270	434
Value	$1,343,044,570	$1,385,325,280	$284,918,760	$306,938,270
Totals				
Count	16,394	35,445	11,326	25,833
Total Value	$10,734,119,570	$15,087,499,940	$8,358,754,430	$12,412,885,610
*Based on being owned by the City of Dallas in DCAD				

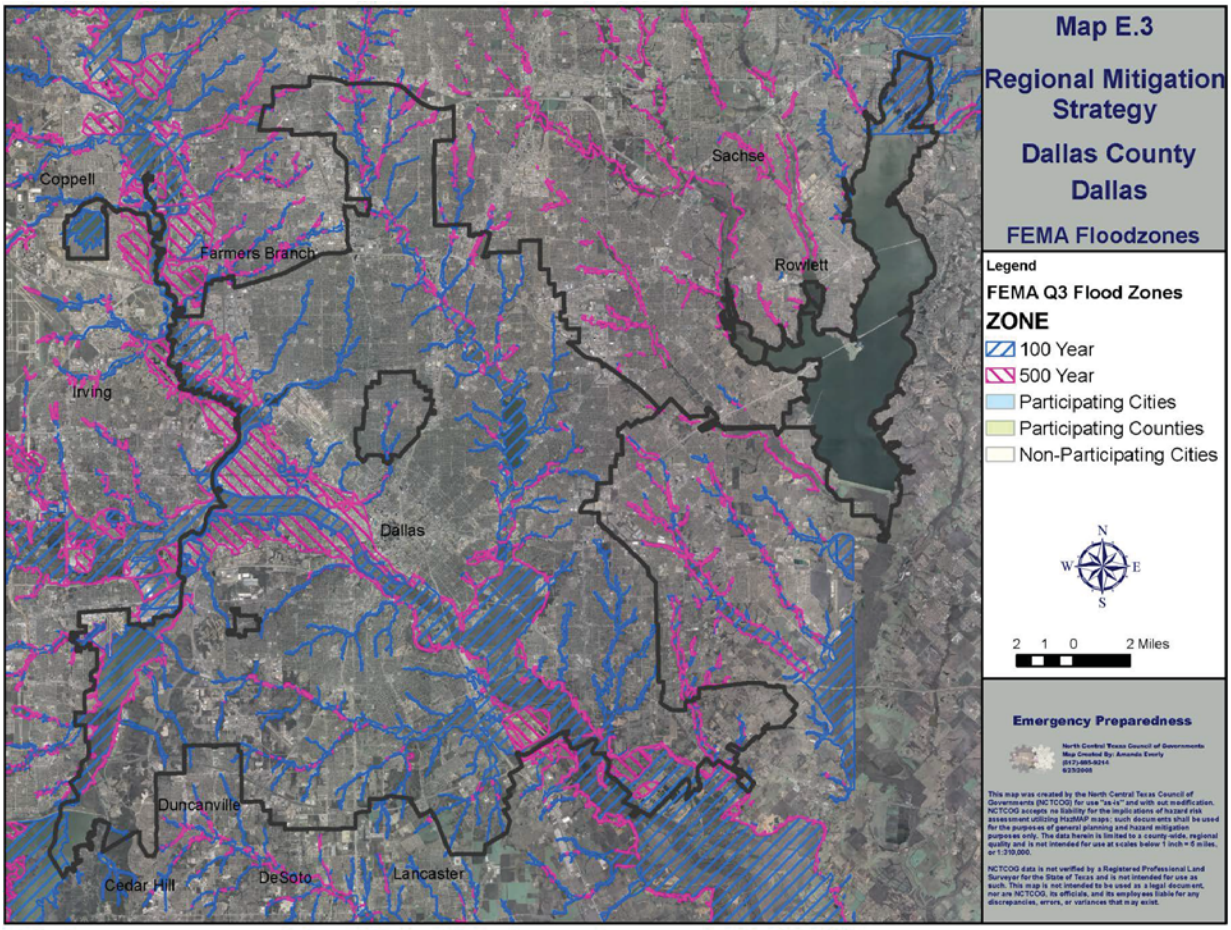
Repetitive Loss/Severe Repetitive Loss Information

City of Dallas	Years	Properties	Number of losses	Payments
Single Family	2006-2013	19,575	230	$5,756,700.00
Other Residential	2006-2013	1905	0	
Non Residential	2006-2013	2,838	434	$14,382.020.00
Total		24,318	664	$20,138,720.00

Summary of Vulnerability Assessment

Flooding	
Population	Although not every location in the City of Dallas is flooded every year, there is a 90% chance that the City will experience a flood event in any given year. Approximately 25% of the population of the City of Dallas is located within the 100 year floodplain.
Improved Property	A loss of $23 million per year can be expected in property loss due to flooding, and 45% of the total assessed value of improvements in the City of Dallas is at risk from the 100 year storm event.
Emergency Facilities	There are 15 emergency facilities at imminent risk from the 100 year flood event.
Critical Facilities	There are 20 critical facilities located within the 100 year storm event.
Critical Infrastructure	25% of railways/highways and bridges, 50% of dams, and 50% of water treatments works, and 50% waste water treatment facilities are at risk from the 100 year storm event. Many of these structures are designed to traverse or be located within the floodplain due to unavoidable circumstances. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities to be located within the floodplain.

City of Dallas Floodplain Map



Severe Thunderstorm and High Winds

Description of Thunderstorm Hazard: Thunders storms are considered a common occurrence in the City of Dallas. Typical thunderstorms are 15 miles in diameter and lasts an average of 30 minutes. Despite the short time span, thunderstorms can be extremely dangerous as they are often strong and fast in their approach and can be accompanied by flash flooding, lightning, hail, tornadoes, and high winds.

Locations of Thunderstorm Hazard: Thunderstorms occur randomly, and therefore it is impossible to predict where they will occur within the City. Thus, it is assumed that the City of Dallas is uniformly exposed to the threat of thunderstorms. Thunderstorms can generally form and develop in any particular geographic location, perhaps most frequently within areas located at mid-latitude when warm moist air collides with cooler air. Damage that results from thunderstorms is mainly inflicted by downburst winds, large hailstones, and flash flooding caused by heavy precipitation. Stronger thunderstorm cells are capable of producing tornadoes and waterspouts. A 1953 study found that the average thunderstorm over several hours expends enough energy to equal 50 A-bombs of the type that was dropped on Hiroshima, Japan during World War Two.

There are four types of thunderstorms: single-cell, multi-cell cluster, multi-cell lines, and supercell.

- ✓ ***Single-cell thunderstorms*** - Single cell storms typically do not produce severe weather and usually last for 20-30 minutes. Also known as pulse storms, single cell storms seem quite random (perhaps because of our lack of understanding) in the production of brief severe events such as downbursts, hail, some heavy rainfall, and occasional weak tornadoes.
- ✓ ***Multi-cell cluster*** - A multi-cell cluster consists of a group of cells moving as a single unit, with each cell in a different stage of the thunderstorm life cycle. As the multi-cell cluster evolves, individual cells take turns at being the most dominant. New cells tend to form along the upwind (typically western or southwestern) edge of the cluster, with mature cells located at the center and dissipating cells found along the downwind (east or northeast) portion of the cluster.
- ✓ ***Multi-cell line storms*** – Multi-cell line storms, better known as squall lines, consist of a line of storms with a continuous, well developed gust front at the leading edge of the line. An approaching multi-cell line often appears as a dark bank of clouds covering the western horizon. The great number of closely-spaced updraft/downdraft couplets qualifies this complex as multicellular, although storm structure is quite different from that of the multi-cell cluster storm.
- ✓ ***Supercell Thunderstorms***: The last of the four major storm types is the supercell. We define a supercell as a thunderstorm with a deep rotating updraft (mesocyclone). In fact, the major difference between supercell and multi-cell storms is the element of rotation in supercells. Even though it is the rarest of storm types, the supercell is the most dangerous because of the extreme weather generated

Description of the High Wind Hazard: As defined by the National Weather Service, wind is the horizontal motion of the air past a given point. Winds begin with differences in air pressures. Pressure that's higher at one place than another sets up a force pushing from the high toward the low pressure. The greater the difference in pressures, the stronger the

force. The distance between the area of high pressure and the area of low pressure also determines how fast the moving air is accelerated. Meteorologists refer to the force that starts the wind flowing as the "pressure gradient force." High and low pressures are relative. There's no set number that divides high and low pressure. Wind is used to describe the prevailing direction from which the wind is blowing with the speed given usually in miles per hour or knots.

For mitigation planning purposes, extreme winds are most often associated with severe storms, including

- ✓ Severe Thunderstorms
- ✓ Straight Line Winds
- ✓ Tropical Systems/Hurricanes
- ✓ Tornadoes

The National Oceanic and Atmospheric Administration (NOAA) defines a severe thunderstorm as a thunderstorm that produces a tornado, winds of at least 58 mph (50 knots), and/or hail at least ¾" in diameter. Structural wind damage may imply the occurrence of a severe thunderstorm. A thunderstorm wind equal to or greater than 40 mph (35 knots) and/or hail of at least ½" is defined as approaching severe.

Straight line winds are responsible for most thunderstorm wind damages, and can exceed 100 MPH. One type of straight-line wind, the downburst, is a small area of rapidly descending air beneath a thunderstorm. A downburst can cause damage equivalent to a strong tornado and can be extremely dangerous to aviation According to NOAA, a hurricane is an intense tropical weather system of strong thunderstorms with well-defined surface circulation and sustained winds of 74 MPH or higher.

Vulnerability Assessment Summary for Thunderstorm and High Wind

Severe Thunderstorm and High Wind	
Population	According to National Climatic Data Center (NCDC), there are no recorded injuries or fatalities from severe thunderstorm and high wind hazards. All the population of the City of Dallas is exposed to this hazard.
Improved Property	According to the National Climatic Data Center (NCDC), an average loss of $2 million per year in property losses is expected from severe thunderstorm and high wind events in the City of Dallas. All improved property is equally at risk for impact by thunderstorm and high wind events.
Emergency Facilities	Because of the expected geographical widespread nature of severe thunderstorm and high winds, all emergency facilities in the City of Dallas are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of severe thunderstorm and high winds, all critical facilities in the City of Dallas are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of severe thunderstorm and high winds, all critical infrastructures in the City of Dallas are exposed to this hazard.

Hail

Description of Hail Hazard: Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and the subsequent cooling of the air mass. Frozen droplets gradually accumulate on the ice crystals until having developed sufficient weight they fall as precipitation, as balls or irregularly shaped masses of ice greater than 0.75 inches in diameter.

The size of hailstones is a direct function of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a result of the intensity of heating at the Earth's surface. Higher temperature gradients relative to elevation above the surface result in increased suspension time and hailstone size.

Location: Hailstorms can vary greatly in terms of size, location, intensity and duration but are considered frequent occurrences throughout the City of Dallas. It is assumed that the entire City is uniformly exposed to hailstorms.

Extent: The National Weather Service classifies a storm as severe if hail of ¾ of an inch in diameter or greater is imminent based on radar intensity or seen by observers. The intensity of a hailstorm depends on the damage potential related to size as depicted in the NCDC Intensity Scale in section 5 of this plan.

On June 13, 2012 the city experienced the 4th costliest hailstorm in the history of the State. Four supercells produced a record setting hail event and one tornado across parts of North Texas. Two of the four supercells tracked through Dallas County causing over a billion dollars in hail damage. The hail in Dallas County ranged in sizes up to 3 in diameter. In many areas, the hail lasted for at least 30 minutes. Tens of thousands of cars were damaged by the hail, windows were shattered, roofs were damaged, and trees were shredded of their leaves. The Lakewood area of Dallas was one of the hardest hit areas. Part of the Lakewood Theater was damaged, and thousands of divots damaged the golf course at the Lakewood Country Club. Historic homes on Swiss Avenue sustained significant roof damage with roof repairs on a few homes estimated over $100,000. This supercell continued to track into Ellis County producing hail damage down to Midlothian. The second supercell in Dallas County tracked from Irving into Cedar Hill. Damage estimates were estimated as high as $2 billion dollars for this event, but insurance companies anticipated the final damage totals to be around $1.1 billion. One head injury was reported when the hail broke through the sunroof of a car.

List of Costliest City of Dallas Hail Events for the Past 20 years

Date	Property Damage	Size (inches)	Deaths	Injuries
03/25/1995	$30,000,000.00	1.75	0	0
02/25/2000	$20,000,000.00	3.5	0	0
04/05/2003	$750,000.00	1.75	0	0
04/13/2007	$10,000.00	1.75	0	0
05/24/2011	$380,000.00	2.75	0	0
06/13/2012	$9,000,000.00	2.75	0	0
03/09/2013	$5,000,000.00	1.75	0	0

Source: NCDC

Vulnerability Assessment Summary for Hail

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. There are no personal losses expected from hailstorm events.
Improved Property	According to the Texas Department of Insurance, a loss of $2 billion per year can be expected in property loss due to hailstorm damage, and all improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for the City of Dallas indicates that there are no expected crop losses from this event. All improved property is equally at risk for impact by hail events.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in the City of Dallas are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in the City of Dallas are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in Dallas County are exposed to this hazard.

Lightning

Description of the Lightning Hazard: Lightning is an atmospheric discharge of electricity accompanied by thunder, which typically occurs during thunderstorms, and sometimes during volcanic eruptions or dust storms. In the atmospheric electrical discharge, a leader of a bolt of lightning can travel at speeds of 130,000 MPH, and can reach temperatures approaching 54,000 °F, hot enough to fuse silica sand into glass.

There are some 16 million lightning storms in the world every year. Lightning can also occur within the ash clouds from volcanic eruptions, or can be caused by violent forest fires which generate sufficient dust to create a static charge. Lightning rapidly heats the air in its immediate vicinity to about 36,000 °F - about three times the temperature of the surface of the sun. This compresses the surrounding air and creates a supersonic shock wave, which decays to an acoustic wave that is heard as thunder.

The following are descriptions of various terms used to describe lightning, both scientific and common usage:

- ✓ **Cloud-to-Ground Lightning**. This is the best known and second most common type of lightning. Of all the different types of lightning, it poses the greatest threat to life and property since it strikes the ground. Cloud-to-ground lightning is a lightning discharge between a cumulonimbus cloud and the ground. It is initiated by a leader stroke moving down from the cloud.
- ✓ **Bead Lightning**. Bead lightning is a type of cloud-to-ground lightning which appears to break up into a string of short, bright sections, which last longer than the usual discharge channel. It is relatively rare. Several theories have been proposed to explain it; one is that the observer sees portions of the lightning channel end on, and that these portions appear especially bright. Another is that, in bead lightning, the width of the lightning channel varies; as the lightning channel cools and fades, the wider sections cool more slowly and remain visible longer, appearing as a string of beads.
- ✓ **Ribbon Lightning**. Ribbon lightning occurs in thunderstorms with high cross winds and multiple return strokes. The wind will blow each successive return stroke slightly to one side of the previous return stroke, causing a ribbon effect.
- ✓ **Staccato Lightning**. Staccato lightning is a cloud to ground lightning strike which is a short-duration stroke that appears as a single very bright flash and often has considerable branching.
- ✓ **Ground-to-Cloud Lightning**. Ground-to-cloud lightning is a lightning discharge between the ground and a cumulonimbus cloud initiated by an upward-moving leader stroke. It is much rarer than cloud-to-ground lightning. This type of lightning forms when negatively charged ions called the stepped leader rises up from the ground and meets the positively charged ions in a cumulonimbus cloud. Then the strike goes back to the ground as the return stroke.
- ✓ **Cloud-to-Cloud Lightning**. Lightning discharges may occur between areas of cloud without contacting the ground. When it occurs between two separate clouds it is known as inter-cloud lightning and when it occurs between areas of differing electric potential within a single cloud, it is known as intra-cloud lightning. Intra-cloud lightning is the most frequently occurring type.

- ✓ **Dry Lightning**. Dry lightning is a term used for lightning that occurs with no precipitation at the surface. This type of lightning is the most common natural cause of wildfires. Pyrocumulus clouds produce lightning for the same reason that it is produced by cumulonimbus clouds. When the higher levels of the atmosphere are cooler, and the surface is warmed to Extreme Temperatures/Heat due to a wildfire, volcano, etc., convection will occur, and the convection produces lightning. Therefore, fire can beget dry lightning through the development of more dry thunderstorms which cause more fires.

Severity of the Lightning Hazard: As stated in Section 5 of the plan, the Lightning Flash Density for Dallas County ranges between four to eight flashes per squared kilometer per year. The extent and severity of future lightning are expected to be around the same range.

Impact on Life and Property from the Lightning Hazard

Lightning is the leading cause of weather-related personal injuries. Perhaps because lightning is a common weather phenomenon, most people do not take the associated risks of exposure to lightning as seriously as they should.

Lightning is a major cause of storm related deaths in the U.S., out pacing hurricanes and tornados in most years. A lightning strike can result in a cardiac arrest (heart stopping) at the time of the injury, although some victims may appear to have a delayed death a few days later if they are resuscitated but have suffered irreversible brain damage.

On average, for every person actually struck by lightning, 10 additional people are affected by the strike. According to Storm Data, a National Weather Service publication, over the last 30 years the U.S. has averaged 58 reported lightning fatalities per year. Due to under reporting, the figures are more realistically at least 70 deaths per year. Only about 10% of people who are struck by lightning are killed, leaving 90% with various degrees of disability.

In 2012, there were 28 lightning fatalities, 2 more than the 2011 total of 26. The 2012 number still is well below the 10-year average of 37 fatalities. Florida has the most number of victims with 5 fatalities, followed by New Jersey and Texas with 3 each.

In addition to the impact lightning can have on people, lightning can have significant impact on property, including utility infrastructure, such as lift stations and electrical sub-stations. Lightning is the leading natural cause of wildfires, and can lead to structure fires as well.

In addition to direct losses such as property damage to buildings, a lightning strike may result in the indirect losses that often accompany the destruction or damage of buildings and their contents. For example, municipalities rely upon the integrity of their structures as they provide services to their communities. A stroke of lightning to an unprotected building that houses the police or fire station may result in an interruption of vital services to the community. The consequences of such an interruption can range from the public's loss of confidence to a citizen's death when a department is unable to respond to an emergency call.

Vulnerability Assessment Summary for Hail

Lightning	
Population	According to the National Climatic Data Center (NCDC), 26 lightning related deaths and injuries occur on average in Texas. The City has 2 confirmed injuries related to lightning strikes in the past 10 years.
Improved Property	According to the Fire Rescue records on average of 10 - 15 structures are lost due to lightning strikes. There have been $8 million recorded property losses resulting from lightning in the City of Dallas. All improved property is equally at risk for impact by lightning events.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Dallas County are exposed to this hazard.

Winter Storms

Hazard Definition: Severe Winter Storms bring the threat of high winds, freezing rain or sleet, and cold temperatures to the City of Dallas. Heavy accumulations of ice, combined with high winds, can knock down trees and destroy power lines. Conditions during a winter storm can make traversing on sidewalks and traveling on streets extremely dangerous. A winter storms effects can linger for days by shutting down normal day to day operations and causing life threatening conditions when the power is out. In addition to power loss, extensive damage to property can occur when frozen pipes burst. Severe winter storms are particularly hard on the elderly and children due to vulnerabilities associated with cold temperatures.

Hazard Identification: Numerous databases were used in identifying the severe winter storm hazards that have occurred in the City of Dallas. Sources include that National Climatic Data Center (NCDC) and the National Weather Service (NWS).

One of the biggest winter storms to experience in Dallas occurred on January 1, 1978 (aka: The Great New Year's Eve Ice Storm), was the worst ice storm in North Texas in three decades, producing ice accumulations up to 2 inches thick in a 100 mile wide swath from just west of Waco to Paris, Texas. 2,000 residents were treated for injuries from vehicle accidents, falls on ice and frostbite. Nearly 300,000 Dallas County customers lost power for two days, while others lost power for up to 10 days. The total amount of damage exceeded $14 million dollars.

Another devastating winter storm occurred on February 24-25, 2003, up to five inches of sleet and snow fell in the area, including one inch of ice accumulation. Area schools were closed for several days while city personnel worked 24/7 to clear the streets. There was a significant economic loss due to lost revenue from stranded motorists, canceled flights, closed businesses, and emergency expenditures. Although these storms were large disasters, the February 11-12, 2010, storm was record-breaking. Snow began to fall across North Texas beginning in the early hours of February 11 and continued for 24 hours. The total region wide economic impact totaled approximately $20 million.

Vulnerability Assessment Summary for Winter Storm

Winter Storm	
Population	According to National Climatic Data Center (NCDC) there have been no recorded injuries or fatalities from winter storms. All the population of the City of Dallas is exposed to this hazard.
Improved Property	According to the National Climatic Data Center (NCDC), an average loss of $600,000 per year in property losses is expected to result from winter storm events. No crop losses are expected from this hazard in the City of Dallas. All improved property is equally at risk for impact by winter storm events.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in the City of Dallas are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in the City of Dallas are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in the City of Dallas are exposed to this hazard.

Earthquake Hazard

Description of Earthquake Hazard: An earthquake is the motion or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons; and disrupt the social and economic functioning of the affected area.

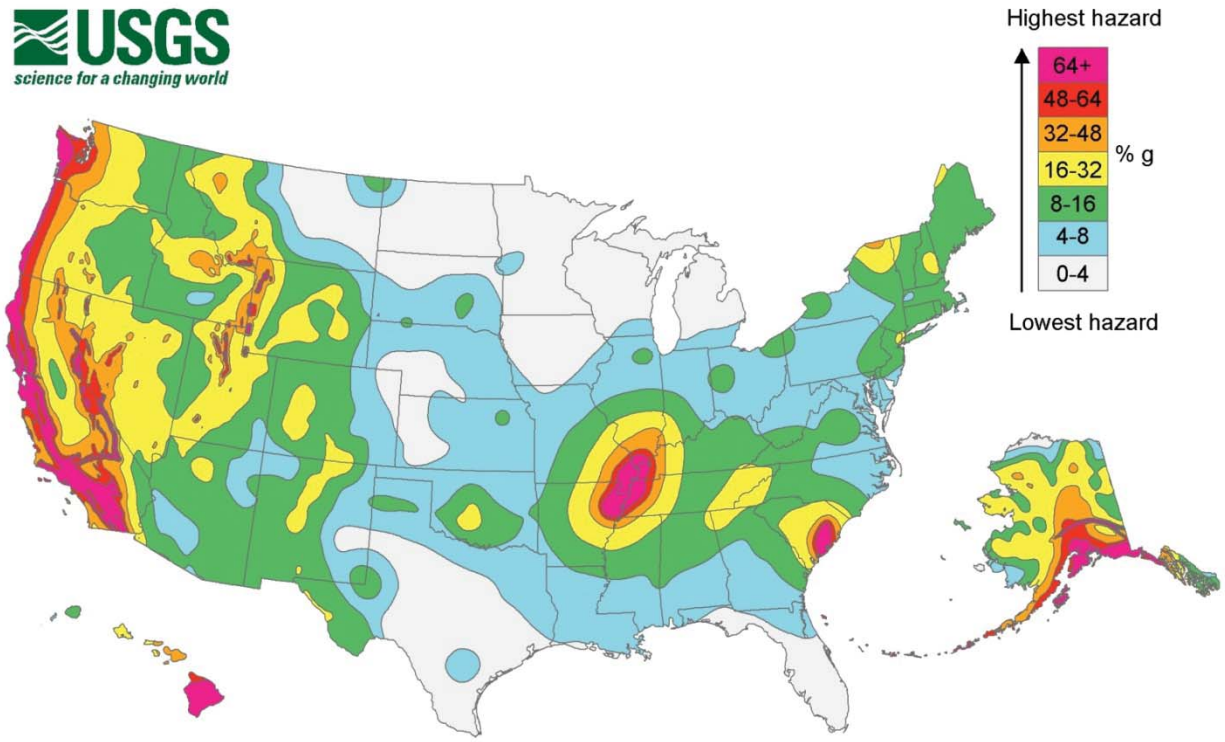
Most earthquakes are caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's 10 tectonic plates. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength, a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

According to the State of Texas Mitigation Plan the nature and geographical extent of earthquake hazard depends on the earthquake's size or magnitude. Each earthquake has one magnitude but different intensities, since earthquake damage becomes less severe away from the epicenter. The region nearest the epicenter has the highest intensity, so most of the damage done by an earthquake occurs there. While intensity relies mostly on factors like soil properties, in most cases earthquakes with larger magnitudes have higher maximum intensities.

The extent and measure in terms of the magnitude and intensity is discussed in the case section of this plan in section 5.

Location of the Earthquake Hazard: Texas does have a moderate risk to less frequent, less intense earthquake events. As shown in the Peak Acceleration for Seismic Activity in the United States map below, there is a potential for earthquakes to pose a threat to the City of Dallas. Seismic activity for the City of Dallas is measured as 4 – 8 % (peak acceleration), which is the second lowest category for the United States.

Peak Acceleration for Seismic Activity in the United States



Source: USGS

Occurrence of Earthquake Hazard: Sept. 29 2011, a 3.4 magnitude earthquake occurred at 11:05 p.m. 2 miles north of Irving. It was followed within minutes by a second quake of 3.1 magnitude in the same area. The quakes caused some cracks in walls and ceilings, but there was no major damage reported. Another of 2.1 magnitude followed one day later. In the same area, a 3.0 magnitude earthquake occurred the following Jan. 22, 2013. On Feb. 25, 2013 a 2.5 magnitude earthquake occurred at 6:56 a.m. south of DeSoto. The annual probability of occurrence for future earthquake events affecting the City of Dallas is low to moderate (between 1 – 10%). Although earthquakes have historically occurred, the low severity and infrequency of past events does not present a significant threat to the city. Due to a lack of data available, the City is citing a data deficiency. The action correcting this deficiency can be found on G-81. According to the State of Texas Mitigation Plan, the earthquake hazard in Texas is small compared to other hazards attributable from other natural phenomena but is still present.

Date	Size	Depth	Location
04/03/2015	2.6	5.0 km	Dallas
04/02/2015	3.3	5.0 km	Dallas
03/12/2015	2.4	8.0 km	Dallas
02/27/2015	3.1	5.0 km	Dallas
01/09/2015	2.4	5.0 km	Dallas
10/28/2014	2.4	5.0 km	Dallas

Vulnerability Assessment Summary for Earthquakes

Earthquake	
Population	While all populations in Dallas are equally at risk for impact from earthquake events, no impacts on populations are expected from future earthquake events. Earthquakes in the City of Dallas is considered a low risk. Large scale earthquakes are considered to be an isolated event, however will cause widespread damage due to a low risk of high magnitude earthquakes in the area. Earthquakes have only been recently recorded in Dallas County, To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans and do not cause damage. Additionally there is currently not a significant amount of data for earthquakes in Dallas County and will need to be researched and studied. No data to support the change of building codes and engineering standards for high magnitude levels can affect buildings, transportation routes, and pipelines.
Improved Property	According to the USGS earthquakes below 6.0 result in minor damage. Properties located near and around the epicenter of the earthquake are at risk of minor damage. All improved property is equally at risk for impact by earthquake events.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact from earthquakes, all emergency facilities in the City of Dallas are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact from earthquakes, all critical facilities in the City of Dallas are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact from earthquakes, all critical infrastructures in the City of Dallas are exposed to this hazard.

Drought Hazard

Description of the Drought Hazard: Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of anticipated natural precipitation over an extended period of time, usually a season or more in length. Drought is one of the most complex of all natural hazards, as it is difficult to determine a precise beginning or end. In addition, drought can lead to or be exacerbated by our hazards, such as extreme winds or wildfires.

Droughts are classified as meteorological, hydrologic, agricultural and socioeconomic. Each of these classifications can be defined as follows:

- ✓ **Meteorological drought** is defined by a period of sustainability diminished precipitation duration and/or intensity. The commonly used definition of meteorological drought is an interval of time, generally on the order of months or years, during which the actual moisture supply at a given place consistently falls below the climatically appropriate moisture supply.
- ✓ **Agricultural drought** occurs when there is inadequate soil moisture to meet the needs of a particular crop at a particular time. Agricultural drought usually occurs after or during meteorological drought, but before hydrological drought and can affect livestock and other dry land agricultural operations.
- ✓ **Hydrological drought** refers to the deficiencies in surface and subsurface water supplies. It is measured as stream flow, snow pack, and as lake, reservoir, and groundwater levels. There is usually a delay between lack of rain or snow and less measurable water in streams, lakes, and reservoirs. Therefore, hydrological measurement tends to lag behind other drought indicators.
- ✓ **Socio-economic drought** occurs when physical water shortages start to affect the health, well-being, and quality of life of the people, or when the drought starts to affect the supply and demand of an economic product.

Location of the Drought Hazard: Droughts can affect areas as small as a few counties to entire regions of the country. Droughts are not defined by a specific geographic boundary or location. The entire planning area is subject to the drought hazard. The City could also be severely impacted by droughts on the mainland, as all of their potable water originates from mainland sources.

Severity of the Drought Hazard: Droughts are measured using the Palmer Drought Severity Index (PDSI), also known as the Palmer Index. The Palmer Index was developed by Wayne Palmer in the 1960s and uses temperature and rainfall information in a formula to determine dryness. It has become the semi-official drought index. The Palmer Index is most effective in determining long term drought—a matter of several months—and is not as good with short-term forecasts (a matter of weeks). It uses a 0 as normal, and drought is shown in terms of minus numbers; for example, -2 is moderate drought, -3 is severe drought, and -4 is extreme drought.

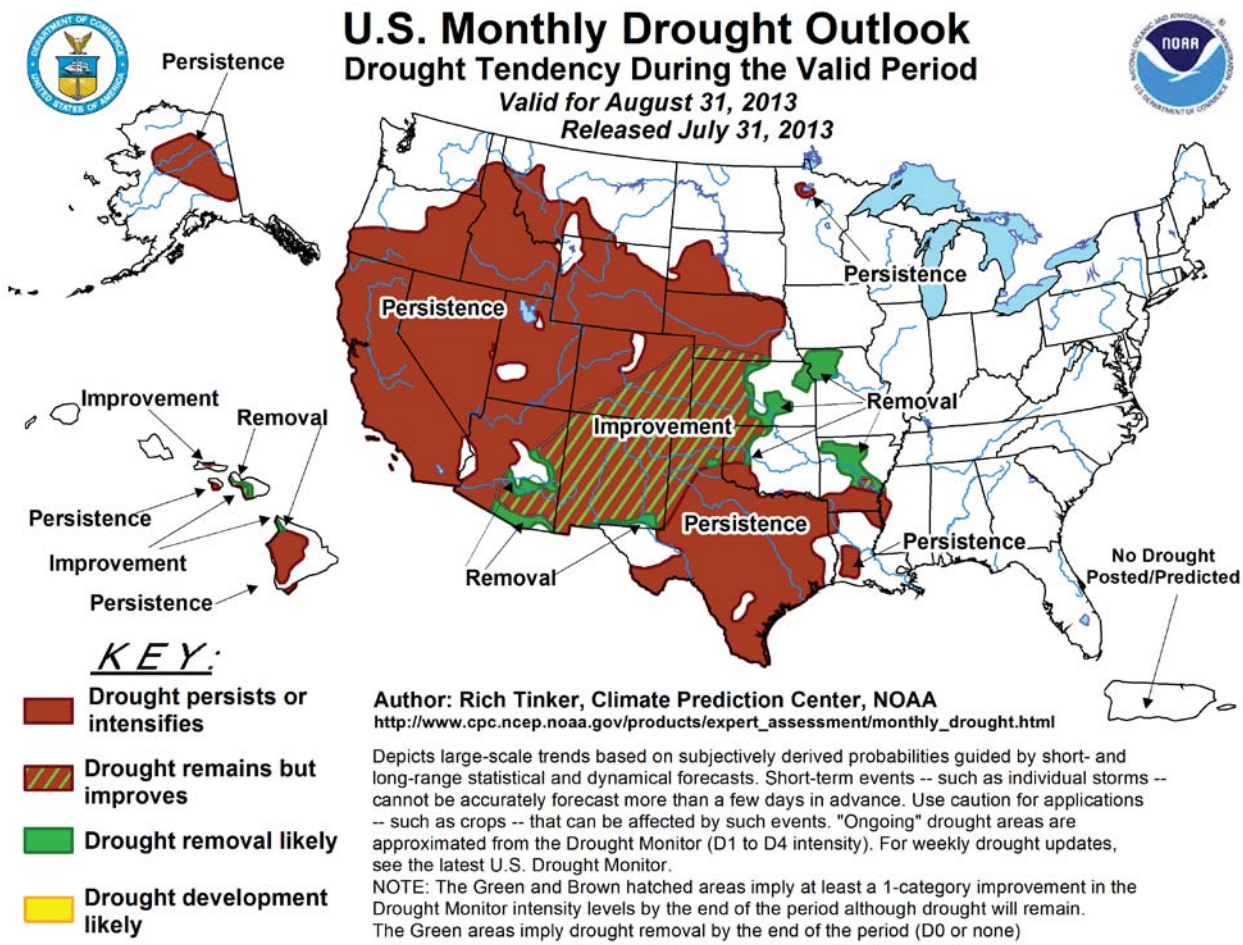
The advantage of the Palmer Index is that it is standardized to local climate, so it can be applied to any part of the country to demonstrate relative drought or rainfall conditions. The negative is that it is not as good for short term forecasts, and is not particularly useful in calculating supplies of water locked up in snow, so it works best east of the Continental Divide.

Drought Hazard impact on Life and Property: Droughts can affect a large geographic area, and can range in size from a few counties to numerous states. Their potential to impact wildlife and agricultural concerns can be enormous. Drought can kill crops, edible plants and wildlife habitat, and destroy grazing lands and trees. Dead or dying vegetation, a normal result of drought, can then serve as a main source for wildfires.

Drought has the potential to significantly affect special population, including the elderly, children and tourists. In addition, a drought of a prolonged nature could have significant impacts on the City's ability to distribute potable water, which is required to sustain life, safety and health.

The National Weather Service Climate Prediction Center produces seasonal drought forecasts for the United States. In the July 2013 forecast the Climate Prediction Center predicts drought conditions to intensify for the North Central Texas region.

United States Seasonal Drought Outlook



Vulnerability Assessment Summary for Drought

Drought Hazard	
Population	According to the National Climatic Data Center (NCDC) zero recorded injuries or fatalities have been recorded for drought events. There are no personal losses expected from drought events.
Improved Property	According to the National Climatic Data Center (NCDC), a loss of $9 Billion per year can be expected in property loss due to damage from drought. Available historical data indicated that the expected losses from drought correspond to crop losses in the amount of $3.5 billion per year, mostly experienced in water shortages and crop losses on agricultural lands. All improved property is equally at risk for impact by drought events.
Emergency Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	Because of the nature of this hazard no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat

Description of Extreme Heat Hazard: The extreme heat hazard in the City of Dallas is often underestimated because other natural hazards that occur more frequently (e.g., floods, tornadoes, thunderstorms) and its effects can vary based on region and vulnerable population within the city. Contents of this section result from research and outreach including the following sources. Dallas has a humid subtropical climate, characterized by humid summers, where temperatures average around 90 degrees Fahrenheit. The combination of high temperatures mixed with humidity leads to heat waves or periods of extreme heat. Although heat can damage buildings and facilities, it presents a more significant threat to the safety and welfare of citizens and animals.

Extreme Heat definition temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation.

The National Weather Service (NWS) provides alerts when Heat Indices approach hazardous levels. In the event of an extreme heat advisory, The National Weather Service does the following:

- ✓ Include HI values and city forecasts
- ✓ Issue special weather statements including who is most at risk, safety rules for reducing risks, and the extent of the hazard and HI valued;
- ✓ Provide assistance to State/Local health officials in preparing Civil Emergency Messages in severe heat waves.

Heat Advisory is issued by the National Weather Service of the United States within 12 hours of the heat index reaching one of two criteria levels. In most areas, an advisory will be issued if there is a heat index of at least 105°F but less than 115°F for less than 3 hours per day and/or if nighttime low temperatures are above 80°F for 2 consecutive days.

Excessive Heat Watch is issued by the National Weather Service of the United States when the heat index is expected to be greater than 105ºF across the northern states or 110ºF across the southern states during the day, and/or nighttime low temperature will be at least 75ºF (24ºC) or higher for two consecutive days.

Excessive Heat Warning is issued by the National Weather Service of the United States within 12 hours of the heat index reaching one of two criteria levels. In most areas, a warning will be issued if there is a heat index of at least 105°F for more than 3 hours per day for 2 consecutive days, or if the heat index is greater than 115°F for any period of time.

Location of the Extreme Heat Hazard: Though injuries or deaths from extreme heat have been recorded at different locations throughout the city, there is no specific geographic scope to the extreme heat hazard. Extreme heat could occur at any area of the city.

Occurrences of the Extreme Heat Hazard: The likelihood of future probability of excessive summer heat in the City of Dallas is high, meaning there is more than a 50 percent chance of an event in any given year. This is discussed in the extreme heat section of the base plan in Section 5.

Vulnerability Assessment Summary for Extreme Heat

Extreme Heat	
Population	Given the regular frequency of excessive heat, it can be expected that future heat waves will continue to threaten life and cause minor property damage throughout the city. All the population of the City of Dallas is exposed and vulnerable to this hazard. Therefore, the probability of future occurrence can be rated as high.
Improved Property	Due to the nature of extreme heat, no structures are anticipated to be impacted by extreme heat. All structures are equally likely to experience the effects of extreme heat
Emergency Facilities	Due to the nature of extreme heat, no emergency facilities are anticipated to be impacted by extreme heat.
Critical Facilities	Due to the nature of extreme heat, no critical facilities are anticipated to be impacted by extreme heat.
Critical Infrastructure	Due to the nature of extreme heat, no critical infrastructure properties are anticipated to be impacted by extreme heat.

Hazardous Materials Incident (Fixed Site and Transport)

Description of the Hazardous Materials Incident Hazard: A hazardous material is a biological, chemical or physical agent with the potential to cause harm to the environment or people on its own or when combined with other factors or materials. For the purposes of this mitigation plan, this hazard will include fixed site facilities, pipelines, and transportation incidents.

Hazardous materials incidents are technological (meaning non-natural hazards created or influenced by humans) events that involve large-scale accidental or intentional releases of chemical, biological, or radiological (nuclear) materials.

Pipeline incidents are typically incidents in which the pipeline is breached or fails. An estimated 2.2 million miles of pipelines carry hazardous materials throughout the United States – more than 77,000 miles of which is in Texas. Pipelines transport natural gas, crude or refined oils, fuels, and petrochemical products. Some pipelines also transport liquefied gases, such as carbon dioxide.

Hazardous materials come in the form of explosives, flammable and combustible substances, toxic releases and waste materials. These substances are most often released as a result of transportation accidents or because of chemical accidents in plants. Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Many products containing hazardous chemicals are used and stored in homes routinely. These products are also shipped daily on the nation's highways, railroads, waterways, and pipelines.

Hazardous materials are monitored and recorded by the US Environmental Protection Agency (ESP) through the Toxics Release Inventory (TRI), which is a publically accessible database that contains information on toxic chemical releases and other hazardous materials activities.

Data is reported annually by certain industry groups and various federal agencies. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and later expanded by the Pollution Prevention Act of 1990.

Each year, facilities that meet specified thresholds must report their releases and other waste management activities for listed toxic chemicals to the EPA and to their State or tribal entity. A facility must report incidents that meet the following criteria:

- ✓ The facility falls within one of the following industrial categories:
  - o Manufacturing
  - o Metal Mining
  - o Coal Mining
  - o Electric generating facilities that combust coal and/or soil,
  - o Chemical wholesale distributors,
  - o Petroleum terminals and bulk storage facilities,
  - o RCRA Subtitle C treatment, storage and disposal (TSF) facilities, and
  - o Solvent recovery services;
- ✓ Has 10 or more full time employees (or equivalent); and

- ✓ Manufactures or processes more than 25,000 pounds or uses more than 10,000 pounds of any listed chemical during the calendar year. Persistent, bio accumulative and toxic (PBT) chemicals are subject to different thresholds of 10 pounds, 100 pounds, or 0.1 grams, depending on the chemical

Tier 2 data is a publicly available database from the Texas Department of State Health Services Tier 2 Chemical Reporting Program. Under the community right-to-know regulations imposed at the state and federal levels, all facilities that store significant quantities of hazardous chemicals must share this information with state and local emergency responders and planners.

Facilities in Texas share this information by filing annual hazardous chemical inventories with the state, Local Emergency Planning Committees (LEPCs), and local fire departments. The Texas Tier 2 reports contain facility identification information and detailed chemical data about the hazardous materials stored at the facility. A facility must report chemicals to the Tier 2 database if it meets the following criteria:

- ✓ Any company using chemicals that could present a physical or health hazard, or
- ✓ If an industry has an Occupational Safety and Health Administration (OSHA) deemed chemical that exceeds the appropriate threshold at any point in time. These chemicals may be on a list of 356 Extremely Hazardous Substances (EHS), or may be one of the 650,000 reportable hazardous substances that do not appear on the EHS list. Hazardous Materials pose a secondary event risk to communities when they are involved in transportation accidents. Transport by ground, rail and sea is a common occurrence in the US.

Location of the Hazardous Materials Incident Hazard: The City of Dallas is home to over 1,400 industries and transporters of hazardous materials. The city has several Interstate highway routes that are designated as hazardous materials routes and several thousand pounds are transported thru the city on a daily basis. The city is also part of the radiological shipments for the Waste Isolation Pilot Plant (WIPP).
WIPP shipments are conducted by The U.S. Department of Energy (DOE) developed the Transportation As part of the shipping protocols agreed to by the DOE, states and tribes, state officials are notified by DOE's Transportation Tracking and Communication System (TRANSCOM) two hours prior to a WIPP shipment entering the state.

In June 2007 a series of explosions occurred at the Southwest Industrial Gases, Inc. plant located near Downtown Dallas. The plant is a welding cutting supply plant and a gas and equipment distributor. The fire was caused due to a mechanical failure of pig-tailed acetylene cylinders. Two employees on the ground were engulfed in the explosion and were transported to Parkland Hospital. The explosion resulted in the closure of several major thoroughfares near downtown. The explosion from the plant caused debris to become airborne as the debris landed it caused smaller fires in the area of the explosion.

Severity of the Hazardous Materials Incident Hazard: The threat from the hazardous materials incident is to structures located along transmission lines and transportation routes in the city. There are critical facilities located along these routes. The severity of this hazard is a range. Minor incidents would likely cause no damage and little disruption. Major

incidents could have fatal and disastrous consequences. The severity of a hazardous material release relates primarily to its impact on human safety and welfare and on the threat to the environment. Threat to Human Safety and Welfare:

- ✓ Poisoning of water or food sources and/or supply
- ✓ Presence of toxic fumes or explosive conditions
- ✓ Damage to personal property
- ✓ Need for the evacuation of people
- ✓ Interference with public or commercial transportation

Impact on Life and Property from Hazardous Materials Incident Hazard: Hazardous materials incidents refer to uncontrollable releases of hazardous materials at a facility, which poses a risk to the health, safety, property, and the environment. The most well-known example of a large-scale fixed-site hazardous materials incident is that which occurred at the Union Carbide plant in Bhopal, India in 1984. This incident caused 2,500 deaths and injuries to many others.

More recently, in April 2013, an ammonium nitrate explosion occurred at the West Fertilizer Company storage and distribution facility in West, Texas while emergency services personnel were responding to a fire at the facility. At least 15 people were killed, more than 160 were injured and more than 150 buildings were damaged or destroyed. Investigations confirmed that ammonium nitrate was the trigger for the explosion. On the 23rd, March 2005, a hydrocarbon vapor cloud explosion occurred at the isomerization process unit at BP's Texas City refinery in Texas City, Texas, killing 15 workers and injuring more than 170 others. The Texas City Refinery was the second-largest oil refinery in the state, and the third-largest in the United States with an input capacity of 437,000 barrels per day as of January 1, 2000. Both incidents occurred in Texas. Although incidences on the Bhopal scale are rare, smaller scale incidents, those requiring a response and evacuation or other protective measures, are relatively common.

Depending on the severity of the incident, the potential impact to life and property is great in Dallas. Incidents can cause multiple fatalities, completely shut down facilities (and the surrounding area) for days or weeks, and cause extensive property and infrastructure damage. Weather conditions can directly impact how a hazardous materials incident develops or can be the initiator of the incident, as in the case of facilities impacted by a tornado. Noncompliance with fire and building codes can substantially increase damage from an incident, as the containment features may not be up to standards.

Table 1.3.9-1: Pipeline Accidents, 2008-2012

Incident Date	Operator	Operator Property Damage
01-28-2008	City of Dallas	$1 - $500
01-12-2008	AF Concrete Contractor	$1- $500
02-12-2008	P & E Contracting	$500 - $1,000
06/02/2008	Weir Bros Const.	$1-$500
06/24/2008	Moore Lawn and Garden	$500 - $1,000
08/01/2008	Five R Construction	$1,000 - $2,500
08/21/2008	Reliable Paving	$1 - $500
11/5/2008	Arthur L Johnson	$1 - $500
11/20/2008	Dallas Water Utilities	$1,000 - $2,500
02/04/2009	Hilarion Marato	$500 - $1,000
07/25/2009	Mansfield Landscape Sprinkler	$500 - $1,000
08/13/2010	City of Dallas	$1-$500
08/23/2010	John R. Mullen	$1-$500
02/11/2011	Roto Rooter	$1 - $500
02/16/2011	DC Carpentry	$1,001 - $2,500
07/08/2011	City of Dallas	$1,001 - $2,500
07/25/2011	City of Dallas	$1 - $500
08/22/2011	Bluffview Builders	$500 - $1,000
10/17/2011	SYB Construction	$501-$1,000
11/16/2011	N.P.L. Construction	$500 - $1,000
12/20/2011	Dallas County Water Control & Improvement District	$500 - $1,000
12/22/2011	Barson Utilities	$500 - $1,000
02/27/2012	Omega Contracting Inc.	$500 - $1,000
03/26/2012	Hernandez Backhoe & Plumbing Services	$500 - $1,000
04/05/2012	University Park Street Maintenance	$500 - $1,000
07/12/2012	Platinum Landscape	$500 - $1,000
07/27/2012	Larman Construction Company	$500 - $1,000
08/26/2012	City of Dallas	$500 - $1,000
09/20/2012	Mamel Rodriguez	$1 - $500
09/20/2012	Estrada Concrete	$1,000 - $2,500
10/02/2012	Shannon Otis	$1,000 - $2,500
10/16/2012	Juan Barrera	$1,000 - $2,500
11/21/2012	N P L Construction	$500 - $1,000
12/12/2012	Tutor Electrical Services	$500 - $1,000

Source: Texas Railroad Commission

Probability of Future Occurrences of the Hazardous Materials Incident Hazard: Occurrences of the hazardous materials incident hazard are often dependent on external factors. An incident can be caused intentionally or accidentally, and may or may not involve human action. Major disaster events can be a major cause, as inundation by flood water or damage from high winds may result in a hazardous materials release. This is usually caused or exacerbated by damage to infrastructure, such as water supply/distribution and waste water treatment facilities.

It's almost impossible to predict the statistical probability of future occurrences of the hazardous materials incident hazard, as there are simply too many variables, including

human behavior. However, the number of possible points of origin for such an incident must be taken into account. Therefore, the probability of future occurrence can be rated as High.

Historic Examples of Environmental Disasters

Southwest Industrial Gas Incorporated Gas Tank Explosions: Wednesday, July 25, 2007 three people were hospitalized with injuries after a series of explosions at Southwest Industrial Gases, Inc., a gas facility in Dallas, Texas. None of their injuries are considered life-threatening. Tanks of oxygen, helium and acetylene began to explode after a connector used to join acetylene tanks during the filling process malfunctioned. The explosions sent flaming debris into the air and onto buildings and expressways. Black smoke that could be seen for miles billowed from the facility. The problem began around 9:30 a.m. at a loading dock and then spread to a trailer housing some 100,000 cubic feet

Authorities evacuated an area that was one-half of a mile (approximately 800 m) wide. Portions of Interstate 35 and Interstate 30 were shut down. Flaming debris ignited small grass fires next to the roads. Tanks were reported to have landed as far away as four blocks.

Two injured men were taken to Parkland Memorial Hospital to be treated for upper-body burns. The third was treated and released at Methodist Dallas Medical Center. He hurt his back when he jumped from the cab of his truck.

West Fertilizer Company Explosion: On April 17, 2013, an ammonium nitrate explosion occurred at the West Fertilizer Company storage and distribution facility in West, Texas, eighteen miles north of Waco, while emergency services personnel were responding to a fire at the facility. Fifteen people were killed, more than 160 were injured, and more than 150 buildings were damaged or destroyed. Investigators have confirmed that ammonium nitrate was the material that exploded, but the cause of the initial fire is as yet unknown.

In an emergency planning report filed with the United States Environmental Protection Agency (EPA) in 2011, company officials stated the ammonia storage tanks did not represent a significant fire or explosion hazard. The tanks were still intact following the fire and explosion.

The facility caught fire on Wednesday, April 17, 2013, then exploded as firefighters were attempting to douse the flames. Authorities ruled out weather, natural causes, anhydrous ammonium, and ammonium nitrate in a rail car as possible causes of the fire.

As a result of the massive explosion, the West Fertilizer Company plant was obliterated, and heavy damage and further destruction was caused to surrounding areas. Numbers for people dead or injured varied initially. In addition to the obliterated plant, the damaged buildings included the public West Middle School, which sits next to the facility. A neighboring 50-unit, two-story apartment building was destroyed.

The blast damaged the nearby West Rest Haven nursing home, and many residents were evacuated. Many of the nursing home residents received cuts from flying glass, but emergency personnel on scene judged that most of these injuries were not life-threatening.

According to the company's insurer, United States Fire Insurance of Morristown, New Jersey, the facility was only covered by $1 million in liability insurance. According to official estimates from both state and company officials, this amount will not even begin to cover the cost of damages. Furthermore, Texas law allows fertilizer storage facilities to operate without any liability insurance at all, even when they store hazardous materials.

Texas City Refinery Explosion: The Texas City Refinery explosion occurred on March 23, 2005, when a hydrocarbon vapor cloud exploded at the ISOM isomerization process unit at BP's Texas City refinery in Texas City, Texas, killing 15 workers and injuring more than 170 others. The Texas City Refinery was the second-largest oil refinery in the state, and the third-largest in the United States with an input capacity of 437,000 barrels per day as of January 1, 2000.

The accident investigation report stated that the direct cause of the accident was heavier than air hydrocarbon vapors combusting after coming into contact with an ignition source, probably a running vehicle engine. The hydrocarbons originated from liquid overflow from the F-20 blow down stack following the operation of the raffinate splitter overpressure protection system caused by overfilling and overheating of the tower contents." Both the BP and the U.S. Chemical Safety and Hazard Investigation Board reports identified numerous technical and organizational failings at the refinery and within corporate BP.

BP Horizon Gulf of Mexico Oil Spill: The Gulf oil spill began April 22, 2010 and leaked an estimated 206 million gallons into the Gulf of Mexico, making it the worst oil spill in U.S. history and the largest accidental oil spill in the world. Oil washed ashore in all of the Gulf States, creating health threats for both humans and animals. The spill began when an oil well a mile below the surface of the Gulf blew out, causing an explosion on BP's Deepwater Horizon rig that killed 11 people. Oil flowed into Gulf for 87 days before the well was finally capped on July 16, 2010.

About 40 percent of the U.S. coastal wetlands are in southern Louisiana, and these areas are home to a variety of species, including the brown pelican, which was removed from the endangered species list in November. Miles of this delicate habitat were coated in oil, and the lives of more than 400 species were severely threatened.

The BP Deepwater Horizon spill also created vast plumes of oil behaving unlike any other spill in history. As these plumes moved through the sea, they suffocated everything in their path. Many of the long-term effects of these plumes and the chemical dispersants used to break up the oil on the ocean's surface are unknown, but experts say they could devastate the Gulf Coast for years to come.

Vulnerability Assessment Summary for Hazardous Materials Incident

Hazardous Materials Incident Hazard	
Population	While large-scale environmental disasters are rare, smaller occurrences happen regularly in Dallas, often as cascading events in conjunction with other hazards. Based on local knowledge and expertise, the HMPSC ranks the probability of future occurrence of the environmental disaster hazard as Moderate.
Improved Property	Available historic data available shows that improved property is at low risk of exposure to this hazard. Damage is normally isolated to a small area near the point of explosion. All structures within a one-mile area downstream of each dam are vulnerable to impacts by
Emergency Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on emergency facilities due to environmental disaster hazards.
Critical Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on critical facilities due to environmental disaster hazard.
Critical Infrastructure	Because of the nature of this hazard, there are no losses or direct impacts expected on critical infrastructure due to environmental disaster hazard.

Biological Event Hazard

Description of the Biological hazard: Biological hazards, also known as biohazards, refer to biological substances that pose a threat to the health of living organisms, primarily that of humans. This can include medical waste or samples of a microorganism, virus or toxin (from a biological source) that can impact human health. It can also include substances harmful to animals. This term and its associated symbol or generally used as a warning, so that those potentially exposed substances will know to take precautions.
For the purpose of this hazard profile, biological events refer to those events that are accidental or naturally occurring. Intentional transmission of infectious agents is included in the profile of terrorism.

Location of the Biological Hazard: Biological events are non-spatial, unless an effective quarantine is established. All locations within the City of Dallas are potentially at risk from this hazard. There are 19 hospitals and 1 medical school located inside the City of Dallas. The University of Texas Southwestern Medical Center Dallas is made up of three schools: The Medical School, the Graduate School of Biomedical Sciences, and the School of Health Professionals. Commonly known at UT Southwestern Medical School, this institution is one of four medical schools in the University of Texas System.

Severity of the Biological Hazard: The United States Centers for Disease Control and Prevention (CDC) categorizes various diseases in levels of bio hazard, Level 1 being minimum risk and Level 4 being extreme risk.

- ✓ **Biohazard Level 1**: Bacteria and viruses including Bacillus subtilis, canine hepatitis, Escherichia coli (E. Coli), varicella (chicken pox), as well as some cell cultures and noninfectious bacteria. At this level precautions against the bio hazardous materials in question are minimal, most likely involving gloves and some sort of facial protection. Usually, contaminated materials are left in open (but separately indicated) waste receptacles. Decontamination procedures for this level are similar in most respects to modern precautions against everyday viruses (i.e.: washing one's hands with anti-bacterial soap, washing all exposed surfaces of the lab with disinfectants, etc.). In a lab environment, all materials used for cell and/or bacteria cultures are decontaminated via autoclave.
- ✓ **Biohazard Level 2**: Bacteria and viruses that cause only mild disease to humans, or are difficult to contract via aerosol in a lab setting, such as hepatitis A, B, and C, influenza A, Lyme disease, salmonella, mumps, measles, scrapie, dengue fever, and HIV. Routine diagnostic work with clinical specimens can be done safely at Biosafety Level 2 (BSL-2), using BSL- 2 practices and procedures. Research work (including co-cultivation, virus replication studies, or manipulations involving concentrated virus) can be done in a BSL- 2 facility, using BSL-3 practices and procedures. Virus production activities, including virus concentrations, require a BSL-3 facility and use of BSL-3 practices and procedures.
- ✓ **Biohazard Level 3**: Bacteria and viruses that can cause severe to fatal disease in humans, but for which vaccines or other treatments exist, such as anthrax, West Nile virus, Venezuelan equine encephalitis, SARS virus, variola virus (smallpox), tuberculosis, typhus, Rift Valley fever, Rocky Mountain spotted fever, yellow fever,

and malaria. Among parasites Plasmodium falciparum, which causes Malaria, and Trypanosoma cruzi, which causes trypanosomiasis, also come under this level.

- ✓ **Biohazard Level 4**: Viruses and bacteria that cause severe to fatal disease in humans, and for which vaccines or other treatments are not available, such as Bolivian and Argentine hemorrhagic fevers, H5N1(bird flu), Dengue hemorrhagic fever, Marburg virus, Ebola virus, hantaviruses, Lassa fever, Crimean-Congo hemorrhagic fever, and other hemorrhagic diseases. When dealing with biological hazards at this level the use of a Hazmat suit and a self-contained oxygen supply is mandatory. The entrance and exit of a Level Four biolab will contain multiple showers, a vacuum room, an ultraviolet light room, autonomous detection system, and other safety precautions designed to destroy all traces of the biohazard. Multiple airlocks are employed and are electronically secured to prevent both doors opening at the same time. All air and water service going to and coming from a BSL- 4 lab will undergo similar decontamination procedures to eliminate the possibility of an accidental release.

The Center for Disease Control and Prevention (CDC) determines the severity of pandemics and communicable disease outbreaks based on a measurement system is known as the Pandemic Severity Index. The index focuses less on how likely a disease will spread worldwide-that is, become a pandemic-and more upon how severe the epidemic actually is. The main criterion used to measure pandemic severity will be case-fatality ratio (CFR), the percentage of deaths out of the total reported cases of the disease. Given that Dallas experiences a high number of visitors and tourists (who arrive by car and air) Dallas could expect to experience the entire range of an outbreaks severity.

Centers for Disease Control and Prevention Pandemic Severity Index		
Category	**Case Fatality Ration**	**Examples**
1	Less than 0.1 %	Seasonal flu
2	0.1% to 0.5%	Asian flu and Hong Kong Flu
3	0.5% to 1%	No examples provided
4	1% to 2%	No examples provided
5	2% or higher	Spanish Flu

Source: Centers for Disease Control

Impact to Life and Property from the Biological Event Hazard: Biological events will have the most immediate impact on life. The extent of the impact will be contingent on the type of infection or contagion, the severity of the outbreak, and the speed at which it is transmitted. Property and infrastructure could be affected if large portions of the populations were affected and unable to perform maintenance and operations tasks. For example, if a large percentage of workers are impacted, business, government and industry could have depressed productivity and activity. This could lead to economic impacts and disruption in the city, and could have a ripple effect to surrounding areas.

Occurrences of the Biological Event Hazard: Occurrences of the biological event hazard are fairly common. In recent history, there have been a number of E. coli and Salmonella

outbreaks traced to issues or deficiencies in the nation's food supply, or to particular restaurants or chains. Recent mutations in the influenza virus resulted in the World Health Organization (WHO) declaring H1N1 to be a global pandemic.

In Texas, there have been several occurrences of biological hazards, as reported by the CDC. In 2005, there were cases of dengue fever reported in South Texas, near the border with Mexico. Also in 2005, in the Houston area, approximately 1,100 evacuees from Hurricanes Katrina and Rita were infected with norovirus.

Probability of Future Occurrences of the Biological Event Hazard: While a high concentration of biohazards does exist in the City of Dallas, all required containment measures and plans are in place for such an event. The likelihood of such an event occurring and impacting the community is low. It is more likely that a naturally occurring infection would have a larger impact, and is more likely to occur. Therefore, the probability of future occurrence of a biohazard event is Moderate.

Vulnerability Assessment Summary for Biological Hazard

Biological Hazard	
Population	According to the Centers for Disease Control (CDC) occurrences of a biological event hazard are fairly common. In 2012 the city managed a West Nile Virus Outbreak resulting in 400 human cases and 20 fatalities. In 2014 the City was the location of the first confirmed Ebola Case in the United States. That event resulted in the in 4 human cases and 1 fatality
Improved Property	Because of the nature of this hazard, there are no losses or direct impacts expected on property due to biological hazard.
Emergency Facilities	Because of the nature of this hazard hospitals and other medical care facilities may experience a large influx of medical cases. Decontamination may cause a temporary loss of use of the facility.
Critical Facilities	Because of the nature of this hazard hospitals and other medical care facilities may experience a large influx of medical cases. Decontamination may cause a temporary loss of use of the facility.
Critical Infrastructure	Because of the nature of this hazard, there are no losses or direct impacts expected on critical infrastructure due to biological hazard.

Airport / Aircraft Crash

Description of the Airport / Aircraft Crash Hazard: All airports are unique and varied in a number of ways, by size, complexity, operations, facilities, geography, and types of aircraft served. If a plane were to crash anywhere in City of Dallas the extent of the damage could be very severe, depending on location and size of the aircraft. The City of Dallas is located in both Arrival and Departure Tracks for Dallas Love Field and Dallas Fort Worth International Airport. The City of Dallas owns and operates two airports, Dallas Love Field and Dallas Executive, and one helipad located near downtown Dallas.

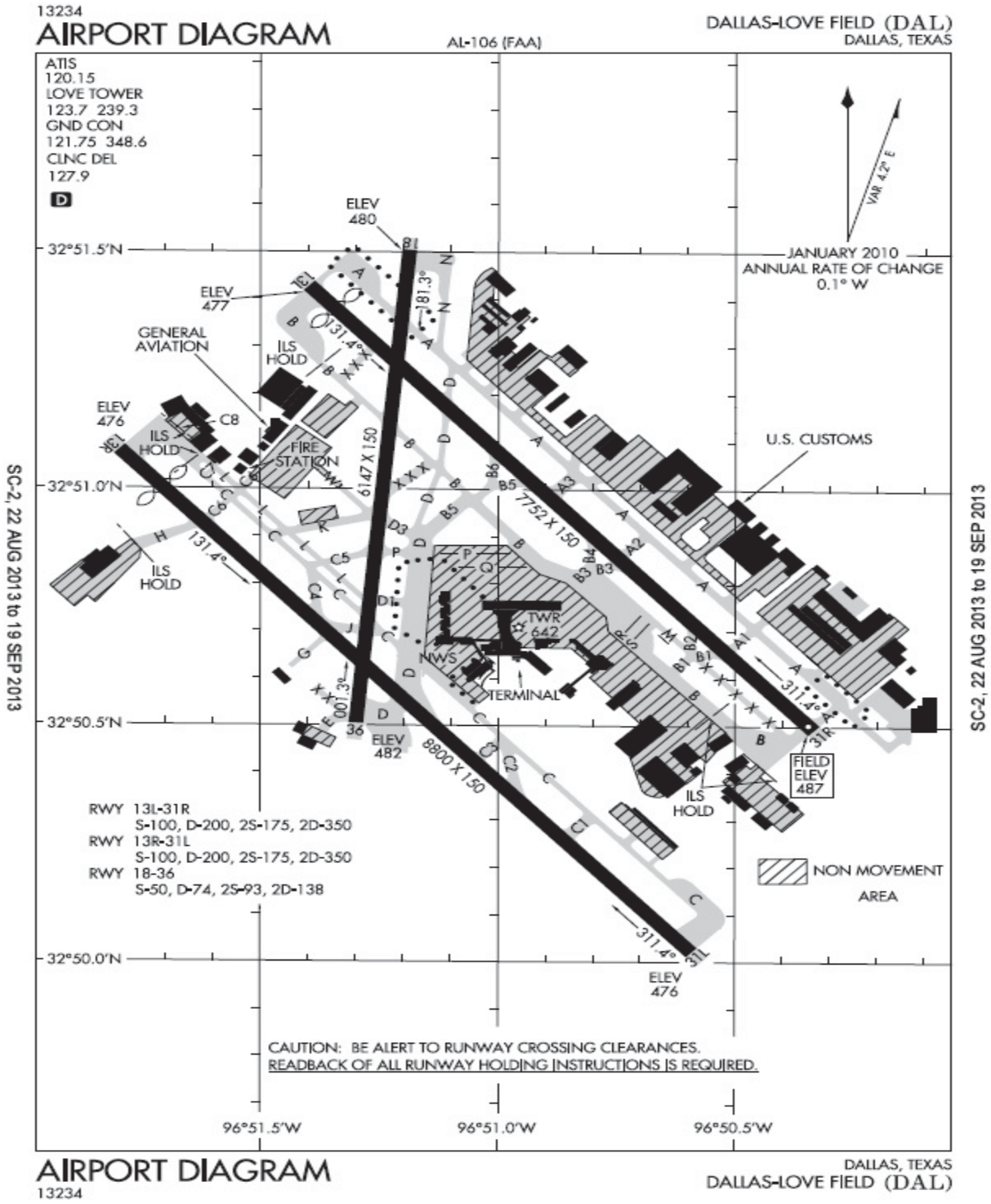
Dallas Love Field (KDAL) is a city-owned public airport 6 miles northwest of downtown Dallas, Texas. It was Dallas' airline airport until 1974 when Dallas/Fort Worth International Airport (DFW) opened. Love Field is served by Southwest Airlines, United Express, Delta Connection, and SeaPort Airlines. Southwest Airlines corporate headquarters is at Love Field, and Dallas is a focus city for them. Seven full service fixed base operators (FBOs) provide general aviation service: fuel, maintenance, hangar rentals, and charters.

Love Field Modernization: The new Love Field Airport will increase efficiency for travelers while maintaining the convenience that Love Field currently offers passengers. In the new design, the terminal will decrease in size approximately 25 percent by replacing a large amount of unused and outdated space with modern and efficient facilities. The three original concourses will be demolished and consolidated into one convenient, centrally located concourse for all airlines. In addition to the new concourse, the check-in and baggage claim areas will be redesigned. The main lobby space will be renovated but will retain the overall structure and volume of the original design. This portion of the facility is the symbolic heart of the terminal complex and a vital part of the passenger processing operation. In addition, the LFMP will more than double the amount of available airport concessions – yet another tremendous benefit for Love Field Customers.

Aircraft Rescue and Firefighting (ARFF): Aircraft rescue and firefighting (ARFF) is a special category of firefighting that involves the response, hazard mitigation, evacuation and possible rescue of passengers and crew of an aircraft involved in an airport ground emergency. Due to the mass casualty potential of an aviation emergency, the speed with which emergency response equipment and personnel arrive at the scene of the emergency is of paramount importance. Their arrival and initial mission to secure the aircraft against all hazards, particularly fire, increases the survivability of the passengers and crew on board. Airport firefighters have advanced training in the application of firefighting foams, dry chemical and clean agents used to extinguish burning aviation fuel in and around an aircraft in order to maintain a path for evacuating passengers to exit the fire hazard area. Further, should fire either be encountered in the cabin or extend there from an external fire, the ARFF responders must work to control/extinguish these fires as well.

The Federal Aviation Administration (FAA) mandates ARFF operations at all U.S. airports that serve schedule passenger air carriers. These are the only civilian fire protection services that are specifically regulated by any government entity. Airports required to have ARFF services are inspected annually by the FAA for compliance with FAR, Part 139 requirements.

Dallas Love Field Airport Diagram



Source: FAA

Airport Index: An index is assigned to each FAA Part 139 certificate holder based on a combination of the air carrier aircraft length and the average number of daily departures. If the longest air carrier aircraft at the airport has five or more average daily departures, the

matching index is used. If the longest aircraft has less than five average daily departures, the next lower index is used. That index determines the required number of ARFF vehicles and required amount of extinguishing agents.

Airport ARFF Index

Index	Aircraft Length	Vehicle	Extinguishing Agents
A	<90 ft.	1	Either 500 pounds of sodium-based dry chemical, halon 1211, or clean agent; or 450 pounds of potassium-based dry chemical and water with a commensurate quantity of AFFF to total 100 gallons for simultaneous dry chemical and AFFF application
B	90 ft. to <126 ft.	1	500 pounds of sodium-based dry chemical, halon 1211, or clean agent and 1,500 gallons of water and the commensurate quantity of AFFF for foam production
		2	One vehicle carrying the extinguishing agents as specified for Index A; and one vehicle carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by both vehicles is at least 1,500 gallons.
C	126 ft. to <159 ft.	2	One vehicle carrying the extinguishing agents as specified for Index B; and one vehicle carrying water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by both vehicles is at least 3,000 gallons
		3	One vehicle carrying the extinguishing agents as specified for Index A; and two vehicles carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by all three vehicles is at least 3,000 gallons
D	159 ft. to <200 ft.	3	One vehicle carrying the extinguishing agents as specified for Index A; and two vehicles carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by all three vehicles is at least 4,000 gallons
E	200 ft. and Longer	3	One vehicle carrying the extinguishing agents as specified for Index A; and two vehicles carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by all three vehicles is at least 6,000 gallons

Source: FAA

Aircraft Lengths

Aircraft Lengths Of Most Common Aircraft Serving Love Field				
Aircraft Type	**Overall Length**	**Passengers**	**Carrier**	**ARFF Index**
Boeing 737 – 300	105 ft. 7 in	149	Southwest	B
Boeing 737 – 500	101 ft. 9 in	122	Southwest	B
Boeing 737-700	110 ft., 4 in	143	Southwest	B
Boeing 737 – 800	129 ft., 6 in	175	Southwest	C
Bombardier CRJ-200	87 ft., 10 in	50	Delta	A
Embraer 145	98 ft.	50	United	B

Source: Boeing, Bombardier

Dallas Fire Rescue is the primary responding department for Dallas Love Field. Dallas Love Field Currently maintains an ARFF Index B.

ARFF Incidents are classified two classifications Alert II and Alert II:

- ✓ Alert II – Major aircraft emergency (e.g. engine out, hydraulic failure, airborne bomb threat, etc.)
- ✓ Alert III – Aircraft crash or fire involving aircraft not in flight.

DFR ARFF Equipment

Designation	Manufacture	Capabilities/Capacity	Location
Red 01	1999 Oshkosh TI 3000	3,000 gals. Of water, 420 gallons 3% foam, 500 lbs. dry powder, Snozzle.	Dallas Love Field
Red 02	1999 Oshkosh TI 3000	3,000 gals. Water, 420 gallons 3% foam, 500 lbs. Halotron Snozzle	Dallas Love Field
Red 03	2001 Oshkosh TI 3000	3,000 gals. Water, 420 gallons 3% foam, 500 lbs. dry powder, Snozzle	Dallas Love Field
Red 05	1986 Oshkosh P-19	1,000 gals. Water, 130 gal. 3% foam, 500 lbs. dry powder.	Dallas Love Field
Red 04	1998 Oshkosh TI 3000	3,000 gals. Water, 420 gals. 3% foam, 500 lbs. dry chemical, 600 – 1,200 GPS roof turret, 300 GPM bumper turret	Executive

Source: Dallas Fire Rescue

Location of Airport/Aircraft Crash Hazard: Any part of the city that is located in the departure or arrival tracts are at greatest risk from an aircraft crash. The City of Dallas is

located within the Standard Instrument Departure and Instrument Departure routes for both Dallas Love Field and Dallas-Fort Worth Airport.

Occurrences of the Airport/Aircraft Crash Hazard: August 2, 1985 is a day Dallas, Texas will never forget. Throughout the afternoon, the weather was typical Texas hot temperatures, low humidity, and sunny skies. At 4:03 PM eastern daylight time, Delta Airlines flight 191, a Lockheed L-1011 departed Fort Lauderdale/Hollywood International Airport. Aboard the aircraft were 167 passengers and crew traveling to Los Angeles with a stop at Dallas/Ft. Worth.

As the L-1011 neared the airport, the previously innocuous shower began to intensify. Just 1,500 feet above the ground, on final approach just 1 minute from landing, Captain Connors noted lightning in the cloud ahead of them. Despite the impending storm, the weather report from the airport was not ominous and well within the restrictions for landing.

Just seconds later, at 800 feet above the ground as the plane entered the heavy thunderstorm, a series of rapid events conspired to doom the jet. First the plane accelerated, hit from behind by strong winds. Then, just as suddenly, the plane rapidly lost speed and altitude. The pilots responded by pushing the throttles to maximum power but it was too late. Without any altitude left, the plane smacked into the ground, ran across a highway killing a motorist, plowed into two water towers and burst into flames, just thousands of feet from the runway. Including the motorist, 137 people died; 29 survived.

August 31, 1988 Flight 1141 departed the gate at 8:30am and was cleared to taxi to runway 18L. The aircraft was instructed to line up on the runway and hold for one minute due to the possibility of wake turbulence from a departing American Airlines DC-10. The crew requested to extend the hold to two minutes which was granted. The takeoff was normal until the main wheels left the ground, at which point the aircraft commenced a violent rolling motion which resulted in the right wingtip contacting the runway. The aircraft developed compressor surges (due to breakdown of the airflow through the engine) and was unable to obtain altitude or stabilized flight. The aircraft then hit the ILS antenna 1000 feet from the end of runway 18L, remained airborne for a further 400 feet until it struck the ground, and came to rest 3200 feet from the end of the runway. Fire erupted in the right wing area and quickly spread and engulfed the rear of the aircraft. The crash killed 14 of the 108 passengers and crew on board, and injuring 76 others.

Probability of Future Occurrences of the Airport/Aircraft Crash Hazard:
Occurrences of an Airport/Aircraft crash incident are often dependent on external factors. An incident can be caused intentionally or accidentally, and may or may not involve human action. It is almost impossible to predict the statistical probability of future occurrences of the airport/aircraft crash hazard, there are simply too many variables, including human behavior. The probability of future occurrence can be rated as low.

Vulnerability Assessment Summary for Aircraft Crash

Airport / Aircraft Crash	
Population	Any part of the population of the City that is located in the departure or arrival tracts are at greatest risk from an aircraft crash. The City of Dallas is located within the Standard Instrument Departure and Instrument Departure routes for both Dallas Love Field and Dallas/Fort Worth Airport. There have been 0 fatalities associated with the hazard in the City of Dallas. Therefore, the probability of future occurrence can be rated as low.
Improved Property	Based on historical data aircraft crashes normally occur during the takeoff and landing phase of flight and these phases are normally within the airport boundaries. There is a less that 1% chance that an aircraft crash will cause damage to a resident neighborhood. Dallas Love Field is mainly located in an industrial area with a small residential development near the runway flight paths.
Emergency Facilities	Because of the geographical operations of airports, there are no emergency facilities exposed to this hazard.
Critical Facilities	Because of the geographical operations of airports, there are no emergency facilities exposed to this hazard.
Critical Infrastructure	Because of the geographical operations of airports, there are no emergency facilities exposed to this hazard.

Dam/Levee Failure

Note: Dam information considered sensitive, including extent and impact, can be found in Appendix C. If you need a copy of this information, please contact the Dallas Office of Emergency Management.

Description of Dam/Levee Failure Hazard: Dams are water storage, control, or diversion barriers that impound water upstream in reservoirs. Dam failure is a collapse or breach in the structure. While most dams have storage volumes small enough that failures have little or no repercussions, dams with large storage amounts can cause significant flooding downstream. The U.S. Army Corp of Engineers classifies dam failures as the following:

- ✓ High – Any loss of life or serious hazard or damage to health, main highways, high value industrial or commercial properties, major public utilities, or serious direct or indirect economic loss to the public
- ✓ Significant – Possible health hazard or probable loss of high value property; damage to secondary highways, railroads, or other public utilities; or limited direct or indirect economic loss to the public.
- ✓ Low – Property losses restricted mainly to rural buildings and Local County and town roads, which are an essential part of the rural transportation system serving the area involved.

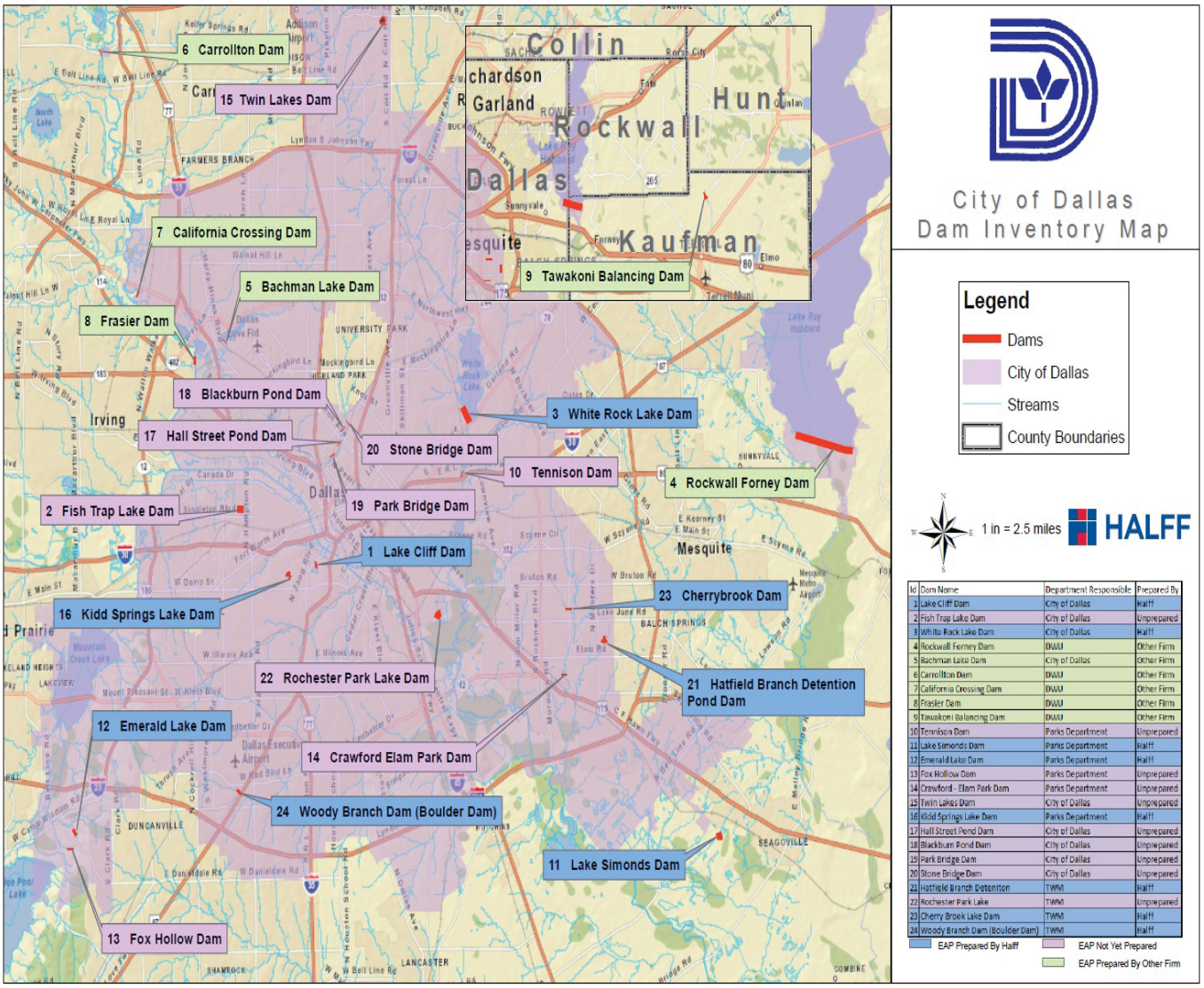
Hazard Identification: The City of Dallas does not have any recorded dam or levee failures. In the past 10 years there have been 35 dam failures in Texas. In 2013 10 dams collapsed near Woodville and 2 dams have failed in the Nueces River watershed. On September 27, 1997, 10 dams including the Charmine, Galahad, Tristan, Urland dams near Woodville, Texas, failed due to an excess amount of rain in a short amount of time.

In 1900 a major dam failure occurred in Austin known as the McDonald Dam (aka: The Great Granite Dam). The failure of the dam caused the Lake McDonald reservoir to drain and left the City of Austin without electrical power for a number of months.

In 2009 Kaufman County residents of Combine were out on alert for a levee failure. The residents were warned that the Trinity River levee was in danger of failure, and the failure could lead to a life threatening situation. The Bois D'Arc Island Levee was built in 1918 and the levee was in desperate need of repairs. The failure of the levee put residential communities and commercial structures in danger. If failure occurred the area could be flooded for up to two weeks.

The City of Dallas has 21 dams that they are responsible for maintain. There are 8 additional dams that are not maintained by the city but do present a hazard. Below in figures 1.4.13.1 – 1.4.13.2 are a list of dams that the City of Dallas is required to maintain an emergency action plan (EAP).

Figure 1.3 - 14.1: Location of Dams in the City of Dallas



Id	Dam Name	Department Responsible	Prepared By
1	Lake Cliff Dam	City of Dallas	Halff
2	Fish Trap Lake Dam	City of Dallas	Unprepared
3	White Rock Lake Dam	City of Dallas	Halff
4	Rockwall Forney Dam	DWU	Other Firm
5	Bachman Lake Dam	City of Dallas	Other Firm
6	Carrollton Dam	DWU	Other Firm
7	California Crossing Dam	DWU	Other Firm
8	Frasier Dam	DWU	Other Firm
9	Tawakoni Balancing Dam	DWU	Other Firm
10	Tennison Dam	Parks Department	Unprepared
11	Lake Simonds Dam	Parks Department	Halff
12	Emerald Lake Dam	Parks Department	Halff
13	Fox Hollow Dam	Parks Department	Unprepared
14	Crawford - Elam Park Dam	Parks Department	Unprepared
15	Twin Lakes Dam	City of Dallas	Unprepared
16	Kidd Springs Lake Dam	Parks Department	Halff
17	Hall Street Pond Dam	City of Dallas	Unprepared
18	Blackburn Pond Dam	City of Dallas	Unprepared
19	Park Bridge Dam	City of Dallas	Unprepared
20	Stone Bridge Dam	City of Dallas	Unprepared
21	Hatfield Branch Detention	TWM	Halff
22	Rochester Park Lake	TWM	Unprepared
23	Cherry Brook Lake Dam	TWM	Halff
24	Woody Branch Dam (Boulder Dam)	TWM	Halff

Source: Halff Associates

Table 1.3 - 14.1: Dam Names and Responsible Department

ID	Dam Name	Department Responsible
1	Lake Cliff Dam	City of Dallas
2	Fish Trap Dam	City of Dallas
3	White Rock Lake Dam	Dallas Water Utilities
4	Rockwall Forney Dam	Dallas Water Utilities
5	Bachman Lake Dam	Dallas Water Utilities
6	Carrollton Dam	Dallas Water Utilities
7	California Crossing Dam	Dallas Water Utilities
8	Frasier Dam	Dallas Water Utilities
9	Tawakoni Balancing Dam	Dallas Water Utilities
10	Tennison Dam	Parks Department
11	Lake Simonds Dam	Parks Department
12	Emerald Lake Dam	Parks Department
13	Fox Hollow Dam	Parks Department
14	Crawford - Elam Park Dam	Parks Department
15	Twin Lakes Dam	City of Dallas
16	Kidd Springs Lake Dam	Parks Department
17	Hall Street Pond Dam	City of Dallas
18	Blackburn Pond Dam	City of Dallas
19	Park Bridge Dam	City of Dallas
20	Stone Bridge Dam	City of Dallas
21	Hatfield Branch Detention	Trinity Watershed Management
22	Rochester Park Lake	Trinity Watershed Management
23	Cherry Brook Lake Dam	Trinity Watershed Management
24	Wood Branch Dam (Boulder Dam)	Trinity Watershed Management

Structure/Property and Dam Breach/Levee Vulnerability

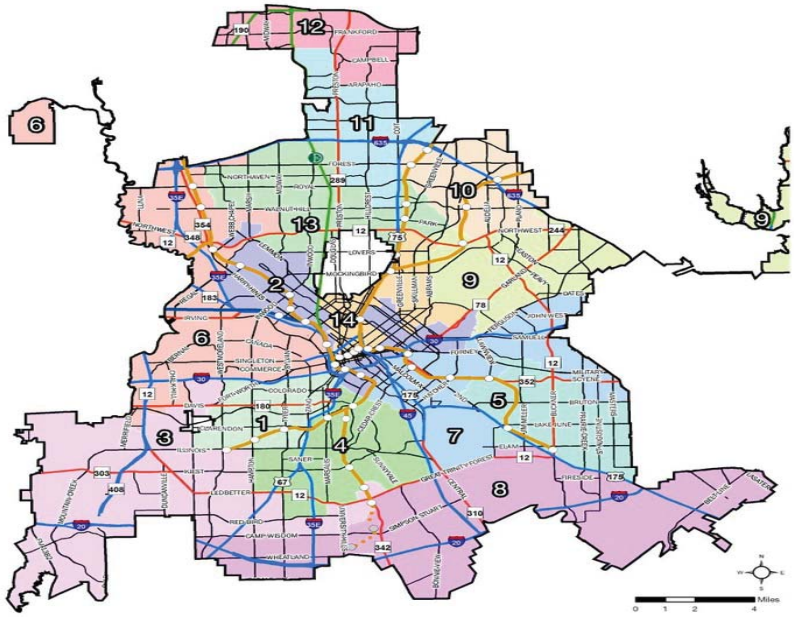
Category of Property in Jurisdiction	FEMA 100 Parcels	FEMA 100 or 500	FEMA 100Parcels with buildings	FEMA 100 and 500Parcels with buildings
Residential				
Count	11,595	24,368	9,318	19,575
Value	$4,628,411,970	$5,450,406,560	$3,634,097,450	$4,382,020,090
Commercial				
Count	1,324	4,509	805	2,986
Value	$3,095,219,000	$5,564,761,390	$2,839,545,440	$5,128,349,800
Industrial				
Count	2044	4663	933	2838
Value	$1,667,444,090	$2,687,006,710	$1,600,192,780	$2,595,576,550
Government / Public*				
Count	1431	1905	270	434
Value	$1,343,044,570	$1,385,325,280	$284,918,760	$306,938,270
Totals				
Count	16,394	35,445	11,326	25,833
Total Value	$10,734,119,570	$15,087,499,940	$8,358,754,430	$12,412,885,610
*Based on being owned by the City of Dallas in DCAD				

Extent of Dam Failure Hazard: Dam failure is at times difficult to mitigate due to the fact that any initial steps require determination of ownership. In Texas, there are a total of 7,590 dams. Of these 890 are high hazard dams, with another 802 as significant hazard dams. Almost 90% are over 25 years old. Responsibility for dams lies with the owners and managers of each dam.

Prior to 2009, High-hazard-potential dams were defined as those at which failure or mis-operation would probably cause loss of human life. Significant-hazard-potential dams are those at which failure or mis-operation probably would not result in loss of human life but could cause economic loss, environmental damage, disruption of lifeline facilities, or other significant damage. Low-hazard-potential dams are those at which failure or mis-operation probably would not result in loss of human life but would cause limited economic and/or environmental losses. Losses would be limited mainly to the owner's property.

The extent of levee failure in the City of Dallas has not yet been determined. As a result the City of Dallas would like to cite a data deficiency pertaining to the UASCE levees as there is no information on the inundation levels. While there is some information on the dams/levees that are operated by the USACE, the City of Dallas does not have own or maintain any data that would show the extent of a levee failure. The City of Dallas will need to conduct studies and work with the USACE to get a better understanding of the risks and extent of inundation that it will face in the event of a breach.

Structure / Property and Dam Breach / Levee Vulnerability by Council District



CITY OF DALLAS, DALLAS COUNTY - TEXAS
PARCEL AND BUILDING FLOODING ANALYSIS

BUILDING** COUNT - GROUPING BY COUNCIL DISTRICTS
NON -LEVEE PANELS (i.e. EXCLUDING 7 LEVEE PANELS)

COUNCIL DISTRICTS	Council District No.	Total Number of Buildings Flooded by 2001 Effective Mapping Only	Total Number of Buildings Flooded by 2010 Preliminary Mapping Only	Total Number of Buildings Flooded by 2001 and 2010 Mapping Always	Total Number of Buildings Flooded by 2001 Effective Mapping	Total Number of Buildings Flooded by 2010 Preliminary Mapping	Total Number of Buildings Added (Net Gain)/Lost (Net Loss) due to 2010 Preliminary Mapping
	1	95	114	158	253	272	19
	2	6	6	4	10	10	0
	3	90	82	88	178	170	-8
	4	135	69	137	272	206	-66
	5	333	163	313	646	476	-170
	6	33	83	152	185	235	50
	7	160	166	337	497	503	6
	8	246	166	349	595	515	-80
	9	343	331	554	897	885	-12
	10	86	304	387	473	691	218
	11	170	197	248	418	445	27
	12	119	64	77	196	141	-55
	13	124	169	185	309	354	45
	14	61	10	65	126	75	-51
	**All Buildings > 300sq.ft.	**2001**	**1924**	**3054**	**5055**	**4978**	-77

Assets Exposed to Hazard

- ✓ Property/Risk Vulnerability: It was determined that critical facilities as well as public, private, and commercial properties are vulnerable to being affected by dam failure if they are located in the inundation area.
- ✓ People Risk/Vulnerability: It was determined that risk/vulnerability includes the population of the City of Dallas that is located in the dam failure inundation area. The population is vulnerable to the effects of dam failures through power outages, effects on transportation routes, establishment of shelters, etc...
- ✓ Environmental Risk/Vulnerability: Risks to the environment are high should a dam or levee failure occur, but the frequency of dam failures in The City of Dallas is low. Environmental concerns during a dam or levee breach would be interruption of water supply, water contamination, and loss of properties.

Dam failure is at times difficult to mitigate due to the fact that any initial steps require determination of ownership. In Texas, there are a total of 7,590 dams. Of these 890 are high hazard dams, with another 802 as significant hazard dams. Almost 90% are over 25 years old. Responsibility for dams lies with the owners and managers of each dam.

Prior to 2009, High-hazard-potential dams were defined as those at which failure or mis-operation would probably cause loss of human life. Significant-hazard-potential dams are those at which failure or mis-operation probably would not result in loss of human life but could cause economic loss, environmental damage, disruption of lifeline facilities, or other significant damage. Low-hazard-potential dams are those at which failure or mis-operation probably would not result in loss of human life but would cause limited economic and/or environmental losses. Losses would be limited mainly to the owner's property.

Table 1.3 - 14-3: Previous Dam Classifications

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, and Lifeline Losses
Low	None expected	Low and generally limited to owner
Significant	None expected	Yes
High	Probable. One or more expected	Yes (but not necessary for this classification)

Source: National Inventory of Dams

Table 1.3 - 14-4: Dam Classifications Effective January 1, 2009

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, and Lifeline Losses
Low	None expected	Minimal economic loss
Significant	None expected	Economic loss appreciable
High	Loss of Life expected	Economic loss excessive

Source: Texas Commission on Environmental Quality

Probability of Dam Failure Hazard: Failure of a major dam for the City of Dallas is an unlikely event. The frequency of occurrence for dam failure is possible, with less than ten percent chance of an occurrence in any given year.

Vulnerability Assessment Summary for Dam/Levee Failure

Dam/Levee Failure	
Population	Although The City of Dallas has not experienced a dam/levee failure, the possibility is always present. All dams/levees should consistently be monitored for structural integrity. The potential damage caused by a dam failure is major; therefore, even though the probability of occurrence is unlikely, mitigation actions should always be considered to prevent a dam failure incident.
Improved Property	All property is vulnerable to being affected by dam failure if they are located in the inundation area.
Emergency Facilities	Emergency facilities are vulnerable to being affected by dam failure if they are located in the inundation area. Currently 35 % of emergency facilities are located in or near a 100 year floodplain
Critical Facilities	Critical facilities are vulnerable to being affected by dam failure if they are located in the inundation area
Critical Infrastructure	Critical infrastructure is vulnerable to being affected by dam failure if they are located in the inundation area.

Terrorism

Description of the Terrorism Hazard: Terrorism is the systematic use of terror, often violent, especially as a means of coercion. In the international community, however, terrorism has no legally binding, criminal law definition. Common definitions of terrorism refer only to those violent acts which are intended to create fear (terror); are perpetrated for a religious, political, or ideological goal; and deliberately target or disregard the safety of non-combatants (civilians). Some definitions now include acts of unlawful violence and war. The use of similar tactics by criminal organizations for protection rackets or to enforce a code of silence is usually not labeled terrorism, though these same actions may be labeled terrorism when done by a politically motivated group.

The word "terrorism" is politically and emotionally charged, and this greatly compounds the difficulty of providing a precise definition. Studies have found over 100 definitions of “terrorism”. The concept of terrorism may be controversial as it is often used by state authorities (and individuals with access to state support) to delegitimize political or other opponents, and potentially legitimize the state's own use of armed force against opponents.

Terrorism has been practiced by a broad array of political organizations to further their objectives. It has been practiced by right-wing and left-wing political parties, nationalistic groups, religious groups, revolutionaries, and ruling governments. An abiding characteristic is the indiscriminate use of violence against noncombatants for the purpose of gaining publicity for a group, cause, or individual. The symbolism of terrorism can leverage human fear to help achieve these goals.

Once thought the be a type of disaster event that did not happen on U.S. soil, the threat of terrorism has evolved into a main concern, with Americans now citing homeland security as a top priority. Whether setting off a nuclear attack, igniting a traditional or dirty bomb, poisoning water/food supplies, or attacking the public transportation system, terrorists are familiar with our nation’s vulnerabilities, and will manipulate them to inflict fear on the psyche of the American people.

The British intelligence agency, commonly known as MI5, lists the following methods that can be used by terrorists. Terrorists can murder and maim using many different methods of attack. As well as using tried and tested methods, Al Qaida and associated networks are able to innovate, as was demonstrated on 11 September 2001.

Explosive devices: These can be delivered to their targets in vehicles, by post or by a person. Currently an explosive device within a vehicle is the most prevalent means of attack. Unlike the Provisional IRA, who also used this method, Al Qaida networks often seek to ensure that their target is hit by employing a suicide operative within the vehicle to detonate the device at the required moment.

Suicide bombers are also deployed to carry an explosive device into the vicinity of a target individual or location. On some occasions the terrorists decide, as they did in the Madrid commuter train attacks in March 2004, to detonate their devices remotely, so that they can go on to perpetrate further attacks.

Other examples of terrorist explosive devices include the suicide attacks using vehicle-borne devices against the British Consulate and HSBC bank in Istanbul in November 2003 and Richard Reid's thwarted attempt in December 2001 to bring down an airliner with a small improvised explosive device concealed in his shoes. Al Qaida has also carried out two suicide attacks against ships using explosives packed into small boats (both off the coast of Yemen, in 2000 and 2002).

Shootings: Al Qaida has orchestrated a campaign of shootings and close quarter attacks targeted against Westerners in Saudi Arabia and Iraq. Most recently, on 6 December 2004, gunmen mounted an assault on the US consulate in the Saudi city of Jeddah, in which five of the consulate staff and four of the attackers were killed. Al Qaida claimed responsibility for this attack. In Europe, an extremist shot dead the Dutch film maker Theo van Gogh in Amsterdam in November 2004.

Kidnappings: There has been an increase in the number of kidnappings taking place, especially in Iraq and Afghanistan. The kidnapping of UK citizen Kenneth Bigley in Iraq in September 2004 resulted in his murder.

Surface to air missiles: An unsuccessful missile attack was attempted on an Israeli charter plane departing from Mombasa, Kenya, in November 2002. Similar attacks have been carried out in recent months against coalition aircraft in Iraq.

Chemical, biological and radiological (CBR) devices: To date, no such attacks have taken place in the UK. Alternative methods of attack, such as explosive devices, are more reliable, safer and easier for terrorists to acquire or use. Nevertheless, it is possible that Al Qaida and some other associated networks may seek to use chemical, biological or radiological material against the West. Osama bin Laden has referred to such devices on several occasions. In November 2001, he said that "if America used chemical or nuclear weapons against us, then we may retort with chemical and nuclear weapons. We have the weapons as a deterrent".

In a June 2002 article, Al Qaida spokesman Sulaiman Abu Gaith also said "it is our right to fight the Americans with chemical and biological weapons". In April 2005, Kamel Bourgass, an Algerian with known links to Al Qaida, was convicted of plotting to manufacture and spread poisons, including ricin, in the UK.

Other methods of attack: In addition to physical attack methods, terrorists may also try to access information that may be of use to them, for example by infiltrating an organization or securing the assistance of an "insider".

Location of the Terrorism Hazard: Terrorism being a man-made hazard, is not tied to specific geography or topography, but rather is usually tied to specific features of a community. These features are usually of high value to the community, or are necessary for the community's operations or livelihood. Several such locations exist in the City of Dallas, including:

- ✓ Mass Transit Rail Stations
- ✓ DART Bus Lines
- ✓ Major Bridges

- ✓ Dallas Love Field
- ✓ Fair Park (State Fair of Texas location)
- ✓ Cotton Bowl
- ✓ Mass transit terminal

In addition to the above fixed facilities, Dallas hosts several annual events that draw large crowds to public spaces, including:

- ✓ Texas/OU Weekend
- ✓ White Rock Marathon
- ✓ Thanksgiving Day Parade
- ✓ St. Patrick's Day Parade
- ✓ Several large corporate conventions

Terrorists most often search for highly visible targets which they can strike while avoiding detection. However, the motivation behind terrorist events can be varied and the entire planning area is considered at risk.

Severity of the Terrorism Hazard: As terrorism is a man-made hazard, the severity of the hazard within the city is impossible to predict. Scenarios range from minor disruptions to catastrophic damages and fatalities. There is no scale for measure the severity of an act of terrorism, and a great deal of variability between events. Terrorism can be targeted at specific individuals or the campus as a whole. They may be premeditated or occur as the result of an opportunity.

The National Terrorism Advisory System (NTAS) replaces the color-coded Homeland Security Advisory System (HSAS). This system will more effectively communicate information about terrorist threats by providing timely, detailed information to the public, government agencies, first responders, airports and other transportation hubs, and the private sector.

It recognizes that Americans all share responsibility for the nation's security, and should always be aware of the heightened risk of terrorist attack in the United States and what they should do.

NTAS Alerts:

- ✓ **Imminent Threat Alert:** Warns of a credible, specific, and impending terrorist threat against the United States.
- ✓ **Elevated Threat Alert:** Warns of a credible terrorist threat against the United States.

After reviewing the available information, the Secretary of Homeland Security will decide, in coordination with other Federal entities, whether an NTAS Alert should be issued. NTAS Alerts will only be issued when credible information is available.

These alerts will include a clear statement that there is an imminent threat or elevated threat. Using available information, the alerts will provide a concise summary of the potential threat, information about actions being taken to ensure public safety, and recommended steps that individuals, communities, businesses and governments can take to help prevent, mitigate or respond to the threat.

The NTAS Alerts will be based on the nature of the threat: in some cases, alerts will be sent directly to law enforcement or affected areas of the private sector, while in others, alerts will be issued more broadly to the American people through both official and media channels.

Sunset Provision: An individual threat alert is issued for a specific time period and then automatically expires. It may be extended if new information becomes available or the threat evolves.

NTAS Alerts contain a sunset provision indicating a specific date when the alert expires - there will not be a constant NTAS Alert or blanket warning that there is an overarching threat. If threat information changes for an alert, the Secretary of Homeland Security may announce an updated NTAS Alert. All changes, including the announcement that cancels an NTAS Alert, will be distributed the same way as the original alert.

Impact on Life and Property from the Terrorism Hazard: Depending on the method chosen, the impact of a terrorist act on life and property in Dallas could be devastating. People, property and infrastructure are all potentially at risk to devastating impacts. The economic impacts to the City could be catastrophic, depending on the severity of the attack and the property and infrastructure that is damaged or destroyed.

Occurrences of the Terrorism Hazard: On September 24, 2009 Hosam Maher Husein Smadi, a citizen of Jordan, was arrested on suspicion of planning a terrorist bombing of Fountain Place, a downtown skyscraper in Dallas, Texas, on September 24, 2009.

Smadi was in the United States illegally, and unaware he was under continuous surveillance, and that the other members of his "sleeper cell" were all Federal agents. The agents in his "sleeper cell" had supplied him with inert chemical, so his bomb had not posed a real threat. Immigration officials were trying to determine how Smadi was able to work at a gas station, since he only had a 2007 tourist visa.

Smadi admitted leaving what he thought was a truck bomb in a garage beneath the 60-story building September. The device was a dud provided by FBI agents posing as al-Qaeda members. Smadi activated a timer connected to the decoy with a cell phone, then rode with an undercover agent and waited to watch the explosion. Instead, the phone rang an FBI number, and Smadi was arrested.

Smadi agreed to plead guilty to attempted use of a weapon of mass destruction. The charge is punishable by up to life in prison and a $250,000 fine, but prosecutors agreed to suggest to U.S. District Judge Barbara M. Lynn that the sentence not be more than 30 years. Under the plea bargain, prosecutors dropped a charge accusing Smadi of bombing a public place. On October 20, 2010, he was sentenced to 24 years imprisonment.

Probability of Future Occurrences of the Terrorism Event: Occurrences of the terrorism incident hazard are solely dependent on external factors. An incident must involve human action, which cannot be predicted with any degree of certainty. It's impossible to predict the statistical probability of future occurrences of the terrorism hazard, as there's

not enough data from which conclusions can be drawn. Therefore, the probability of future occurrence can be rated as moderate.

Vulnerability Assessment Summary for Terrorism

Terrorism	
Population	Occurrences of the terrorism incident hazard are solely dependent on external factors. An incident must involve human action, which cannot be predicted with any degree of certainty. It's impossible to predict the statistical probability of future occurrences of the terrorism hazard, as there's not enough data from which conclusions can be drawn. Therefore, the probability of future occurrence can be rated as low.
Improved Property	Because it is impossible to predict the statistical probability of a terrorist attack all properties located inside the City of Dallas are exposed to this hazard.
Emergency Facilities	Because it is impossible to predict the statistical probability of a terrorist attack all emergency facilities in the City of Dallas are exposed to this hazard.
Critical Facilities	Because it is impossible to predict the statistical probability of a terrorist attack all critical facilities in the City of Dallas are exposed to this hazard
Critical Infrastructure	Because it is impossible to predict the statistical probability of a terrorist attack all critical infrastructures in the City of Dallas are exposed to this hazard.

Consequence Analysis

The Emergency Management Accreditation Program (EMAP) for a HIRA requires the city program to include a consequence analysis for hazards identified in the HIRA. The consequence analysis should consider the impact on the public; responders; continuity of operations including delivery of services; property, facilities and infrastructure; the environment; the economic conditions of the city, and public confidence in the city's governance.

Impact on Public: Based on the HIRA in the Hazard Mitigation Action Projects, there is neither record of a historical event or impacts as identified in the vulnerability analysis that would be considered catastrophic form a city wide perspective. Historically, other than emerging disease/pandemic outbreaks, hazard events in the City of Dallas tend to be moderate in size-possibly approaching widespread, but not necessarily rising to the level of catastrophic. Three natural events that may have broader impact on the public would be a large tornado event (2012 North Texas Tornado Outbreak), a widespread flood (Dallas flood of 1908), or a large winter weather event (Great New Year's Eve Storm). Still the impacts on the public from these three events would be moderate. Perhaps the hazard with the greatest impact on the public (in terms of numbers of individuals adversely affected) would be an emerging biological hazard or a terrorism event that included a nuclear dispersion device.

Impact on Responders: Because it is unlikely that a hazard event would be widespread enough in Dallas to be "catastrophic," existing mutual aid mechanisms and the ability to exercise the Statewide Mutual Aid System (aka Senate Bill 11), should be sufficient to handle any hazard event. The exception to this may be an emerging biological outbreak.

Continuity of Operations (COOP): The City of Dallas continually develops and updates COOP plans in the event facilities and/or departments are impacted. City departments also maintain continuity of government plans which are largely operations based. Private sector corporations are encouraged to develop business continuity plans, but they are not mandated by the state.

Property, facilities, and infrastructure: The City of Dallas has collected and created risk assessments and vulnerability analyses for the different hazards profiled. The plan does not imply that the whole region would actually have an event occur where maximum damages are sustained.

Environment: Certainly a hazard event has the potential for environmental impact. Flood events for example may result in pollution of streams and rivers due to combined sewage overflows and a tornado/wind event will disperse materials, trash and debris over a widespread area. A drought may affect the environment in a different way by drying up wetlands, and weakening or killing trees and forestland. The three hazards that have a significant potential for environmental impact are: Tornado outbreak, flooding, and drought.

Economic condition of the city: Because most hazards in Dallas would not result in a city wide catastrophe, the economic impacts, while potentially severe, would be recoverable. Dallas has a diverse economy and is not reliant on one segment as other cities in the state are. From a geographic perspective, an event that would affect the greater Dallas/Fort

Worth area would have a greater impact on the state than would a hazard affecting a smaller rural area of the state. Similarly, The City of Dallas economy is no longer dependent on the energy sector having learned lessons from the collapse of the sector in the 80's and is now more diverse. However, an event affecting the downtown or Central Business District could have significant impact as a variety of programs could be interrupted.

Public confidence in city governance: As demonstrated in catastrophic events in other cities and counties, public confidence in city governance is tightly linked to the government's response to a hazard event. Even in more regionalized or local disasters this is the case although the effect of the disaster on public confidence is similarly regionalized or localized. The hazards most likely to have a widespread effect on public confidence in city governance are those that either have the probability of region wide effect (winter storm, drought) those that have a high impact or consequence (terrorism or biological) and those that have a short speed of onset (terrorism)

Changes in Population and Development

The City of Dallas was a participating jurisdiction in the 2009 Dallas County Hazard Mitigation Action Plan. Dallas has completed several actions identified in the previous plan.

Since the last mitigation plan in 2009 for the City of Dallas, 2010 census projections show the population of Dallas has grown from 1,197,816 to 1,281,047 (Jan. 1, 2015), an increase of 6.4%. The population estimate for December 31, 2015 is 1,363,034. Property values continue to rise in the City of Dallas, by an average of 1.3% citywide and as high as 4.7% in some areas. Dallas continues to set records for economic growth throughout the nation. In 2010, it was ranked 2nd for highest job growth by the US Department of Labor. These increases in wealth only increase the importance of hazard mitigation.

Since the 2009 plan, no new developments were built within a floodplain. To help mitigate the impacts of a disaster, Dallas has adopted stronger water-use ordinances and increased the scope and capabilities of its outdoor warning system through upgraded sirens. To further mitigate impacts, Dallas offers to its citizens and businesses Community Emergency Response Team (CERT) training and public education on natural and technical hazards.

Mitigation Strategy

In preparation of the 2013 update of this plan, the Local Planning Team reviewed the Mitigation Priorities from the previous plan and validated them for continued relevance. This section contains the city's updated and most current mitigation strategy as of August 2013.

Goals and Objectives

Reduce or eliminate the long term risk of loss of life and property damage to the citizens of the City of Dallas.

Goal 1: *Protect life and property from the impacts of natural, technological, and man-made disasters.*

- ✓ Objective 1.1: Reduce the risk posed to lives and property by frequently occurring hazard events and practices.
- ✓ Objective 1.2: Focus on hazards that cause repetitive damage and/or pose severe risk.
- ✓ Objective 1.3: Develop and implement strategies that make critical facilities and community assets, as well as private homes and businesses, more resistant to impact of hazard events.
- ✓ Objective 1.4: Encourage preventative measures for existing and new development areas vulnerable to hazards, and develop strategies that support municipal efforts towards responsible development in hazard prone - areas.

Goal 2: *Enhance awareness and education of the risks associated with natural, technological, and human caused hazards:*

- ✓ Objective 2.1: Determine what issues the public needs to understand about hazard mitigation.
- ✓ Objective 2.2: Develop and execute education outreach programs to increase public awareness of both risks associated with hazards, and strategies that can be adopted to lessen the impact of hazard events.
- ✓ Objective 2.3: Provide information on resources available for implementing mitigation strategies

Goal 3: *Build a hazard mitigation infrastructure and promote pre-disaster mitigation as the most effective means to reduce future disaster losses.*

- ✓ Objective 3.1: Utilize the Hazard Mitigation Plan effectively by clearly communicating the process for plan implementation, maintenance, and updates. This includes helping the public understand what their role is in both disaster response and pre-disaster mitigation.
- ✓ Objective 3.2: Identify agencies, personnel and resources available or needed to implement pre disaster mitigation activities and initiatives.
- ✓ Objective 3.3: Enforce, track, and/or recommend Federal, State, and local legislation related to hazard mitigation.

Goal 4*: Promote growth in sustainable manner*

- ✓ Objective 4.1: Incorporate hazard mitigation into long-range planning, budgeting and development activities.
- ✓ Objective 4.2: Promote beneficial uses of hazardous areas while expanding space and recreational opportunities.
- ✓ Objective 4.3: Prevent creation of future hazards to life and property.

Action Items

Mitigation Action Project # 1	
City of Dallas Action Item	Levee System Improvements
Hazard(s) Addressed	Flooding and dam/levee failure
Goal/Objective	Goal 1 / Objective 1.1
Priority	High
Estimated Cost	$6,000,000.00
Potential Funding Sources	Hazard Mitigation Grant Funds
Potential Matching Sources	General Budget
Lead Department	Trinity Watershed Management
Implementation Schedule	2 years
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Increase stability of levee system
Discussion	Improve the levee system with improvements aimed at increasing their durability and longevity for example constructing cut off walls in areas where seepage has been identified as potential problem; flattening levee slopes to widen to increase stability and to decrease levee slope to reduce skin slides; increasing the levee height to make it 18 feet above 100 year instead of 16 feet to add freeboard to enable to pass the standard project flood.

Mitigation Action Project # 2	
City of Dallas Action Item	Flood Control
Hazard(s) Addressed	Flooding and dam/levee failure
Goal/Objective	Goal 1 / Objective 1.4
Priority	Medium
Estimated Cost	$1,000,000.00
Potential Funding Sources	Hazard Mitigation Grant Funds
Potential Matching Sources	General Budget, Private Match
Lead Department	Trinity Watershed Management
Implementation Schedule	2 years
Effect on Old Buildings	Reduce flooded structures by buying out properties.
Effect on New Buildings	Reduce flooded structures by restricting development
Cost Effectiveness	Reduce repetitive loss claim properties
Discussion	Improve floodplain management through wetland restoration and land buyouts throughout the city (Specifically in the Cadillac Heights area in Southwest Dallas) area that are most affected by flooding waters.

Mitigation Action Project # 3	
City of Dallas Action Item	Implement the Texas Safe Room Rebate Program for residents of the City of Dallas
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	Goal 1 / Objective 1.1
Priority	Medium
Estimated Cost	$500,000.00
Potential Funding Sources	Mitigation programs.
Potential Matching Sources	Business donations.
Lead Department	Office of Emergency Management
Implementation Schedule	Within one year of funds being approved.
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather.
Effect on New Buildings	Provides safe shelter in new building during severe weather.
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

Mitigation Action Projects # 4	
City of Dallas Action Item	City of Dallas Conservation to mitigate the effects of Drought
Hazard(s) Addressed	Drought
Goal/Objective	Goal 1 / Objective 1.3
Priority	Low
Estimated Cost	$25,000.00
Potential Funding Sources	City General Fund
Potential Matching Sources	Block Grants, Private Sector Matching
Lead Department	Dallas Water Utilities
Implementation Schedule	2-3 years
Effect on Old Buildings	This has no direct impact on structures
Effect on New Buildings	This has no direct impact on structure
Cost Effectiveness	Conservation of water to mitigate against Drought.
Discussion	Provide low flow devices to private residences and commercial properties as a means of conserving water in Dallas. Conservation of water is the best way to mitigate the effects of Drought.

Mitigation Action Projects # 5	
City of Dallas Action Item	City of Dallas Public Education of Drought Hazard
Hazard(s) Addressed	Drought
Goal/Objective	Goal 2/Objective 2.2
Priority	Low
Estimated Cost	$5,0000.00
Potential Funding Sources	City General Fund
Potential Matching Sources	Private Match
Lead Department	Dallas Water Utilities
Implementation Schedule	2-3 years from date of funding
Effect on Old Buildings	This has no direct effect on structures
Effect on New Buildings	This has no direct effect on structures
Cost Effectiveness	Mitigate the effects of drought thru public education
Discussion	Provide educational outreach to public on developing new or upgrading existing water systems to eliminate breaks and leaks. Information would include irrigation system usage, how and when to water, and water saving tips. Public education will help mitigate the lingering effects of a drought by teaching water conservation awareness.

Mitigation Action Projects #6	
City of Dallas Action Item	City of Dallas Protect Critical Infrastructure and Facilities
Hazard(s) Addressed	Earthquake
Goal/Objective	Goal 2 / Objective 2.3
Priority	Medium
Estimated Cost	$100,000.00
potential Funding Sources	City General Fund
Potential Matching Sources	State Match
Lead Department	Office of Emergency Management/City of Dallas Code Compliance
Implementation Schedule	5 years
Effect on Old Buildings	There are no direct affects to structures
Effect on New Buildings	There are no direct affects to structures
Cost Effectiveness	Costs associated
Discussion	Research the feasibility and cost effectiveness of Identifying and hardening critical lifeline systems (i.e., critical public services such as 911 and utilities) to meet Seismic Design Guidelines and Standards for Lifelines or equivalent standards.

Mitigation Action Projects # 7	
City of Dallas Action Item	City of Dallas Increase Earthquake Risk Awareness
Hazard(s) Addressed	Earthquake
Goal/Objective	Goal 1 / Objective 1.4
Priority	Low
Estimated Cost	$50,000
Potential Funding Sources	General Fund
Potential Matching Sources	Private match, State Funding
Lead Department	Office of Emergency Management
Implementation Schedule	2 years from date of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is very cost effective
Discussion	Conduct public education program about earthquake risk and mitigation activities in homes, schools, and businesses. Information would educate homeowners on safety techniques to follow during and after an earthquake.

Mitigation Action Projects #8	
City of Dallas Action Item	City of Dallas Public Outreach for Hail Risk Awareness
Hazard(s) Addressed	Hail
Goal/Objective	Goal 1 / Objective 1.3
Priority	Low
Estimated Cost	$25,000.00
Potential Funding Sources	General Budget
Potential Matching Sources	State of Texas, Urban Area Security Initiative
Lead Department	Equipment and Building Services
Implementation Schedule	2 years from date of funding
Effect on Old Buildings	This has no direct impact on structures
Effect on New Buildings	This has no direct impact on structures
Cost Effectiveness	Increase Hail Risk Awareness
Discussion	Conduct outreach activities to increase public awareness of hail dangers, including mailing safety brochures with the monthly city utility bill. Discuss the dangers of hail and how to take safety precautions. Topics would also promote upgrading roofing materials that better resist hail damage and impact resistant windows and doors.

Mitigation Action Projects #9	
City of Dallas Action Item	City of Dallas Critical Infrastructure Protection
Hazard(s) Addressed	Lightning
Goal/Objective	Goal 4 / Objective 4.3
Priority	Low
Estimated Cost	$250,000.00
Potential Funding Sources	General Funds
Potential Matching Sources	Private Match, State Grant
Lead Department	CIS – Communications
Implementation Schedule	4 years from date of funding
Effect on Old Buildings	No impacts to existing structures
Effect on New Buildings	No impacts to existing structures
Cost Effectiveness	Mitigate harmful effects from lightning strikes on radio communication sites.
Discussion	Installing a lightning protection system to the communication towers are integral to the City's ability to effectively communicate before, during, and after any major disaster. Mitigating this hazard will ensure their proper functioning.

Mitigation Action Projects #10	
City of Dallas Action Item	City of Dallas Public Education for Winter Storm Risk Awareness
Hazard(s) Addressed	Winter Storm
Goal/Objective	Goal 3 / Objective 3.1
Priority	Low
Estimated Cost	$5,000.00
Potential Funding Sources	General Fund
Potential Matching Sources	Private Match
Lead Department	Office of Emergency Management
Implementation Schedule	2 years from date of funding
Effect on Old Buildings	No effects on old buildings
Effect on New Buildings	No effects on new buildings
Cost Effectiveness	Increase Risk Awareness to Winter Storm Hazard.
Discussion	Educate the public of the dangers of severe winter storms and encourage the public to plan in advance for the occurrence of severe winter storms. Provide information via utility billing on how to protect exposed pipes and exterior plumbing and how to protect vegetation and pets during winter weather.

Mitigation Action Projects #11	
City of Dallas Action Item	City of Dallas Assist Vulnerable Populations during a Winter Storm.
Hazard(s) Addressed	Winter Storm
Goal/Objective	Goal 2 / Objective 2.3
Priority	Low
Estimated Cost	$50,000.00
Potential Funding Sources	General Fund
Potential Matching Sources	Private Match, VOAD,
Lead Department	Office of Emergency Management
Implementation Schedule	2 years for date of funding
Effect on Old Buildings	This has no direct impacts on structures
Effect on New Buildings	This has no direct impacts on structures
Cost Effectiveness	Very cost effective as majority of costs would be utility costs to running warming centers.
Discussion	Protect vulnerable populations in the City of Dallas from the impacts of severe winter storms by Identifying specific at-risk populations that may be exceptionally vulnerable in the event of long term power outages and organizing outreach to vulnerable populations, including establishing and promoting accessible heating centers in the community.

Mitigation Action Projects #12	
City of Dallas Action Item	City of Dallas Public Education Extreme Heat Risk Awareness
Hazard(s) Addressed	Extreme Heat
Goal/Objective	Goal 2 / Objective 2.2
Priority	Low
Estimated Cost	$15,000.00
Potential Funding Sources	General Fund
Potential Matching Sources	Private Match, County Funds
Lead Department	Office of Emergency Management/Public Information Office
Implementation Schedule	2 years from date of funding
Effect on Old Buildings	No effects on old buildings
Effect on New Buildings	No effects on new buildings
Cost Effectiveness	Mitigate the effects of heat to the general public.
Discussion	Conduct public information outreach to remind citizens to hydrate and avoid direct exposure to the sun between the peak Ultra Violet hours of 1 p.m. and 4 p.m. This outreach will help reduce the loss of life from heat related medical conditions.

Mitigation Action Projects #13	
City of Dallas Action Item	City of Dallas Extreme Heat Hazard to vulnerable populations.
Hazard(s) Addressed	Extreme Heat
Goal/Objective	Goal 3 / Objective 3.2
Priority	Low
Estimated Cost	$45,000.00
Potential Funding Sources	General Fund
Potential Matching Sources	Private Match, County Funds
Lead Department	Office of Emergency Management/Parks Department
Implementation Schedule	2 years
Effect on Old Buildings	No effects on old buildings
Effect on New Buildings	No effects on new buildings
Cost Effectiveness	Mitigate the effects of extreme heat to vulnerable populations.
Discussion	Coordinate efforts with volunteer outreach organizations and private sector partners to identify and operate cooling centers during extreme heat days. Public outreach may include providing portable air conditioners or fans when funds are available.

Mitigation Action Projects #14	
City of Dallas Action Item	City of Dallas Public Education for Lightning Risk Awareness
Hazard(s) Addressed	Lightning
Goal/Objective	Goal 2 / Objective 2.2
Priority	Low
Estimated Cost	$2,500.00
Potential Funding Sources	General Budget
Potential Matching Sources	Private Match
Lead Department	Office of Emergency Management
Implementation Schedule	1-2 from date of funding
Effect on Old Buildings	No impacts to existing structures
Effect on New Buildings	No impacts to existing structures
Cost Effectiveness	Conduct Lightning Awareness Programs
Discussion	Use outreach programs to promote awareness of lightning dangers by developing a lightning brochure for distribution at recreation Centers, Fair Park occupants, and to outdoor event organizers. Mailing safety brochures with monthly water bills and including lightning safety tips on department website and social media.

Mitigation Action Project # 15	
City of Dallas Action Item	City of Dallas Purchase and distribute hail and wind resistant window coverings to eligible homeowners
Hazard(s) Addressed	Hail, tornado, high winds
Goal/Objective	
Priority	Low
Estimated Cost	Unknown currently, based on current population and vendor
Potential Funding Sources	HMGP
Potential Matching Sources	General Fund, in-kind
Lead Department	Emergency Management
Implementation Schedule	12 Months
Effect on Old Buildings	Potentially can reduce damage caused by severe weather
Effect on New Buildings	Potentially can reduce damage caused by severe weather
Cost Effectiveness	Low cost and will provide great benefit to the community
Discussion	The city will purchase window coverings to protect residential and business windows from damage from hail and wind damage.

Mitigation Action Project # 16	
City of Dallas Action Item	City of Dallas Conduct a Flood Protection Study to determine the most appropriate mitigation actions to alleviate the inundation areas of the dams and levees that affect the City of Dallas
Hazard(s) Addressed	Flooding, Dam and Levee failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$150,000
Potential Funding Sources	City Budget, State and Federal Funding including HMGP and PDM
Potential Matching Sources	Emergency Management
Lead Department	Within two years of funding
Implementation Schedule	None
Effect on Old Buildings	None
Effect on New Buildings	The cost is low compared to the benefits
Cost Effectiveness	Future flood studies for floodway crossings of the City of Dallas. Improvements required as a result of the future studies will be incorporated into the future roadway improvement projects.
Discussion	Conduct a Flood Protection Study to determine the most appropriate mitigation actions to alleviate the inundation areas of the dams and levees that affect the City of Dallas

Mitigation Action Project # 17	
City of Dallas Action Item	City of Dallas Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities
Hazard(s) Addressed	Drought
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	TBD
Potential Matching Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire where applicable.

Mitigation Action Project # 18	
City of Dallas Action Item	Commission a Study of the Earthquake Threat to City of Dallas
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5 and this annex, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Essential Infrastructure Summary Report for the City of Dallas

The following tables and maps below provide a summary inventory of essential infrastructure and facilities in the City of Dallas.

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	See Map 1.4.1	14
Schools	See Map 1.4.2	376
Police Stations	See Map 1.4.3	6
Fire Stations	See Map 1.4.4	57
Emergency Operations Facilities	1500 Marilla, Dallas, TX, 76227	1
Dams (Moderate to High Hazard)	See Map 1.4.5	24
Hazardous Materials Sites	See Map 1.4.6	11
Military Institutions	See Map 1.4.7	11
Power Plants	See Map 1.4.8	85
Water Treatment Facility	See Map 1.4.9	8
Airport	Dallas Love Field	1
Mass Transportation Locations	See Map 1.4.10	57

Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	FEMA 100 Parcels	FEMA 100 or 500	FEMA 100 Parcels with buildings	FEMA 100 and 500 Parcels with buildings
Residential				
Count	11,595	24,368	9,318	19,575
Value	$4,628,411,970	$5,450,406,560	$3,634,097,450	$4,382,020,090
Commercial				
Count	1,324	4,509	805	2,986
Value	$3,095,219,000	$5,564,761,390	$2,839,545,440	$5,128,349,800
Industrial				
Count	2044	4663	933	2838
Value	$1,667,444,090	$2,687,006,710	$1,600,192,780	$2,595,576,550
Government / Public*				
Count	1431	1905	270	434
Value	$1,343,044,570	$1,385,325,280	$284,918,760	$306,938,270
Count	16,394	35,445	11,326	25,833
Total Value	$10,734,119,570	$15,087,499,940	$8,358,754,430	$12,412,885,610
*Based on being owned by the City of Dallas in DCAD				

Structure/Property and Wildfire Vulnerability

Category of Property in Jurisdiction	FEMA 100 Parcels	FEMA 100 or 500	FEMA 100 Parcels with buildings	FEMA 100 and 500 Parcels with buildings
Residential				
Count	11,595	24,368	9,318	19,575
Value	$4,628,411,970	$5,450,406,560	$3,634,097,450	$4,382,020,090
Commercial				
Count	1,324	4,509	805	2,986
Value	$3,095,219,000	$5,564,761,390	$2,839,545,440	$5,128,349,800
Industrial				
Count	2044	4663	933	2838
Value	$1,667,444,090	$2,687,006,710	$1,600,192,780	$2,595,576,550
Government / Public*				
Count	1431	1905	270	434
Value	$1,343,044,570	$1,385,325,280	$284,918,760	$306,938,270
Count	16,394	35,445	11,326	25,833
Total Value	$10,734,119,570	$15,087,499,940	$8,358,754,430	$12,412,885,610
*Based on being owned by the City of Dallas in DCAD				

Plan Maintenance

Plan Update

The Disaster Mitigation Act of 2000 requires that the City of Dallas Mitigation Action Projects be updated once every five years. The City of Dallas Office of Emergency Management Hazard Mitigation Planner will be responsible for ensuring that this update is completed. The Hazard Mitigation Planning Team will be involved to ensure all departments provide input into the planning process. The public will also be invited to participate in the process.

Maintenance

Once formally adopted by council resolution the plan will be submitted to the Texas Department of Emergency Management (TDEM) and the Federal Emergency Management Agency (FEMA). The plan will be revised and maintained as required under the guidance of the Hazard Mitigation Planning Team members. Each revision will be formally adopted by the City of Dallas.

Public participation will be sought throughout the plan implementation, evaluation, and maintenance. This will be included in periodic presentations of the plans progress to the City of Dallas Public Safety Commission, annual questionnaires and surveys, public meetings, and postings on social media and the Office of Emergency Management's website.

Incorporating into Existing Planning Documents

It will be the responsibility of the Office of Emergency Management to determine additional implementation procedures when appropriate. This will include integrating the requirements of the Dallas County Hazard Mitigation Plan into other City of Dallas planning documents or processes such as the following:

- ✓ Emergency Management Accreditation Standards
- ✓ Strategic plan
- ✓ Continuity of Operations Plans
- ✓ National Flood Insurance Community Rating System
- ✓ Ordinances, resolutions, and regulations

Opportunities to integrate the requirements of this plan into other planning mechanisms will continue to be identified through future meetings of the Hazard Mitigation Planning Team and through the five year review process as required by FEMA.

Other integration documents and responsible parties are identified in the integration table provided below.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Dallas	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director – Water Utilities Department	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

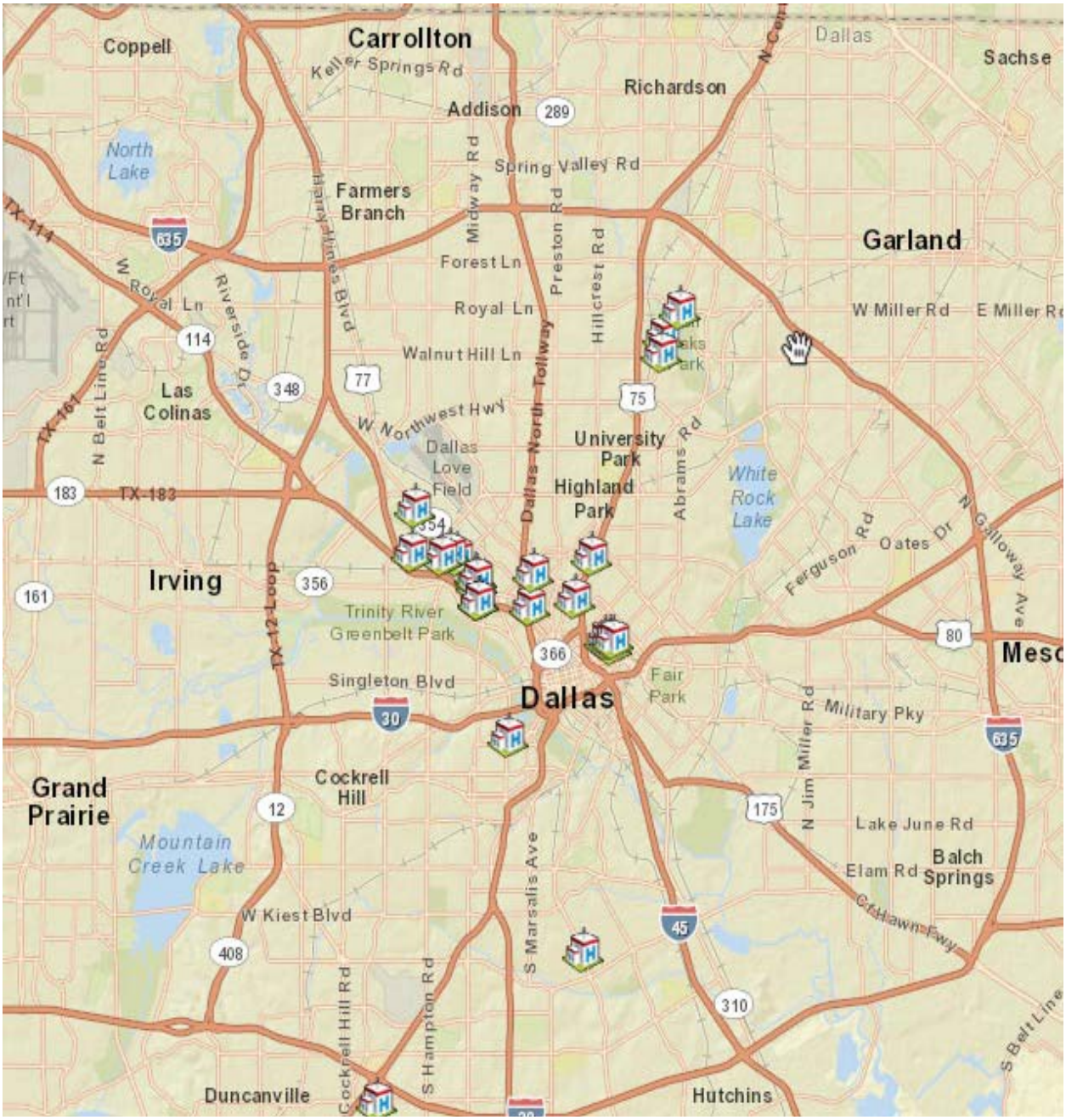
Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

- **A.** COD A-1 - Maps
- **B.** COD B-1 - Supporting Documentation – Meeting and Outreach
- **C.** COD C-1 – Community Rating System Summary
- **D.** COD D-1 – Sensitive Information

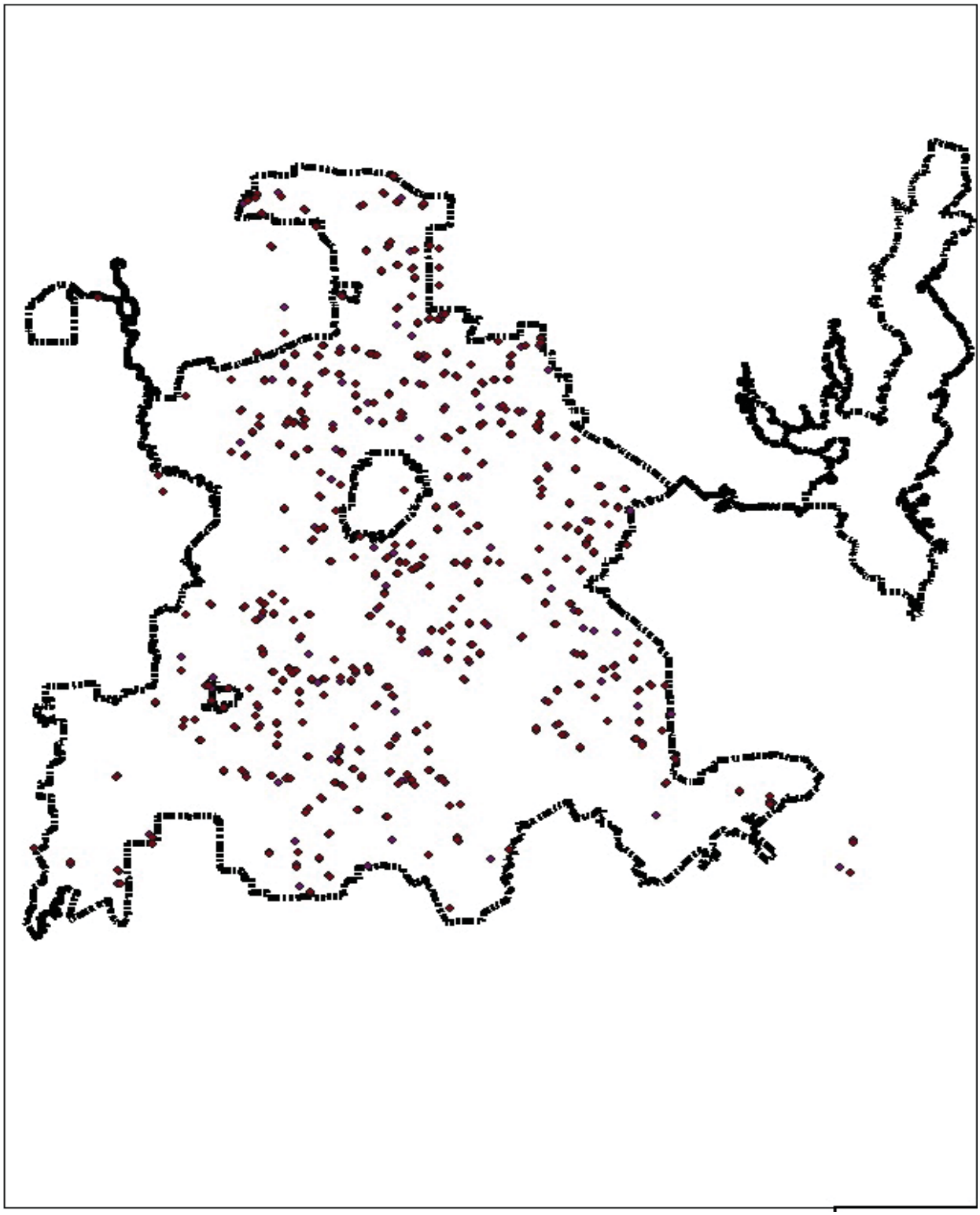
Appendix COD A-1: Maps

Hospital Locations



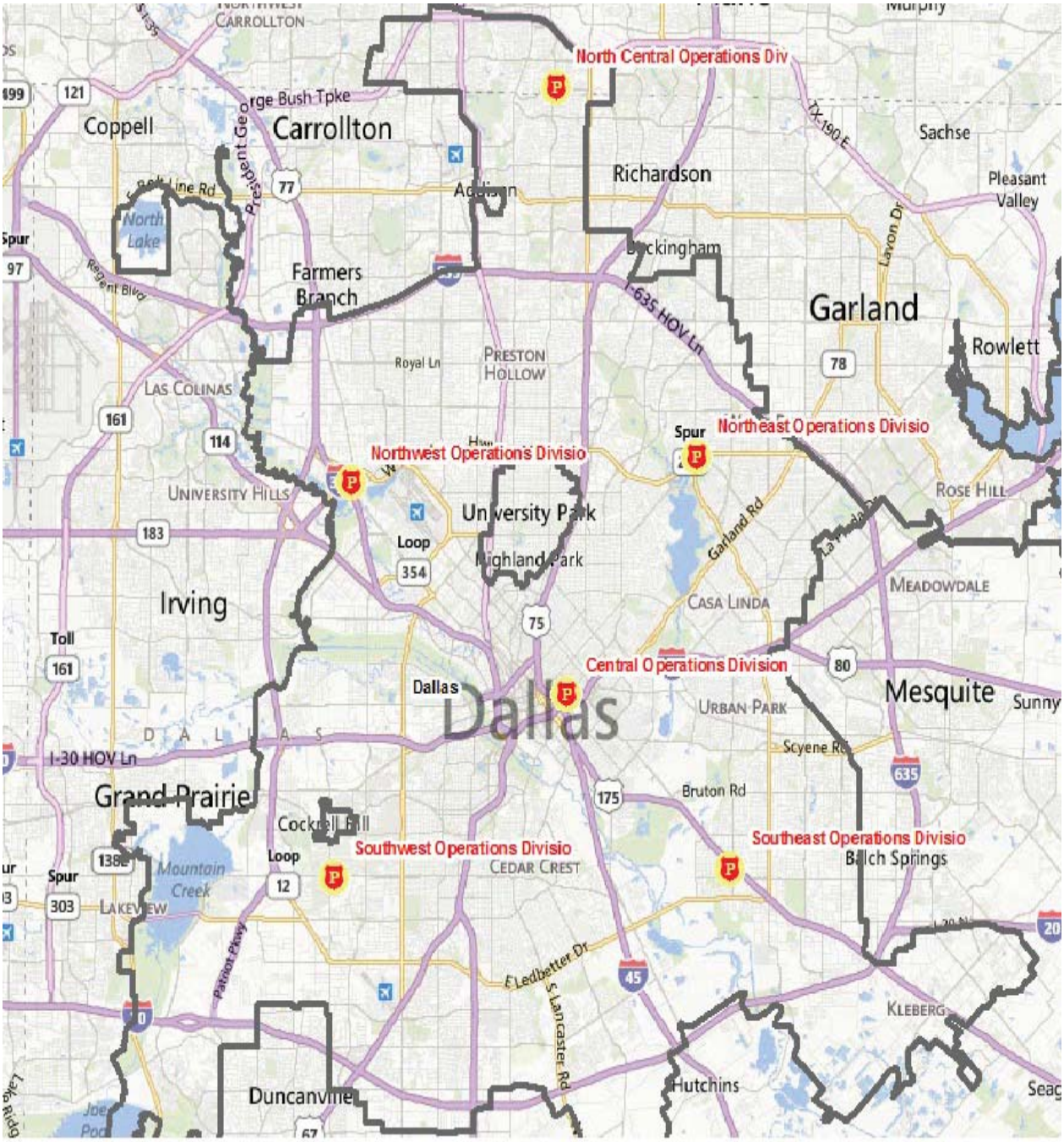
Source: Digital Sandbox and ESRI

School Locations



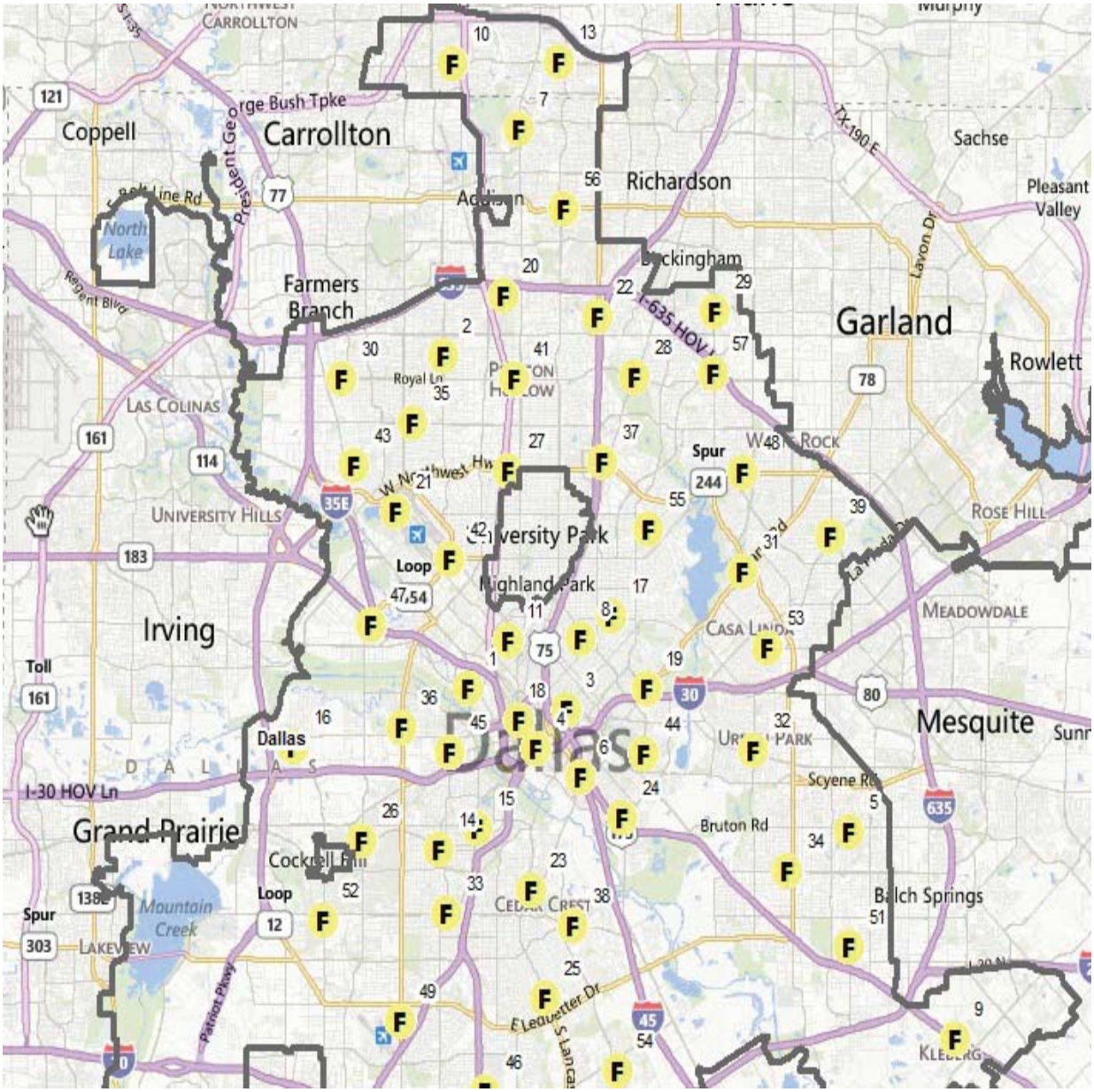
Source: Digital Sandbox, ESRI

Police Substations



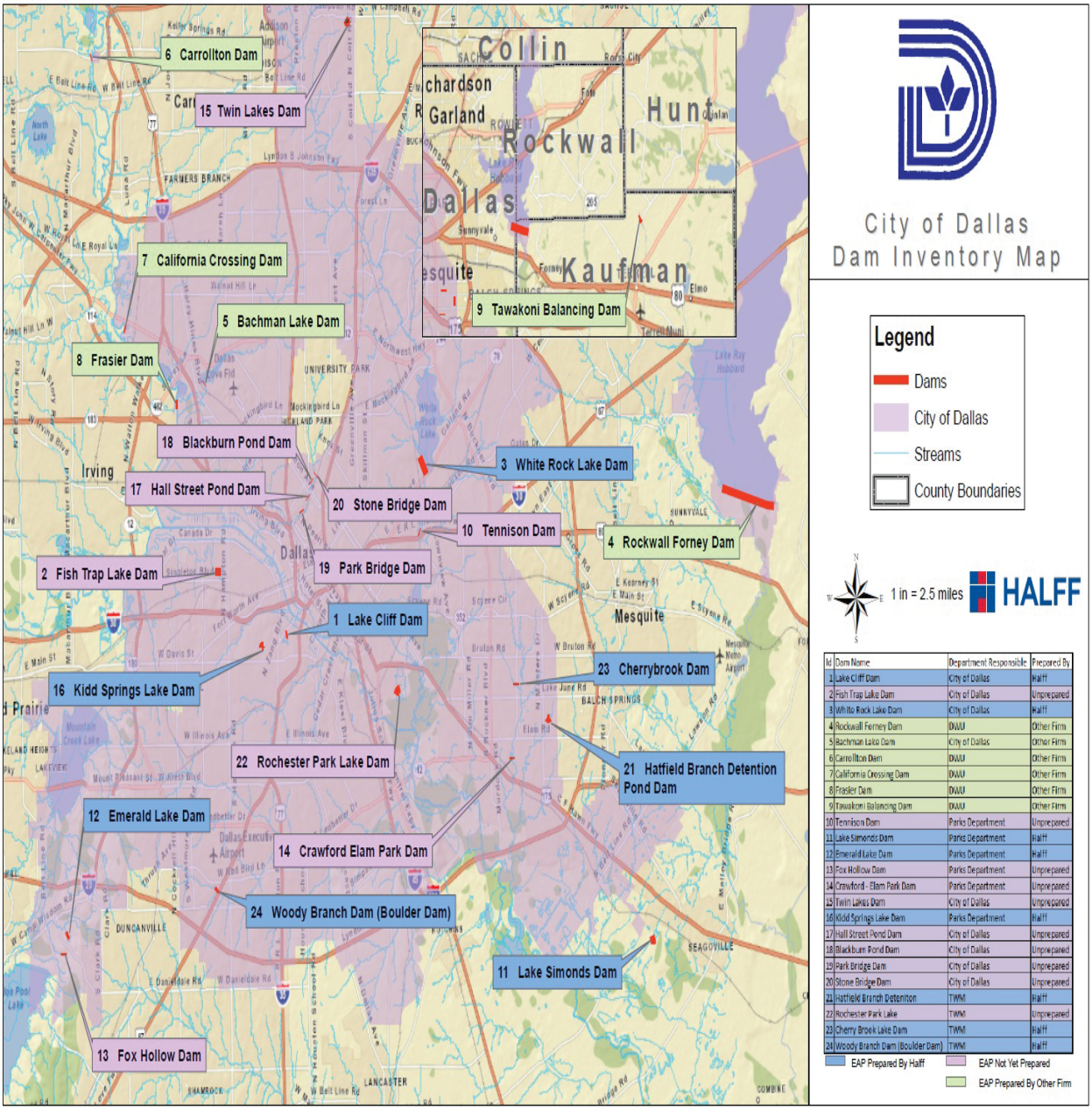
Source: Digital Sandbox, ESRI

Fire Stations



Source: Dallas Fire Rescue

Dams (Moderate to High Hazard)



Id	Dam Name	Department Responsible	Prepared By
1	Lake Cliff Dam	City of Dallas	Halff
2	Fish Trap Lake Dam	City of Dallas	Unprepared
3	White Rock Lake Dam	City of Dallas	Halff
4	Rockwall Forney Dam	DWU	Other Firm
5	Bachman Lake Dam	City of Dallas	Other Firm
6	Carrollton Dam	DWU	Other Firm
7	California Crossing Dam	DWU	Other Firm
8	Frasier Dam	DWU	Other Firm
9	Tawakoni Balancing Dam	DWU	Other Firm
10	Tennison Dam	Parks Department	Unprepared
11	Lake Simonds Dam	Parks Department	Halff
12	Emerald Lake Dam	Parks Department	Halff
13	Fox Hollow Dam	Parks Department	Unprepared
14	Crawford - Elam Park Dam	Parks Department	Unprepared
15	Twin Lakes Dam	City of Dallas	Unprepared
16	Kidd Springs Lake Dam	Parks Department	Halff
17	Hall Street Pond Dam	City of Dallas	Unprepared
18	Blackburn Pond Dam	City of Dallas	Unprepared
19	Park Bridge Dam	City of Dallas	Unprepared
20	Stone Bridge Dam	City of Dallas	Unprepared
21	Hatfield Branch Detention	TWM	Halff
22	Rochester Park Lake	TWM	Unprepared
23	Cherry Brook Lake Dam	TWM	Halff
24	Woody Branch Dam (Boulder Dam)	TWM	Halff

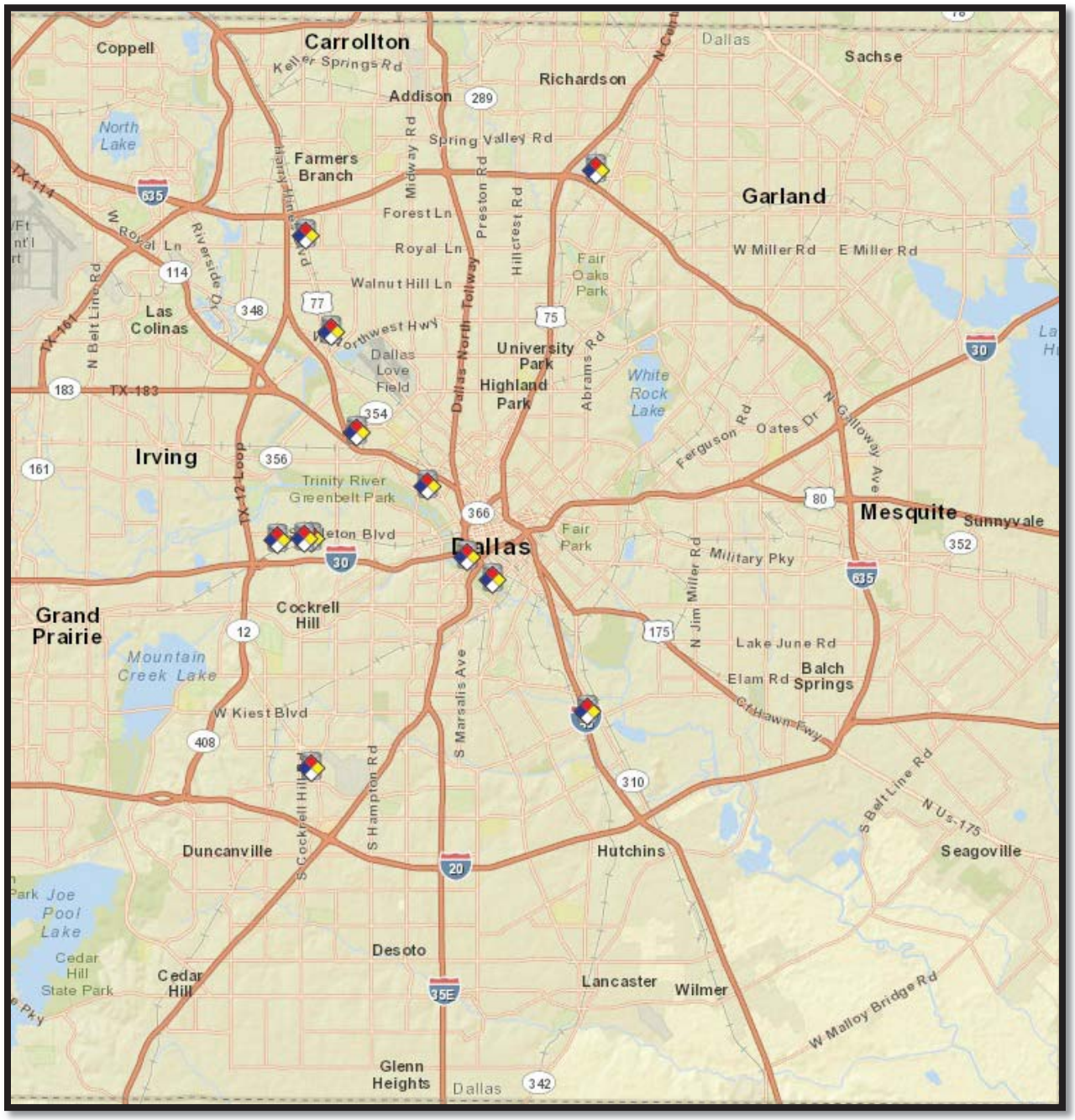
Source: Halff

Mass Transit Locations

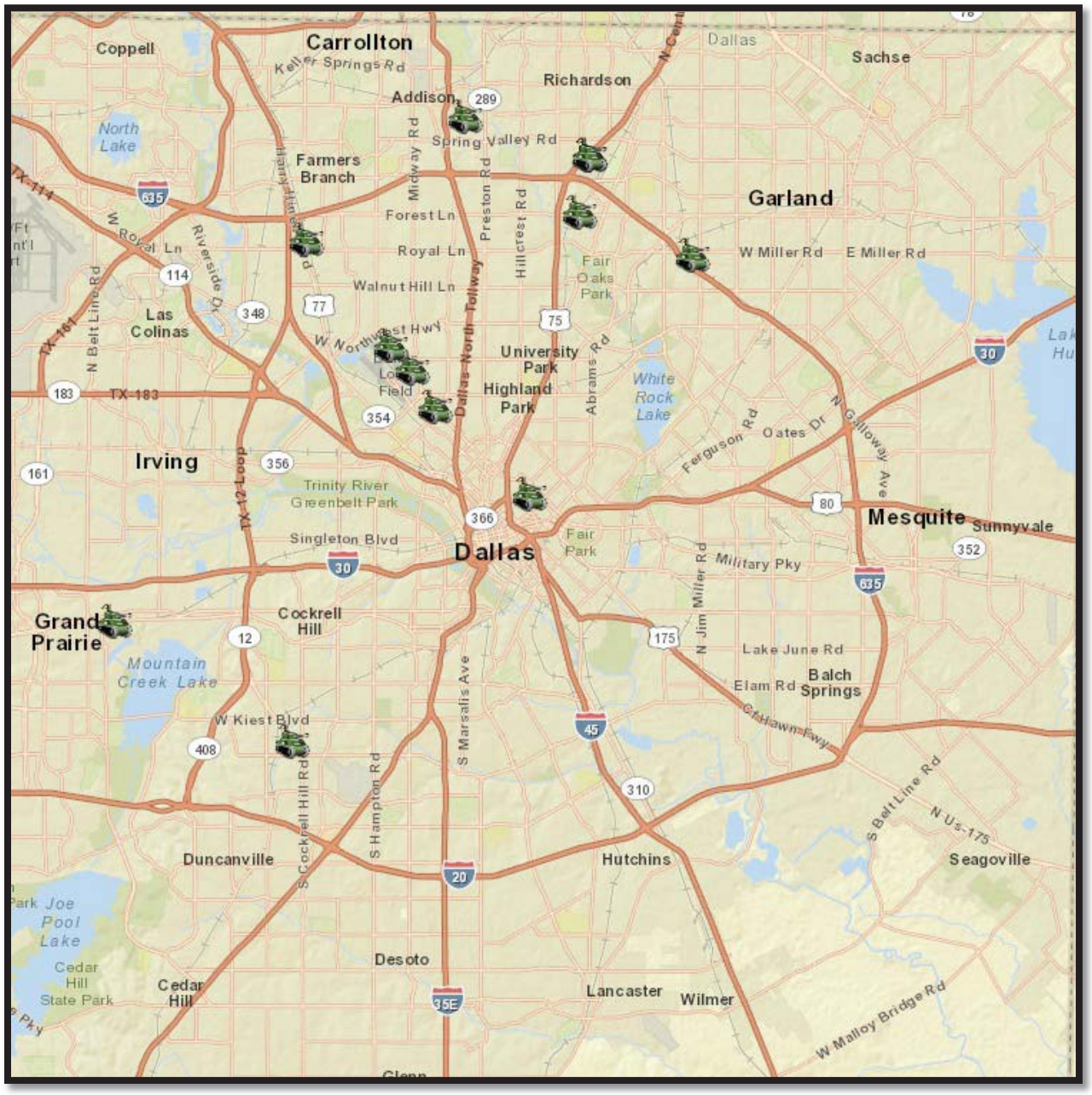


Source: Digital Sandbox

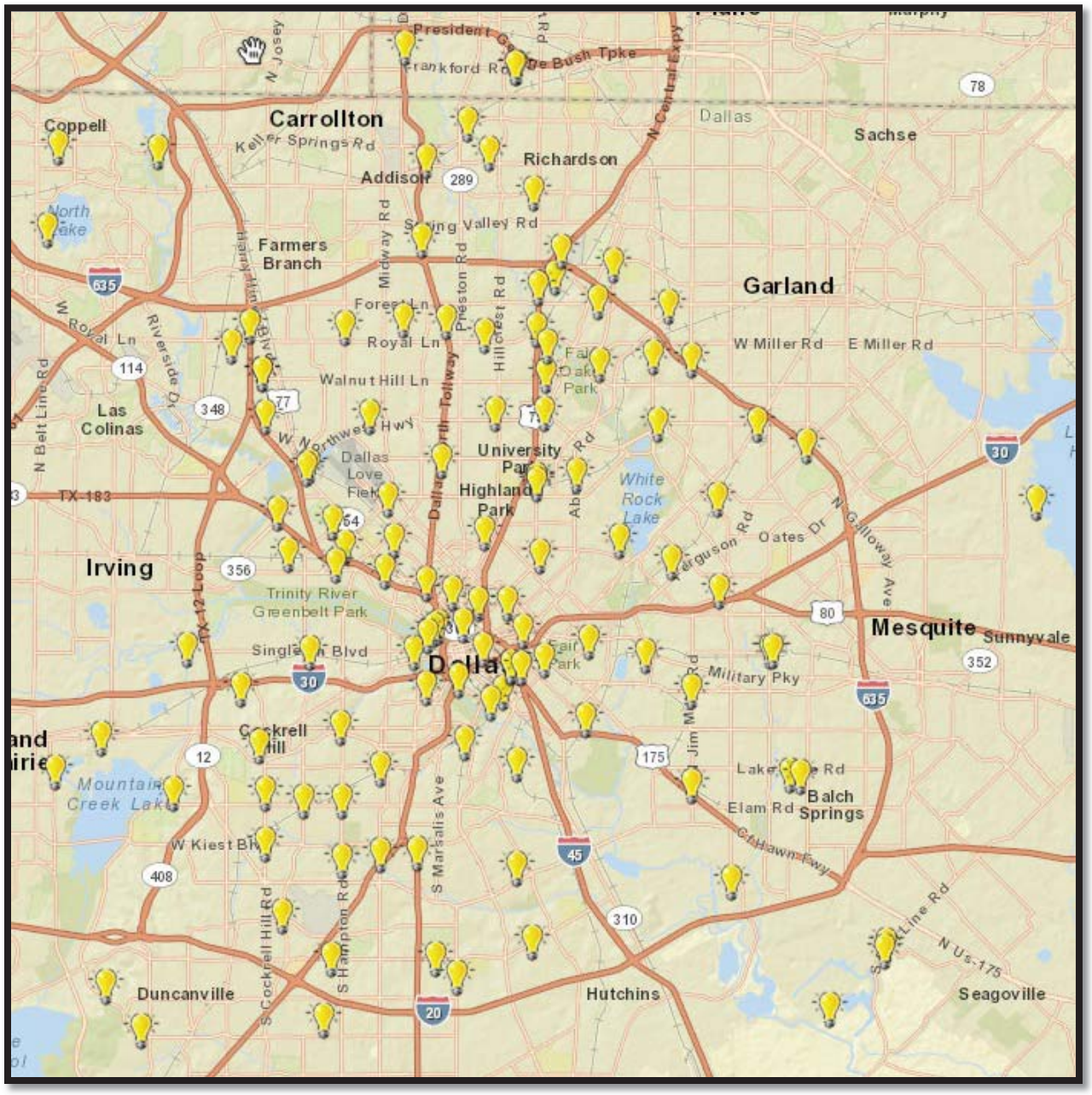
Hazardous Materials Sites



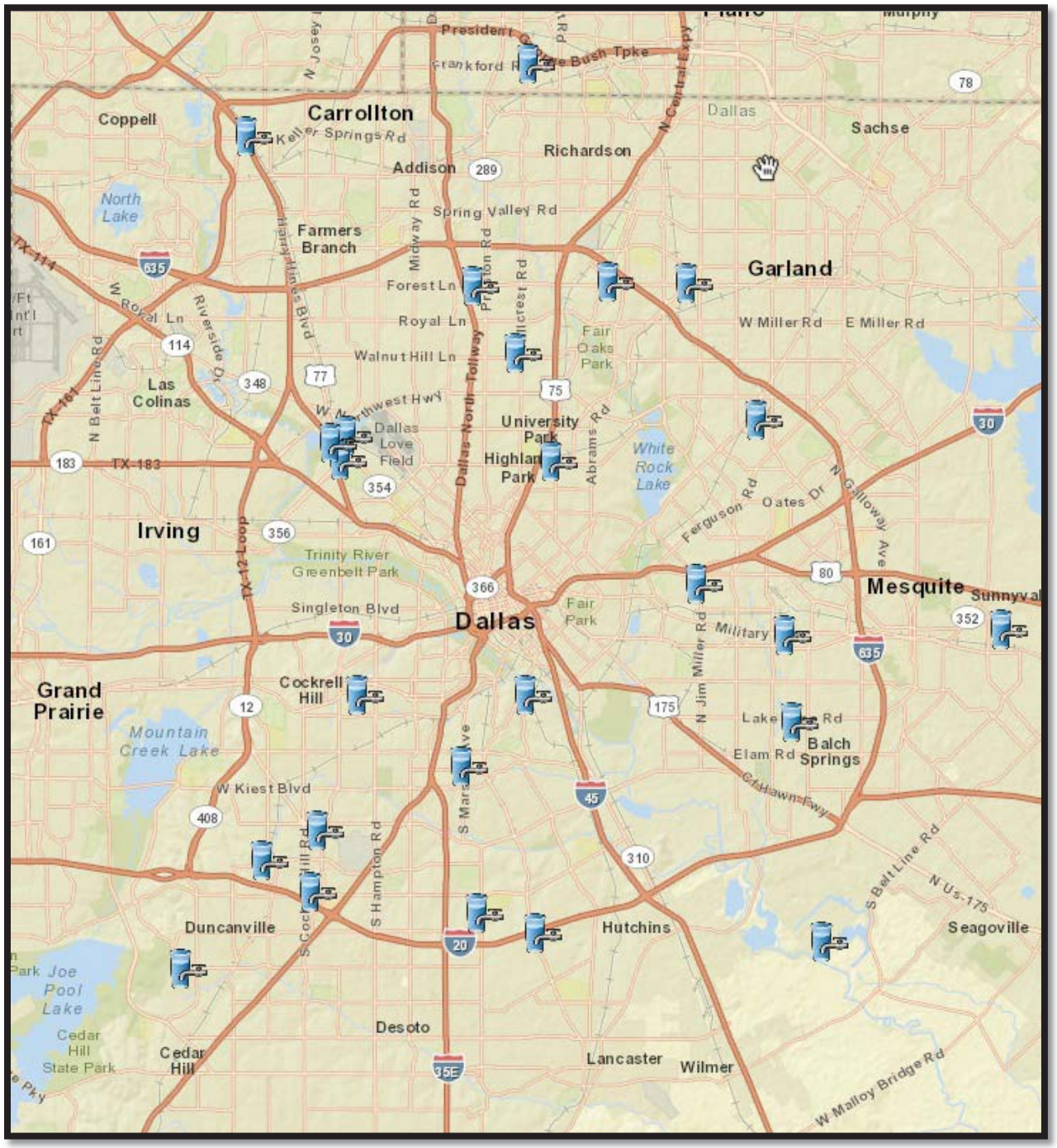
Military and Defense Locations



Power Infrastructure Locations



Water Utility Sites



Appendix COD B-1: Supporting Documentation and Sources

Public and Meeting Documentation

Date	Meeting Summary
05-29-2013	Hazard Mitigation Team introduction. Explained mitigation review process and discussed items that would need to be updated.
07-11-2013	Reviewed identified hazards and conducted a risk assessment for the City of Dallas in respect to the Dallas County HIRA
09-10-2013	Review list of action mitigation measures and determine the rankings. Prioritized mitigation actions to address the identified risks.
08-08-2013	Reviewed Flood Plans, Flood Hazard Plan, County Hazard Mitigation Plan and Bond Programs.
10-24-2013	Final Review of plan with Mitigation Team.
03-24-2015	Reviewed FEMA report on hazard mitigation plan review and updated mitigation projects that were addressed during the 2009 Bond Process.

Agenda and Notes

City of Dallas Office of Emergency Management

2013 Hazard Mitigation Plan Update

City of Dallas

Agenda & Notes

Date: 09-10-2013

Time: 2:00 p.m. – 3:00 p.m.

Attendees: Joseph Ellis

Kevin Oden

Greg Guthrie

Discussion Topics

Review list of action mitigation measures and determine the rankings.

Updated rankings based on current data and assessments.

City of Dallas Office of Emergency Management

2013 Hazard Mitigation Plan Update

City of Dallas

Agenda & Notes

Date: 05-29-2013

Time: 2:00 p.m. - 3:00 p.m.

Attendees: Joe Ellis, Kevin Oden, Frank Librio, Jo Puckett, Dhruv Pandya, Theresa O'Donnell, Don Knight, Jack Ireland, Kevin Lefebvre, Lanita Magee, Peter Haskel, Frank Camp, William Madison, Larry Holmes, Cesar Baptista, Randall Payton, Zachary Peoples, Bridgette Smith, Chan William, Brandon Freeman

Discussion Topics

This meeting included Dallas Water Utilities, Trinity Flood Control, Aviation, Streets, Sanitation staff as well as Public Safety staff. The 5-year update to County Hazard Mitigation Plan of which Dallas is a part was discussed, including what input, data, maps and other documents needed to be provided. Reviewed and discussed mitigation plan information form 2008.

City of Dallas Office of Emergency Management

2013 Hazard Mitigation Plan Update

City of Dallas

Agenda & Notes

Date: 08-08-2013

Time: 2:00 p.m. - 3:00 p.m.

Attendees: Steve Parker, Tam Vu, Jessica Baker, Jarred Overbey, Joe Ellis, Greg Guthrie, Kevin Oden

Discussion Topics

Review Flood Plans for City of Dallas

Discuss of additions to the Flood Hazard Plan

Review of the County Hazard Mitigation Plan

Discuss Hazard Mitigation Projects.

This notice was sent out via the City of Dallas NEOGOV contact system on 09/01/2013. This system is used by the city's public information office to send notifications to home owners associations, civic groups, business leaders, etc…

The City of Dallas and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite your group to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate. A Copy of the plan is also available for review in the Office of Emergency Management, 1500 Marilla, L2AN, Dallas, TX, 75201 from 08:00 a.m. – 5:00 p.m. Monday – Friday or by calling 214-670-4275.

Thank you for your consideration and assistance in this matter.

www.dallascityhall.com/oem/hazardmitigationplan

Sincerely,

Joseph Ellis, CEM

Hazard Mitigation Program Manager

214-670-4275

From: Ellis, Joseph
Sent: Thursday, October 24, 2013 10:44 AM
To: Vaz, Rocky (rocky.vaz@dallascityhall.com); Oden, Kevin; Knight, Don; Librio, Frank; Puckett, Jo; Dhruv Pandya (dhruv.pandya@dallascityhall.com); O'Donnell, Theresa; Parker, Steve; Magee, Lanita
Subject: Hazard Mitigation Plan Annex Draft

Good Morning,

Attached is the Final Draft Hazard Mitigation Plan Annex, please review and forward me any comments by October 28th. This plan will be submitted to Dallas County to be included in the Dallas County Multi-Jurisdictional Hazard Mitigation Plan. FEMA requires members of the Local Planning Team to review the plan and provide any feedback. If you have any questions please feel free to contact me.

Thank you,

Joe Ellis, CEM
Senior Emergency Management Specialist
Dallas Office of Emergency Management
1500 Marilla Street, L2AN
Dallas, Texas, 75201
214-670-4341 – Ofc
469-744-2240 – Mbl
214-670-4677 – Fax
Joseph.ellis@dallascityhall.com
"Plans are nothing; planning is everything" Dwight D. Eisenhower

Webpage Snap Shot Showing Link to Survey



Sources

- ✓ **Plans**
  - o Dallas County Hazard Mitigation Plan
  - o City of Dallas Charter
  - o City of Dallas Flood Response Plan
  - o City of Dallas Dam Emergency Response Plans
  - o State of Texas Hazard Mitigation Plan 2013 Update
  - o City of Dallas Hazard Identification and Risk Assessment
- ✓ **Websites**
  - o Texas Division of Emergency Management (www.txdps.state.tx.us/dem/ (Plan Guidance)
  - o City of Dallas (http://www.dallascityhall.com) (City Information)
  - o Dallas County (www.dallascounty.org) (Parcel and Tax Information)
  - o National Climatic Data Center (www.ncdc.noaa.gov) (Hazard Occurrences)
  - o Digital Sandbox (rac.dcbox.com/dfw) (Critical Infrastructure)
  - o National Weather Service (www.weather.gov) (Climate Data)
- ✓ **Other Sources**
  - o Federal Aviation Administration (Airport Emergency Plan)
  - o Texas Railroad Commission (Hazardous Materials Information)
  - o Texas Department of Transportation (Roadway Routes and Construction)
  - o FEMA Floodplain Mapping Software (Flood information)
  - o Emergency Management Accreditation Program 2013 Standards (Plan Contents)

Appendix COD C-1: Community Rating System Summary

The Federal Emergency Management Agency (FEMA) Community Rating System (CRS) is a program designed to reward communities for doing more than simply regulating construction of new buildings to the minimum national standards. Under the CRS, the flood insurance premiums of a community's residents and businesses are discounted to reflect that community's work to reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, preserve and/or restore natural functions of floodplains, help insurance agents obtain flood data, and help people obtain flood insurance. The CRS program has three goals: Reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the NFIP, foster comprehensive floodplain management. A community receives a CRS classification based upon the total credit for activities listed in the CRS Coordinator's Manual. There are 10 CRS classes with Class 1 requiring the most points and Class 10 requiring the least. The City of Dallas has been a part of the CRS program since 1991. In 2014, the City went through a cycle verification visit with the Insurance Services Office, Inc. (ISO), FEMA's CRS management contractor. As a result of the visit, the City of Dallas was granted a CRS Class 5 which equated to a flood insurance premium reduction of 25% for its residents. Below is a summary of the activities the City of Dallas received credit for in the 2014 cycle visit. The activities referenced are from the 2013 CRS Coordinator's Manual.

Activity 310 (Elevation Certificates) – The City of Dallas of Dallas does not permit new construction of substantial improvement to structures in the floodplain. The City requires that elevation certificates be obtained in cases in which structural improvements are proposed and the floodplain status in not clear. The City maintains all elevation certificates received.

Activity 320 (Map Information Service) – The City of Dallas Trinity Watershed Management (TWM) department provides information about the local flood hazard to residents and businesses so they can potential take steps to avoid problems and/or reduce their exposure to flooding. The Map Information Service includes information on the following items: FEMA Flood Insurance Rate Map (FIRM) information, Floodways, flood problems not shown on the FIRM, flood depth data, special flood-relation hazard (erosion and urban storm sewer flooding), and historical flooding. The service is publicized once a year

Activity 330 (Outreach Projects) – The objective of this activity is to provide the public with information needed to increase flood hazard awareness and to motivate actions to reduce flood damage, encourage flood insurance coverage, and protect the natural functions of floodplains. The City of Dallas has developed a comprehensive outreach plans which focuses on reaching residents through mailings, social media, and public meetings. These messages are delivered annually in English and in Spanish.

Activity 340 (Hazard Disclosure) - Section 5.008 of the Texas Property Code requires all sellers to disclose a property's potential flood hazard to prospective buyers before the lender notifies them of the need for flood insurance.

Activity 350 (Flood Protection Information) – The City of Dallas has resources available to the public on flood protection measures that extend beyond the annual outreach activities. The City of Dallas Library System has a number of local and FEMA publications related to protection of people and property from flood related hazards. The information is also available on the TWM website.

Activity 360 (Flood Protection Assistance) – The objective of this activity is to provide one-on-one help to people who are interested in protecting their property from flooding. The staff at TWM is well qualified to provide advice on flood hazard, flood protection measures and/or possible financial assistance through meetings, phone calls, and site visits.

Activity 410 (Floodplain Mapping) – The key to reducing flood related hazards is to accurately determine the location of the hazard. The City of Dallas is constantly improving the quality of the floodplain mapping used for mitigation projects, citizen outreach, and to identify and regulate floodplain development. The City has developed new floodplain studies for nearly the entire City through FEMA's Map Modernization Program and Cooperating Technical Partners (CTP) Program. These studies utilized higher study standards than those required by FEMA at the time of the study.

Activity 420 (Open Space Preservation) – The objectives of this activity are to prevent flood damage by keeping flood-prone lands free of development and to protect and enhance the natural functions of floodplains. The City of Dallas preserves 69% of the current regulatory floodplain as open space through public ownership and floodway easements. Construction is prohibited in these areas to reduce potential increased flood damages from future development.

Activity 430 (Higher Regulatory Standards) – The City of Dallas has regulations in place to protect existing and future development and natural floodplain functions from flood related hazards. The following is a summary of the codes as they relate to the CRS Manual.

Development limitations (DL) - The City does not permit development within the regulatory floodplain but has criteria and a permitting system for floodplain reclamation. These criteria include compensatory storage for fill, structural freeboard, and velocity and water surface limitations. *Freeboard (FRB)* – The City requires that all new or substantial improved structures have a building pad filled to an elevation of at least two feet above the design flood elevation and a the lowest floor be constructed three feet above the design flood elevation. *Cumulative substantial improvements (CSI)* – The City requires that all improvements to a structure location in or adjacent to the regulatory floodplain do not exceed 50% of the building's pre-improvement value without meeting the current flood protection requirements. This value is calculated cumulatively for the last 10 years in order to reduce the potential for repetitive loss structures. *Building code (BC)* – The City has adopted the entire 2012 International Code Series (I-Codes) including the International Building Code, International Residential Code, International Pluming Code, International Mechanical Code, and International Fuel Gas Code. Coordinating floodplain management with local building code has helped the City reduce losses from natural hazards. Additionally, the City is rated a Class 5 by ISO for the Building Code Effectiveness Grading Schedule (BCEGS). The BCEGS assess the building codes

in effect in a community and how a community enforces them, with special emphasis on mitigation of losses from natural disasters. *Local Drainage Protection (LDP)* – The City regulations require that all development provide positive drainage away from building sites in an effort to reduce localized flooding.

Activity 440 (Flood Data Maintenance) – The objective of this activity is to make community floodplain data more accessible, current, useful, and/or accurate so that the information contributes to the improvement of local regulations, insurance rating, planning disclosure, and property appraisals. The City of Dallas maintains a GIS database containing all applicable information related to flood hazards. The information is used to for informational purposes with residents and in emergency situations. The City also maintains copies of all pervious FIRM maps and FIS reports for use with mitigation projects, substantial improvement requirements, and insurance determinations.

Activity 501 (The Repetitive Loss List) – Repetitive Loss data is gathered by FEMA and sent to the communities to review and update for use in mitigation projects. The City has created a Repetitive Loss Plan to guide the flood hazard mitigation efforts and to be used during flood event response. The plan contains an inventory of the properties, a mitigation strategy, outreach materials, and detailed maps of the respective loss areas. Thirty-one percent of the properties on the inventory have been mitigated to date. The City has performed multiple repetitive loss area analyses to determine alternatives to mitigate the remaining properties. These alternatives are added to the City's Needs Inventory for inclusion in future bond programs.

Activity 510 (Floodplain Management Planning) – The City of Dallas participates in the Dallas County Multi-Hazard Multi-Jurisdictional Mitigation Action Plan. The City participates in the County wide Mitigation Advisory Committee, reviewed all portions of the previous hazard mitigation plan pertaining to the City, and incorporated relevant components into the City of Dallas Hazard Mitigation Annex. The annex serves as a complete hazard mitigation planning tool for the City of Dallas. It contains updated capability assessment information, a new vulnerability assessment, and an updated/revised mitigation strategy. The annex contains a number of ongoing and planned flood hazard mitigation projects derived from the City's Needs Inventory.

Activity 520 (Acquisitions and Relocations) – Acquisition and relocation projects remove people and property from harm's way and reduce the community's costs for disaster response, recovery, and repair. Additionally, these properties create additional open space in the floodplain and allow the lands to return to their natural function. The City of Dallas has actively acquired and relocated properties to mitigate repetitive loss properties and for structural flood control projects. The City has acquires fifty-eight properties since 1983.

Activity 530 (Flood Protection) – In addition to acquisitions and relocation projects, the City of Dallas has constructed a number of small flood control projects that reduce the flood hazard risk to people and property. These projects were identified through Floodplain Master Plans and added to the City's Needs Inventory. The mitigation projects were prioritized based on the potential reduction of flood risk and funded through the Capital Improvement Program (CIP). The constructed projects include bypass channels, dams, bridge/culvert

improvements, and diversion systems. Many of these projects were constructed to mitigate the risk to repetitive loss properties.

Activity 540 (Drainage System Maintenance) – Trinity Watershed Management is responsible for the inspection and maintenance of the City owned drainage system, which includes natural and human-made creeks and open channels, underground storm sewer pipes, floodway management areas (FMA's), detention/retention basins, improved drainage easements, and Flood Control systems. The City of Dallas TWM has created a Standard Operating Procedure Manual for Drainage System Maintenance which details procedures for annual inspection and regular and post-storm maintenance of the system. The goal of the program is to keep the system free of debris so that the system can maintain the designed flood carrying and storage capacity. Problems areas identified through the maintenance program that can cause a flood hazard increase are added to the City's Needs Inventory list and funded through the CIP.

Activity 610 (Flood Warning and Response) – The City of Dallas is recognized as a StormReady Community. The City has several procedures in place to monitor riverine flood levels, especially along the Trinity River. This monitoring system is used for emergency response and road closures. The real-time information is displayed on the City's website for use by the public.

Activity 620 (Levees) – The City of Dallas has created a Trinity River Levee Emergency Action Plan (EAP) and Operation and Maintenance (O&M) manual. These documents outline procedures to properly inspect and maintain levees and to identify impending levee failures in a timely manner, disseminate warnings to appropriate floodplain occupants, and coordinate emergency response activities to reduce the threat to life and property.

Activity 630 (Dams) – The City of Dallas has created a Dallas Dams Emergency Action Plan (EAP) and Operation and Maintenance (O&M) manual. These documents outline procedures to properly inspect and maintain dams and to identify impending dam failures in a timely manner, disseminate warnings to appropriate floodplain occupants, and coordinate emergency response activities to reduce the threat to life and property.

Appendix COD D-1: Sensitive Information

This section contains information regarding dam inundation extent and impact. This section is to be removed from all public distributions of this HazMAP. All inquiries regarding this information are to be directed to the City of Dallas Office of Emergency Management.

This page intentionally left blank

Unincorporated Dallas County Annex

Update: *During the 2013 update, this section was expanded from the 2009 HazMAP Section 2 – Dallas County.*

In this section of the 2013 plan update, information was gathered from each jurisdiction on their Planning and Regulatory; Administrative and Technical; Financial Capacity and the Educational and Outreach Capabilities to carry out hazard mitigation activities. The findings were evaluated and attention was given to state, regional or local plans, regulations and development requirements. These included, but were not limited to, local plans, zoning laws, sub-division and site-specific regulations, building codes, flood insurance programs, natural resources and conservation statutes. Emergency Management information, as required by Annex P, was also gathered to help evaluate the effectiveness of existing mitigation measures, policies, plans, practices and programs. This section was previous included in the Chapter 2 of the original plan and developed into a standalone section of this updated plan to provide a better content flow.

Introduction

A detailed profile of Dallas County has already been provided in Section 3 of this plan. As has been stated earlier in the plan, in Texas, only cities and not counties have the authority to adopt zoning ordinances. Therefore Dallas County does not have the authority to enact zoning ordinances. However, it does have the authority to adopt various regulations for its unincorporated area. This unincorporated area represents approximately ten percent of the land in Dallas County and is primarily located in the southeastern corner of the county.

The unincorporated area regulations that the county enforces govern:

A. All development within the floodplain
B. The subdivision of property
C. The installation of septic tanks
D. The construction and inspection of residential structures
E. Certain outdoor businesses like junkyards, recycling businesses, and those that store or display merchandise outdoors
F. The location of communication facility structures such as cell towers
G. The construction of commercial buildings

Most of the county's unincorporated area is considered to be in the floodplain. As a result, no development is allowed within the unincorporated area without a permit which either verifies that the development is not located within the floodplain or that it will be sufficiently elevated or protected from flooding.

Internal Planning Process:

The table below lists members of the Unincorporated Dallas County Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the Dallas County critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for new mitigation actions for the unincorporated areas.

Table 9.1

Name	Title, Department or Agency	Role
Robert De Los Santos	Fire Marshal, Fire Marshal Department	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Wayne Barr	Bridge Manager, Public Works	Hazard & Plan development. Provided historical information on Dallas County Unincorporated
Aaron McCarthy	Coordinator, NCTEMTS Group	Hazard & Plan development, assisted in risk assessment. Provided community representation
Scott Greeson	Former Planning Sections Chief, HSEM	Hazard & Plan development, assisted in risk assessment. Assisted with HMPT coordination
Deborah Foster	Deputy Sheriff, Sheriff's Department	Hazard & Plan development, assisted in risk assessment
Rick Loessberg	Director, Planning and Development	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Emily Gore/ Tammara Scroggins	Bioterrorism, HHS/Assistant Director, HHS	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Zachary Thompson	Director, HHS	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Michael Gaciri	Hazard Mitigation Specialist, HSEM	HMPT Coordinator

* NCTEMTS was invited by Dallas County HMPT as an external stakeholder. The invitation to participate was made via email and telephone.

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and organized data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal. A summary of the sources used and the purpose for which it was used is provided below:

Source	***Data Incorporation***	***Purpose***
City and County Appraisal Data 2012	*Population and demographics*	*Population counts, parcel data and land use data*
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	*Hazard occurrences*	*Mapping for all hazards but wildfire*
National Climatic Data Center (NCDC)	*Hazard occurrences*	*Previous event occurrences and mapping for all hazards*
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	*Wildfire Threat and Urban Interface*	*Mapping and Wildfire Vulnerability data*
National Dam Inventory	*Dam information*	*High Hazard Dam list*
FEMA DFIRM Flood Zones	*Flood Zone Maps*	*GIS mapping of flood zones*

Meeting Dates	Summary of Discussions
06/17/2013	Overview of the Planning Process and Review HIRA as discussed at the Dallas County Hazard Mitigation Working Group. Reviewed survey questions and developed Strategy for promoting survey
08/27/2013	Identified hazards and estimated potential losses from future hazard events. Conducted Capabilities Assessment – Fire Marshal
08/28/2013	Identified hazards and estimated potential losses from future hazard events. Capabilities Assessment – Planning and Development
10/02/2013	Identified hazards and estimated potential losses from future hazard events. Goals and Strategies and Review of Action Items
10/09/2013	Identified hazards and estimated potential losses from future hazard events. Capabilities Assessment. Provided GIS capabilities and parcel data information. Conducted field tour assessments – Public Works
02/07/2014	Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. Dallas County notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through the main Dallas County website, which directed them to the online survey. The survey was made available in both English and Spanish. Copies of Dallas County's outreach materials a included in the Appendix Section.

Public Review Period

On November 14, 2014 Dallas County announced the availability of the Dallas County Unincorporated Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the Dallas County Office of Homeland Security and Emergency Management website inviting the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period. An email was sent out to members of the Dallas County Hazard Mitigation Planning Team and included external stakeholder Coordinator of the North Central Texas Emergency Management Training Seminar and Expo Group. The public was encouraged to submit comments prior to November 29, 2013 for consideration and possible incorporation into this draft. **Figure DCU 1** provides a screen shot of the announcement.

Despite outreach efforts, no responses were received from Dallas Unincorporated. As a result, this information could not be incorporated into this annex.

Figure DCU 1: Screen Shot of Website Announcement Inviting Public Review and Comment



The public comments were directed to the Michael Gaciri the Hazard Mitigation Specialist with Dallas County. The public were advised that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex. External stakeholders invited via email to participate in the planning and review process of the Dallas County Hazard Mitigation Plan:

Representing	Position / Department	Title	Role
North Central Texas Council of Governments	Emergency Preparedness Department	HazMAP Team	Review Plan
University of Texas at Dallas	Office of Emergency Management	Director of	Review Plan
Dallas County Community College District	Office of Risk Management	Director of Risk Management	Review Plan
Southern Methodist University	Office of Risk Management – Emergency Management and Business Continuity	Director of Risk Management	Review Plan
Dallas-Fort Worth Airport	Office of Emergency Management	Emergency Management Coordinator	Review Plan
NCTEMTS Group	Coordinator	Coordinator	Part of HPMT, review plan

No comments or survey reports were provided from the public or external stakeholders during the public review period for the unincorporated Dallas County.

Capability Assessment

Dallas County identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments

The following is a summary of existing departments in the county and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within unincorporated areas of Dallas County. The administrative and technical capabilities of the county, as shown in **Table 9.1** provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan. **Figure 9.1** shows the Dallas County Organizational Chart and Key Departments within the county that will have a significant role in implementing the plan.

A. County Judge Office

The Dallas County Judge presides over a five-member Commissioners Court that has administrative and budgetary authority over the county. The county judge is responsible for the Truancy Courts system which hears cases regarding the Failure to Attend School and Parent Contributing to Non-Attendance policies within the county. Five full-time magistrates who report to the county judge hear these cases. This county judge is also accountable for Dallas County's Homeland Security and Emergency Management Department and is the sole individual that can declare a disaster within the county.

For unincorporated Dallas County, the Commissioner's Court, including the County Judge and Commissioners have the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

B. Dallas County Office of Homeland Security & Emergency Management (HSEM)

The Dallas County Office of Homeland Security & Emergency Management (HSEM) is a function of the Dallas County government. HSEM is responsible for management of a county-wide emergency management program, homeland security program, manages the county emergency operations center (EOC), works with municipalities, state/federal agencies, partners, NGO, volunteer groups and others to provide emergency protective actions for approximately 2.5 million residents of Dallas County. Other areas of responsibility include:

- ✓ Maintain a trained cadre of EOC team members
- ✓ Provide ongoing support and coordination of emergency plans and exercises with the cities throughout the County
- ✓ Assist County departments in developing department Continuity of Operations Plans (COOP) which addresses how they will perform during an emergency or disaster

- ✓ Provide ongoing training for County department safety coordinators
- ✓ Participate in an ever-expanding public education campaign for all hazards through partnerships with the Aware and Prepare Campaign, public venues and various media presentations
- ✓ Management and coordination of the County's Local Emergency Planning Committee

The Dallas County Emergency Management Plan: Dallas County HSEM developed and maintains an Emergency Management Plan (EMP) in accordance with Chapter 418 of the Texas Government Code and Title 37, Part 1, Chapter 7 of the Texas Administrative Code. The EMP consists of a basic plan and functional annexes and appendices. The basic plan outlines a jurisdiction's approach to emergency operations, and provides general guidance for emergency management activities, including methods of mitigation, preparedness, response, and recovery. The plan describes the emergency response organization and assigns responsibilities for various emergency tasks. The Dallas County EMP is categorized at the advanced level of preparedness by the Texas Division of Emergency Management (TDEM).

The Dallas County EMP also includes joint resolutions between Dallas County and the cities of Balch Springs, Cockrell Hill, Duncanville, Highland Park, Hutchins, Seagoville Sunnyvale, University Park, and Wilmer.

The Dallas County Office of Homeland Security and Emergency Management, within its duties noted above, will use this HazMAP in conjunction with the Dallas County Emergency Operations Plan to implement strategies, projects and policies which lead to a more resilient and safe County.

C. Dallas County Fire Marshals' Office

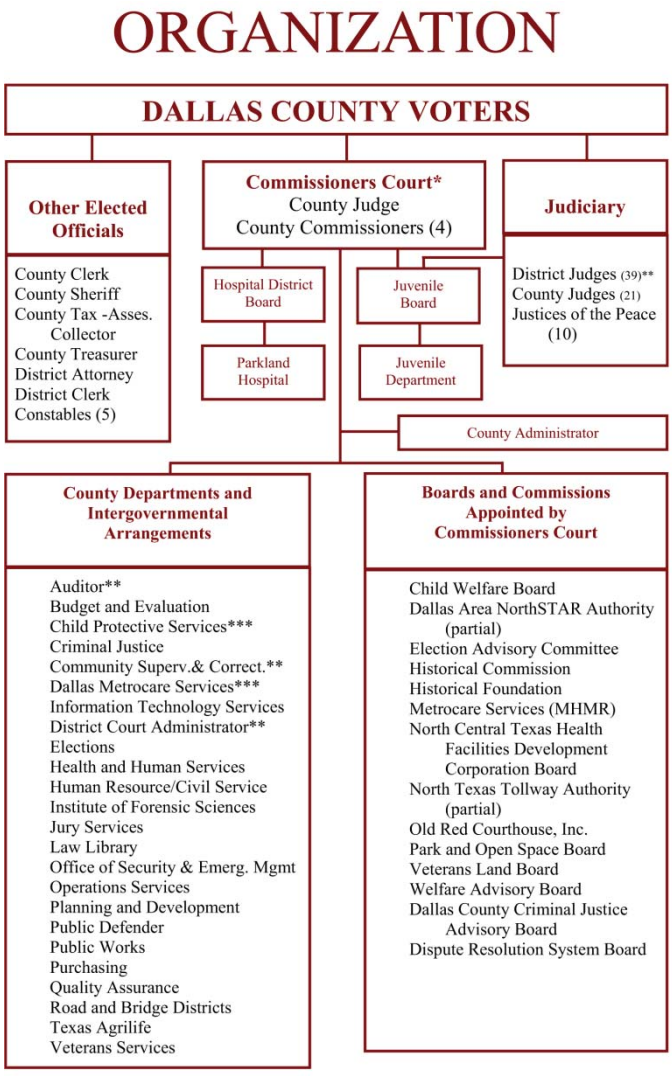
The Dallas County Fire Marshal's Office is responsible for determining origin, cause, and circumstances of fires that occur in the unincorporated areas of Dallas County and the surrounding cities that request mutual aid service. The Dallas County Fire Marshal's Office provides a 24-hour operation to protect its citizens from all hazards by providing and coordinating resources, expertise, leadership and advocacy through a comprehensive program of prevention, mitigation, preparedness, response and recovery. It is the duty of the Dallas County Fire Marshal's Office to provide for the health, safety, and welfare of the citizens of Dallas County, in accordance with Chapter 352 of the Texas Local Government Code, County policy, Dallas County Fire Code, and sound Emergency Management practices.

The County's Fire Marshal's Office also has the inspection and Fire & Life Safety prevention division. The division conducts random and annual Fire and Life Safety inspections in all Dallas County buildings and detention facilities which educates staff and visitors and helps prevent fire through Fire Inspections and Code Enforcement activities.

D. Dallas County Department of Planning and Development

The Planning and Development Department operates the County's community development block grant (CDBG) program, open/space trail program, household hazardous waste program, replacement housing program, and law library. It also conducts the County's economic development and historic preservation activities, analyzes population trends and economic data, and administers the county's various planning activities.

Figure 9.1: Dallas County Organizational Chart and Key Departments



* - Members of the Commissioners Court serve on the following boards and committees: Texas Juvenile Probation Commission, Dallas County Juvenile Board, Deferred Compensation Committee, NACO Large Urban Counties Caucus, Texas Conference of Urban Counties Chair, Texas Association of Regional Councils, IH635 Coordination Committee, North Central Texas Council of Governments (NCTCOG) Board, Dallas Regional Mobility Coalition, Public Health Advisory Board, North Texas Commission, DFW Partners in Mobility, Regional Transportation Council, NCTCOG Air Carrier Policy Council, Loop 9 Policy Advisory Group, Texas 21 Statewide Transportation Coalition; Mental Health Task Force, Dallas County DWI Task Force, Community Justice Council, Dallas County Housing Finance Corporation, Dalhoma Trail Advisory Committee, Dallas County Civil Service Commission, and Public Employee Benefit Cooperative Board.
** - The 39 District Judges appoint the County Auditor, the District Court Administrator, and participate in selecting the Directors of the Juvenile Department, the Community Supervision and Corrections.
***- CSCD, CPS and Dallas Metrocare Services (formerly Dallas County MHMR) are independent agencies with important County programmatic connections.

E. Dallas County Department of Public Works

The Dallas County Department of Public Works' mission is to improve the quality of life of our customers by effectively planning, developing, implementing and administering approved regional transportation projects. In fulfilling that mission, we envision ourselves becoming a recognized leader in regional transportation planning and coordination, an effective agent and valued partner for our cities, and a vital part of Dallas County government. The department's values are centered on being Respected, Responsive, & Reliable in all its relationships.

The Public Works Department has a significant role to play in the unique and exciting environment of Dallas County. The department takes a proactive leading role since the department has the perspective of the whole county.

F. Sheriff's Office

The Dallas County Sheriff's Department is the chief law enforcement agency in Dallas County and has been for more than 164 years. It operates the 7th largest jail in the United States with over 7,300 inmates and more than 2400 employees. The department is committed to maintaining its long running track record as an innovative department and a pioneer in the advancement of law enforcement techniques and policies.

The sheriff is an elected individual and is the principal law enforcement officer in the county. Responsibilities include, but are not limited to, traffic enforcement, courtroom security, warrant execution, inmate housing and patrol of unincorporated areas. Unlike municipal law enforcement agencies, the sheriff has jurisdiction in all areas of the county including cities within Dallas County.

G. Department of Health and Human Services

The mission of the Dallas County Department of Health and Human Services is to protect the health of the citizens of Dallas County through disease prevention and intervention, and through promotions of a healthy community and environment. This is done through assessment, community input education, disease monitoring, regulation, and health services that help control the spread of disease. Resources, both human and financial, are directed toward areas where improvement in public health services is needed. The department makes every effort to ensure the people of Dallas County receive information and services needed to maintain and improve their health and provide good stewardship of public resources.

Summary of Capabilities

The tables below identify the current capabilities in Dallas County.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	No	Most of Dallas Unincorporated in located in the flood zone
Capital Improvements Plan	Yes	Yes, Yes, Yes
Economic Development Plan	No	Done in conjunction with the various cities in the county
Local Emergency Operations Plan	Yes	Yes; Yes; Yes
Continuity of Operations Plan	Yes	Yes; Yes; Yes
Transportation Plan	Yes	
Storm water Management Plan	Yes	This is done in conjunction with the cities in the county. A plan is required from the developer of a property
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	None	

Building Code, Permitting, and Inspections	Yes/No	
Building Code	No	Version/Year: Dallas County does not have a building code. However, the Fire Marshal's Department enforces a building code for commercial building in the unincorporated area
Building Code Effectiveness Grading Schedule (BGEGS) Score	No	Score: N/A
Fire Department ISO rating	Yes	Rating: 10
Site Plan review requirements	Yes	Dallas County Public Works Department

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	No	Dallas County Unincorporated doesn't have any zoning ordinance authority
Subdivision ordinance	No	Dallas County Unincorporated has subdivision regulations and policies. These are in place and are enforced
Floodplain ordinance	No	Dallas County Unincorporated has flood plain regulations and policies. These are in place and are enforced
Natural hazard specific ordinance (storm water, steep slope, wildfire)	No	Dallas County Unincorporated doesn't have any ordinance authority
Flood insurance rate maps	Yes	Yes, Dallas County does not allow one to build in the flood zone
Acquisition of land for open space and public recreation uses	Yes	Yes; Yes
How can these capabilities be expanded and improved to reduce risk?		
The regulations and policies implemented in Dallas County are subject to Commissioners Court approval. Dallas County Unincorporated doesn't have ordinance authority		

Administrative and Technical

Administration	**Yes/No**	**Describe capability** **Is coordination effective?**
Planning Commission	No	N/A
Mitigation Planning Committee	Yes	Comprised of departments listed in this plan; Yes
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	This is handled by the appropriate Roads and Bridges divisions; Yes
Mutual aid agreements	Yes	In place with all Dallas County cities and neighboring counties; Yes
Staff	**Yes/No** **FT/PT**	**Is staffing adequate to enforce regulations?** **Is staff trained on hazards and mitigation?** **Is coordination between agencies and staff effective?**
Chief Building Official	Yes, FT	Yes; Yes; Yes
Floodplain Administrator	Yes, FT	Yes; Yes; Yes
Emergency Manager	Yes, FT	Yes; Yes; Yes
Community Planner	Yes, FT	Yes; Yes; Yes
Civil Engineer	Yes, FT	Yes; Yes; Yes
GIS Coordinator	Yes, FT	Yes; Yes; Yes
Other – Human & Health Service	Yes, FT	Yes; Yes; Yes
Technical	**Yes/No**	**Describe capability** **Has capability been used to assess/mitigate risk in the past?.**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Needs improvement; outdoor signs are maintained by Public Works Department
Hazard data and information	Yes	Needs improvement
Grant writing	Yes	Varies by department
HAZUS analysis	No	Other tool used - NCTRHAT
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	N/A	N/A - Dallas County works with cities
Authority to levy taxes for specific purposes	Yes	This is only done by Commissioners Court within the guidance provided in the State Law
Fees for water, sewer, gas or electric services	No	N/A
Impact fees for new development	No	N/A
Storm water utility fee	No	N/A
Incur debt through general obligation bonds and/or special tax bonds	No	N/A
Incur debt through private activities	No	N/A
Community Development Block Grant	Yes	Yes; Yes
Other federal funding programs	Yes	Yes; Yes
State funding programs	Yes	Bridge Program; 80/10/10. It is used to maintain bridges. It is possible that the funding could be used to fund mitigation actions
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Office of Budget and Evaluation is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Dallas County Medical Reserve Corp, NCTEMTS Group and Dallas County Voluntary Organizations Active in Disasters are examples of organizations that can be leveraged to increase the impact of Public education and outreach
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Education and outreach is limited due to the funding of such programs and as such the outreach is limited.
Natural disaster or safety related school programs	No	N/A
StormReady certification	No	N/A
Firewise Communities certification	No	N/A
Public-private partnership initiatives addressing disaster-related issues	No	N/A
Other		

How can these capabilities be expanded and improved to reduce risk?
Public education and outreach is one of the most critical aspects of hazard mitigation. Aggressively look for funding that will help improve and expand the capabilities of Dallas County to offer education and outreach on a continual basis Increase funding and hire more staff

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		✓
✓ Dallas County does not have the authority to adopt zoning ordinances as per Texas Law		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?		✓
✓ Most of the County's unincorporated area is considered to be in the floodplain. No development is allowed within the unincorporated area without a permit which either verifies that the development is not located within the floodplain or that it will be sufficiently elevated or protected from flooding		
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?		✓
✓ N/A		
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	

Comprehensive Plan	Yes	No
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?		✓
✓ N/A - Dallas County does not have the authority to adopt zoning ordinances as per Texas Law		
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		✓
✓ N/A		
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?		✓
✓ N/A		
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
✓ No development is allowed within the unincorporated area without a permit which either verifies that the development is not located within the floodplain or that it will be sufficiently elevated or protected from flooding		
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		✓
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?		✓
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		✓
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?		✓
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		✓
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to data provided by the Texas Water Development Board 69 policies are in place in Unincorporated Dallas County
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	60 claims have been closed with pay; 19 closed without pay. $1,162,928 has been paid out between 1979 through 2008. 2 properties were considered RL & SRL properties
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	Not Known
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	N/A
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	N/A
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	N/A
Are there any outstanding compliance issues (i.e., current violations)?		None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		N/A
Is a CAV or CAC scheduled or needed?		N/A

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	Initial FHBM - 09/01/1970 Initial FIRM - 07/19/1982
Are the FIRMs digital or paper?	Community FPA	FIRMs are digital and were approved by Dallas County Commissioners Court in July 2014. Note seven (7) Panel Maps "On Hold" pending Levee Certification in the Cities of Dallas and Irving are not included.
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Yes
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	See NFIP compliance section below
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	N/A
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

National Flood Insurance Program (NFIP) Compliance

Dallas County is participating in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. This is incorporated into all current and future planning for dealing with repetitive loss vulnerabilities.

Jurisdiction Compliance

Once the community applies for the NFIP, FEMA arranges for a study of the community to determine base flood elevations and flood risk zones. Consultation with the community occurs at the start of and during the study, and those communities with minimal flood risk are converted to the Regular Program without a study.

FEMA provides the studied community with a Flood Insurance Rate Map delineating base flood elevations and flood risk zones. The community is then given 6 months to adopt base flood elevations in its local zoning and building code ordinances. Once the community adopts more stringent ordinances, FEMA converts the community to the NFIP's Regular Program. FEMA then authorizes the sale of additional flood insurance in the community up to the Regular Program limits. The community must implement and enforce the adopted floodplain management measures. FEMA provides periodic community assistance visits with local officials to provide technical assistance regarding complying with NFIP floodplain management requirements.

The purchase of flood insurance is mandatory as a condition of receipt of federal or federally-related financial assistance for acquisition and/or construction of buildings in SFHAs of any participating community. Those communities notified as flood-prone which do not apply for participation in the NFIP within 1 year of notification are ineligible for federal or federally-related financial assistance for acquisition, construction, or reconstruction of insurable buildings in the SFHA.

Jurisdiction Activities

In order to maintain eligibility with NFIP, jurisdictions are required to maintain their list of properties that hold a policy with NFIP, along with up-to-date maps of the floodplains in the jurisdictions. Each jurisdiction participating in the Dallas County Hazard Mitigation Action Plan completes this basic requirement and has the information on file with the jurisdiction's designated floodplain manager. Using this plan, participating jurisdictions will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding in their respective jurisdictions.

The Community Rating System (CRS)

The Community Rating System (CRS) is a voluntary program for NFIP-participating communities. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. All CRS communities must maintain completed FEMA elevation and flood proofing certificates for all new and substantially improved construction in the Special Flood Hazard Area after the date of application for CRS classification.

The Dallas County Hazard Mitigation Action Plan will apply for and participate in the CRS program to provide discounted insurance premium incentives for communities to go beyond

the minimum floodplain management requirements and to analyze and manage future development.

Jurisdiction	Community Floodplain Administrator	NFIP Activity	Activity Description	Enforcement
Unincorporated Dallas County	Floodplain Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the Department of Public Works-Planning. Dallas County requires-2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and elevation certificate document non-residential structures requires 2 feet of free board above the Base Flood Elevation or Flood Proof Certificate Document that will be built on properties created or platted after the effective date of the Flood Damage Prevention Ordinance.	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with county requirements may be fined in accordance with the Texas Water Code for each violation per day.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Take action to minimize the effects of flooding on people, property, and building.	County Road Operations department installs signs at low water crossings that indicate "When flooded turn around don't drown".	

Hazard Assessment and Risk Assessment

The conclusion drawn by the Unincorporated Dallas County HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for Unincorporated Dallas County were as follows:

High Risk (over 65% on HIRA)	Tornado
Moderate Risk (30%- 65% on HIRA)	High Winds Hail Extreme Heat Winter Storms Flooding
Low Risk (12 %-40% on HIRA)	Earthquake Wildfire Lightning Drought
No Risk (Below 12% on HIRA)	Stream Bank Erosion Dam/Levee Failure

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk as there is not property or people that have been identified as being at risk from this hazard in the jurisdiction.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Unincorporated Dallas County**.**

A. Flooding: As has been stated earlier, approximately 10% of the land in Dallas County is in the unincorporated area. located within a city. Much of this unincorporated land is considered to be in the federally-designated floodplain. Rural unincorporated Dallas County, which is located in the southeast portion of the county consists of single family dwellings, manufactured home parks, and many preserve and sanctuaries such as Fin and Feather Club Lake, Trinity River Greenbelt, Dallas Hunting and Fishing Club Lake, Goat Island Preserve, Cottonwood Creek Preserve, Palmetto/Alligator Slough Preserve, Simonds Lake and Park, Post Oak Grove Preserve, Trinity River Greenbelt Preserve Riverbend Section, and Audubon Bird Sanctuary.

Because the unincorporated areas of Dallas County lie within a federally-designated floodplain, the likelihood of the unincorporated areas of Dallas County to be flooded is very likely due to number of aging and unmaintained levees that are located within the floodplain.

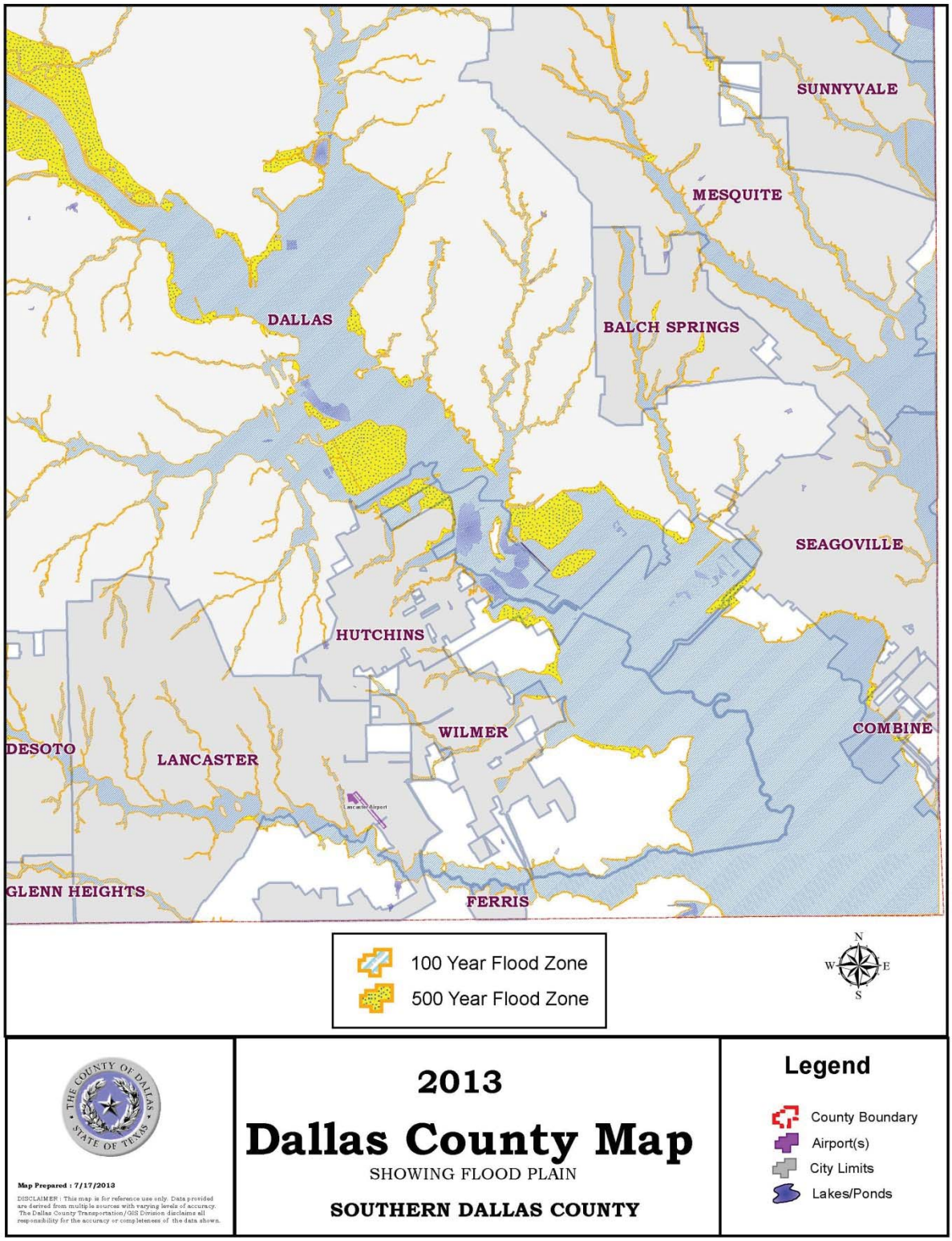
In 2005, the unincorporated areas of Southeast Dallas County at 14300-15000 Beckett Rd became flooded due to a levee breach which flooded gravel sloughs that submerged commercial excavating equipment, a crane and damaged two or three homes in this area.

From April 2005 through 2007, Dallas County received a grant to relocate 100 residents in the Sand Branch area located within the low-lying floodplain located at 3900-4000 S Beltline Road in the unincorporated area of Dallas County. However, a data deficiency was identified in this hazard because the exact number of properties exposed to flooding could not be determined.

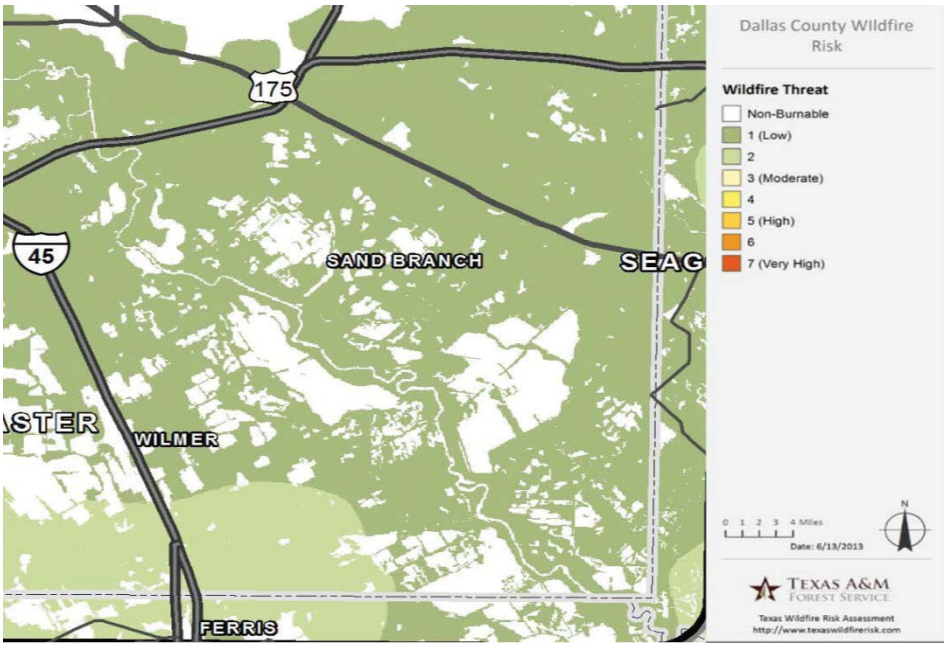
Locations: The following are areas of unincorporated Dallas County that are known to be susceptible to flooding:

- D Bar D MHP, Near Fin & Feather Club Lake & Trinity River, The 2700 Block Dowdy Ferry, Dallas, Texas, 75253
- Sand Branch, Single Family Homes near Palmetto/Alligator Slough Preserve, 3900-4000 Beltline Rd S, Dallas, Texas, 75159
- Near Goat Island Preserve, Post Oak & Fulgham, Dallas, Texas, 75172
- Near Cottonwood Creek Preserve, Beltline & Cottonwood Creek, Wilmer, Texas 75172
- Near Cottonwood Creek Preserve, Beltline Rd & Post Oak, Wilmer, Texas, 75172,
- Near Palmetto & Alligator Slough Preserve, Bilindsay & Belt Line Rd S, Dallas, Texas, 75159,
- Parson Slough near Bilindsay & Bois D' Arc, Combine, Texas75159
- Trinity River Greenbelt Preserve Riverbend Section near Malloy Bridge & Boise D' Arc, Dallas, Texas, 75159
- Near Audubon Bird Sanctuary near Wolf Springs Rd East, Dallas, Texas, 75125, 75159
- Audubon Bird Sanctuary/Trinity River near Bilindsay Cove & Bilindsay, Dallas, Texas, 75159
- The 2700 Block Sachse Road, Sachse, Texas 75048 (4 homes flooded near Muddy Creek)
- Dowdy Ferry & Tea Garden, Dallas, Texas 75217

Map 9.1: Flood Plain Southwest Dallas County Unincorporated



B. Wildland Urban Interface (WUI): At the time of developing this plan, the information of the number or percentages of the population in the Dallas County Unincorporated area that live within the WUI could not be accurately determined. A data deficiency has been identified with this hazard. However, according to the Texas A&M Wildfire Assessment Portal (TXWRAP) the threat of wildfire occurring in the Dallas Unincorporated area is low.



C. Dam and Levee Failure: The risk of levee failure from the base flood event is minimal for the levee systems listed below. This is because majority of Dallas County Unincorporated in in the flood zone and there are no major developments are in the area.

There is a greater risk of levee failure or levee systems being overtopped for flood events that exceed the base flood event. The three foot freeboard required by FEMA provides a greater safety factor, but major floods of long duration such as the 1993 Mississippi River Flood can result in major damage and potential loss of life.

The Trinity River is formed at the confluence of the West Fork and Elm Fork, just to the west of downtown Dallas, and the majority of the levees are located on these conveyances or their major tributaries. The Code of Federal Regulations, 44 CFR Section 65.10, outlines the requirements for mapping areas protected by levee systems. For the purposes of the National Flood Insurance Program (NFIP), FEMA will only recognize in its flood hazard and risk mapping effort those levee systems that meet, and continue to meet, minimum design, operation, and maintenance standards that are consistent with the level of protection from the base flood.

The following table displays the Flood Protection Levee Systems in Dallas County, it is based on information shown on FEMA published Flood Insurance Studies and described on Flood Insurance Rate Maps (FIRM's). FEMA requires that levee systems must be designed, constructed and maintained to the minimum standards of the National Flood Insurance

Program and protect to the 100-year flood event before that can be mapped as providing flood protection.

The county does not approve or allow any residential area to be developed in the inundation areas and none the county properties are in the inundation areas. The Map 9.2 depicts the inundation area for the Ten Mile Creek Dam, it is important to note that the dam is in the flood zone and there are not residential, commercial or county facilities in the areas depicted. The extent of inundation in this area ranges from 0 feet to 6 feet of depth.

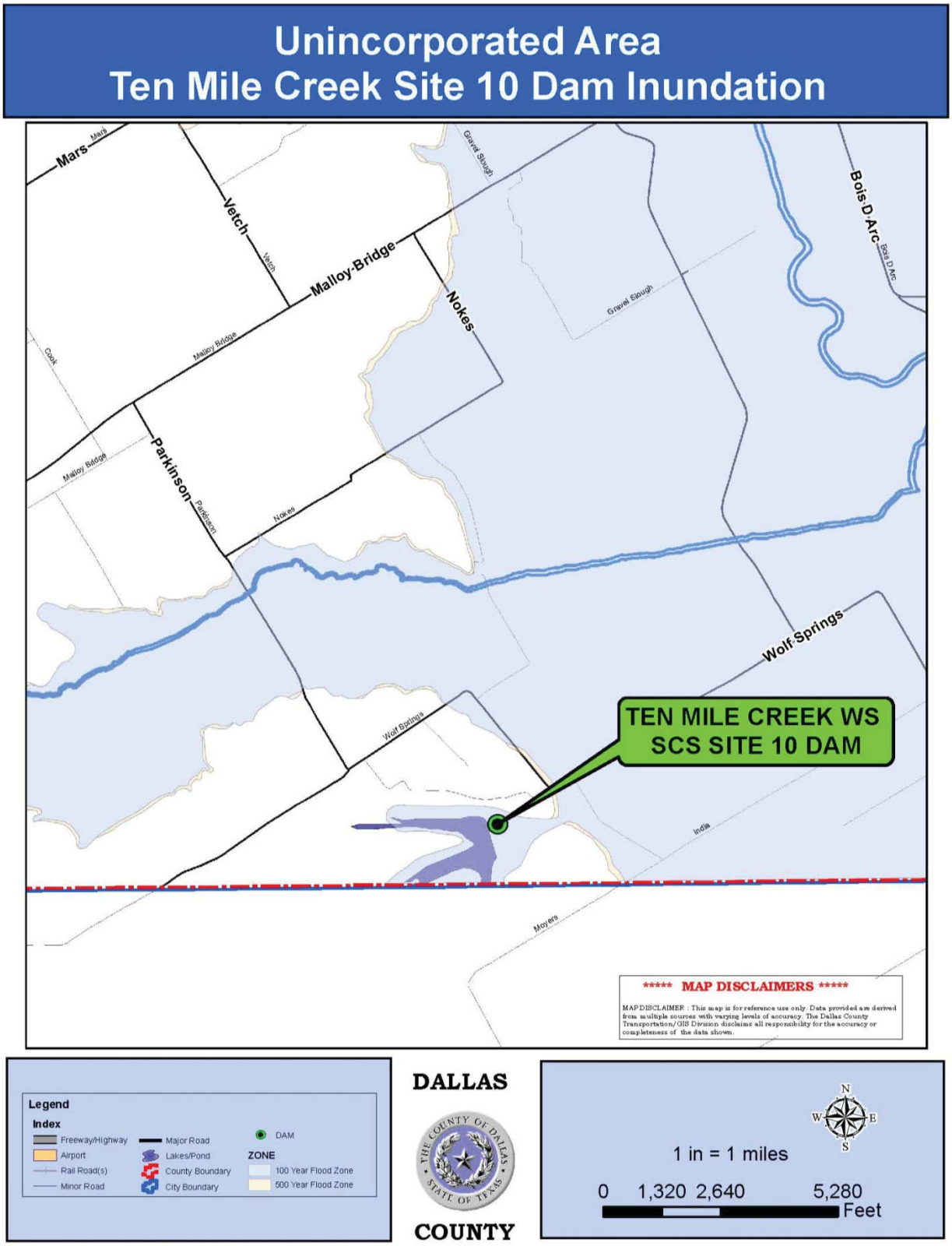
Flood Protection Levee Systems in Dallas County Local Mitigation Strategy

Levee System	County	Community
West Fork Levee System	Tarrant and Dallas	Numerous
Dallas Floodway (Trinity River)	Dallas	City of Dallas
Irving Flood Control Dist. Section I (Elm Fork)	Dallas	City of Irving
Irving Flood Control District Section III (Grapevine Creek and Elm Fork)	Dallas	City of Irving
Farmers Branch-Carrollton Flood Control District (Cooks Branch and Hutton Branch)	Dallas	Cities of Carrollton and Farmers Branch
Valwood Improvement Authority	Dallas	City of Irving
Grand Prairie Municipal Utility and Reclamation District (West Fork)	Dallas	City of Grand Prairie
City of Dallas Levees (Trinity River and Five Mile Creek)	Dallas	City of Dallas
Dallas County Flood Control District #1	Dallas	City of Dallas

D. Earthquake: There are no known active geological faults within Unincorporated Dallas County and as such high magnitude earthquakes are considered a low risk threat. Additionally, there are no historical data of earthquakes in unincorporated Dallas County. This increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

E. Stream Bank Erosion: There are no areas of unincorporated Dallas County where stream bank erosion is considered to be a hazard nor is there any history of stream bank erosion. Stream Bank Erosion is not considered a hazard that affects the area though its risk potential will be re-evaluated as needed.

Map 9.2: Inundation Map of Ten-Mile Creek 10 Dam



Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for Dallas County unincorporated. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. There are no personal losses expected from drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Unincorporated Dallas County. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property in Unincorporated Dallas County.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Unincorporated Dallas County
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Unincorporated Dallas County
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Unincorporated Dallas County

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of Unincorporated Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in Unincorporated Dallas County due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Dallas County are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of Unincorporated Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in Unincorporated Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Dallas County are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in Unincorporated Dallas County have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in Unincorporated Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Dallas County are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in Unincorporated Dallas County. All the population of Unincorporated Dallas County is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in Unincorporated Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Dallas County are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. . The entire population is exposed to this hazard
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for Unincorporated Dallas County. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Dallas County indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in Dallas County are exposed to this hazard.

Wildfire	
Population	The population of Unincorporated Dallas County that is within the WUI areas is exposed to this hazard.
Improved Property	Based on geographical data, two wildfires have been reported during the review period though no property or crops a loss were reported. All property within the WUI are exposed to this hazard
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding. It could not be determined the percentage or number of people in the unincorporated Dallas County who are exposed to this hazard. It was however agreed that the number would be low.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the Unincorporated Dallas County area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

Change is Population and Development

Unincorporated Dallas County was a participant in the last Dallas County Hazard Mitigation Action Plan. The estimated growth in population for Unincorporated Dallas County was from 7,175 to 7,200 an increase of 0%. There have been no major structural and economic developments within the unincorporated areas of Dallas County since the previous plan. The vulnerability for the area has not changed.

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Continue to build capacity for hazard mitigation in unincorporated areas of Dallas County.

- ✓ ***Objective 4-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 4-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 4-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Dallas County	Dallas County Earthquake Study: Conduct a study to identify the vulnerability and potential for earthquakes in Dallas County. Identify cost-effective action items
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Dallas County Department of Planning and Development in conjunction with HSEM, and participating jurisdictions
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Dallas County	Dallas County Weatherization Assistance Program (WAP).
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$400,000
Potential Funding Sources	General fund expenditures, federal and state grant funds
Lead Agency/Department Responsible	Dallas County Health and Human Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income Dallas County families, particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Dallas County Weatherization Assistance Program (WAP) provides assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. As part of the WAP program, DCHHS equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

*

Dallas County Action Item	Install backup generators UPS systems to all county facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, County budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Dallas County HSEM, Fire Marshall and Facilities
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

Unincorporated Dallas County Action Item	Implement the Texas Safe Room Rebate Program for residents of Unincorporated Dallas County
Hazard(s) Addressed	Tornado, High Winds, Hail
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	Dallas County Emergency Management and Office of the Fire Marshal
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the North Central Texas Council of Governments

Unincorporated Dallas County Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, dam/levee failure, drought, winter storm, hail, earthquake, lightning
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative
Potential Matching Sources	Budget, Donations
Lead Department	Emergency Services
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Unincorporated Dallas County Action Item	Install water-saving equipment and implement strategies that support water-saving practices such as low flow fixtures. These will include installing equipment that will conserve water within Dallas County Facilities
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$500,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program
Lead Agency/Department Responsible	Dallas County Facilities Management
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing your water consumption is one of the easiest and most inexpensive ways of achieving cost savings
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

Unincorporated Dallas County Action Item	Manage the Flood Plain beyond the minimum requirements. This action will include developing an incentive program for building above the required freeboard minimum
Objective(s) Addressed	1-C, 3-B, 4-A, 4-B, 4-C
Hazard(s) Addressed	Floods/Dam and Levee Failure
Priority (High, Medium, Low):	Medium
Estimated Cost	$1,000,000
Potential Funding Sources	Federal and state grant funds
Lead Agency/Department Responsible	Dallas County Public Works, Planning and Development, Environmental Services and Fire Marshal's Office
Implementation Schedule	This project would begin upon receipt of grant funds and continue indefinitely or until all grant funds are exhausted
Effect on Old Buildings	By providing incentives old building owners will be able to reduce the risk of loss in the event of flooding
Effect on New Buildings	By providing incentives new building will be able to reduce loss in the event of flooding
Cost Effectiveness	The cost of implementing this program is low compared to the benefits of the program
Discussion	As stated earlier, Dallas County participates in the NFIP. However it only meets minimum requirements. Implementing more stringent floodplain management techniques that exceed minimum standards and requirements can help minimize flood losses. Adopting a more stringent floodplain rules and including an incentives will help ensure that all jurisdictions in Dallas County are following the same criteria when it comes to development. It will also ensure that as development occurs, flooding impacts to adjacent property owners and/or upstream and downstream communities are mitigated. The incentive can include receiving a discount on flood insurance premiums as well as the permit fees

Unincorporated Dallas County Action Item	Conduct a risk and vulnerability assessment to determine the number of people, property and infrastructure exposed to flooding and wildfire hazards and identify appropriate action items
Objective(s) Addressed	4-A
Hazard(s) Addressed	Wildfire and Flooding
Priority (High, Medium, Low):	Low
Estimated Cost	$10,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Dallas County Department of Planning and Development in conjunction with HSEM, Public Works and the Office of the Fire Marshall
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	A data deficiency was noted in the vulnerability section above (H-23 and H-25) for flooding and wildfire. While there have been no injuries or fatalities recorded to date, studies will provide data so as to obtain the information and data needed to make the most appropriate decision

Unincorporated Dallas County Action Item	Adopt and implement Dallas County Open Space System Program and Dallas Trails Program. Such a program will include techniques such as developing open space reuse, and preservation planning targeting hazard areas. These programs will seeks to protect and restore natural flood mitigation features and provide for recreational activities
Objective(s) Addressed	1-C, 2- A, and 5-C
Hazard(s) Addressed	Floods, Dam/Levee Failure
Priority (High, Medium, Low):	Medium
Estimated Cost	Staff Time
Potential Funding Sources	Dallas County Planning and Development
Lead Agency/Department Responsible	Planning and Development
Implementation Schedule	As funding is available
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost effectiveness of this program not only promotes healthy watersheds and saves cost, but benefits the community as well
Discussion	Natural resources provide floodplain protection, riparian buffers, and other ecosystem services that mitigate flooding. The Dallas County preserves include wetlands, heavily wooded vegetative cover, and some are historically significant to both Texas and Dallas County. The preserves set aside natural habitats where native plants, reptiles, birds and mammals can continue to thrive. Such natural areas and vegetation benefits natural resources while also mitigation potential flood losses

Plan Maintenance

The Dallas County Office of Homeland Security and Emergency Management (HSEM) will be responsible leading the monitoring and update efforts for Dallas County Unincorporated plan annex. HSEM will call the Dallas County Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
Unincorporated Dallas County	Emergency Management Coordinator/ Planning Sections Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

HSEM will report the outcomes of the annual HMPT to the Dallas County Emergency Management Coordinators meetings and when needed to the Dallas County Commissioners Court. All participating cities will be encouraged to do the same reporting to their City Councils.

Additionally, the hazard mitigation plan will be a discussion/work item on the HSEM agenda each year, and department heads and other emergency preparedness staff, who serve in the Dallas County Emergency Operations Center will focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting Dallas County or its communities, legal changes, and other events may trigger a meeting of the Dallas County Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

Dallas County is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. Dallas County will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. Dallas County will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the county will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the county will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
Unincorporated Dallas County	Commissioners Court	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	Commissioners Court	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director, County Commissioners	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA
b. Supporting Documentation and Outreach Materials

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: August 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms: High Winds									
Hail	4	4	3	3.00	1	3	1	5	60%
Lightning	4	4	2	2.00	1	3	1	5	40%
Winter Storms	2	4	4	2.00	2	1	1	4	50%
Tornado	4	4	4	4.00	2	3	1	6	66%
Flooding	3	3	4	4300	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	4	4.00	4	1	1	6	66%
Extreme Temperatures/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3.00	2	2	2	6	50%
Wildfire	1	1	3	3.300	3	4	3	10	30%
Utility Failure	4	4	3	3.00	4	1	1	6	50%
Energy/Fuel Shortage	1	1	3	3.00	4	2	1	7	42%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Urban Fire	4	4	2	2.00	2	3	1	6	33%
Earthquake	1	1	3	3.300	3	4	3	10	30%
Levee/Dam Failure	1	2	1	.500	1	1	3	5	10%
Drought	4	3	2	2.66	2	4	4	10	26%
Aircraft Accident	1	1	2	2.00	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.500	1	1	3	5	10%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4.00	4	4	4	12	33%
Civil Disorder	2	2	3	3.00	2	2	2	6	33%

NB: Dallas County Unincorporated HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

B. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

2.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County. It is used to categorize and define the level of risk, probability, impact and extent of a hazard. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix DC –B1: Supporting Documentation

Michael Gaciri

From: Michael Gaciri
Sent: Tuesday, June 11, 2013 2:35 PM
To: Lauren Mish; Robert De Los Santos; Alberta Blair; Zachary Thompson; Emily Gore; Deborah Foster; Rick Loessberg; 'NCTEMTSGroup@gmail.com'
Cc: Doug Bass; Scott Greeson; Larry Thompson; Rodrick Jones; (osem.osem@dallascounty.org) (osem.osem@dallascounty.org)
Subject: Invitation - Dallas County Hazard Mitigation Planning Team

Good Afternoon,
Following the cancellation of the Dallas County Hazard Mitigation Planning Team (HMPT) kick-off meeting due to the Memorial Holiday, HSEM would like to reschedule the Dallas County Hazard Mitigation Planning Team meeting as follows:

Date: Monday, June 17, 2013
Time: Dallas County Office of Homeland Security & Emergency Management, 509 Main Street Suite 305 Dallas, TX 75202
Place: 1:30 pm – 3:00 pm

The departments/offices expected at this meeting include the Judge's Office, Health and Human Services, Public Works, Planning and Development, Fire Marshall, Sheriff and HSEM. We look forward to having you at the meeting. An agenda will be sent before the meeting.

If you have any questions or concerns please feel free to contact me.

Kind Regards,

Mike Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
Tel: 214-653-6962
Email: michael.gaciri@dallascounty.org

From: Doug Bass
Sent: Tuesday, May 14, 2013 2:04 PM
To: Dallas County Department Heads
Cc: Scott Greeson; Michael Gaciri; Larry Thompson; Rodrick Jones; Lauren Mish; Gordon Hikel; Darryl Martin
Subject: FW: Dallas County Hazard Mitigation Planning Team Invitation

Department Directors/Elected Officials:

Dallas County Office of Homeland Security & Emergency Management (HSEM) is facilitating an update of the current Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP). The purpose of updating the HazMAP is to meet the FEMA/State EM requirements to provide updated hazard mitigations plans. As part of the emergency planning process, HSEM is formulating a Hazard Mitigation Planning Team (HMPT) comprised of various Dallas County Offices /

1

Departments and community stakeholders that have an understanding of the communities risks and capabilities in hazard mitigation. In all, 23 municipalities are participating with Dallas County in this important planning project.

HSEM would like for your department to consider appointing a representative to serve as a member of the Dallas County Hazard Mitigation Planning Team (HMPT). Please pass this information to appropriate person(s) within your department who might contribute to this planning process.

The first HMPT meeting is scheduled as follows:
Date: Monday, May 27, 2013
Place: Dallas County Office of Homeland Security & Emergency Management, 509 Main Street Suite 305 Dallas, TX 75202
Time: 1:30pm – 3:00pm

If you have any questions or concerns contact us at the contact information provided below.

Mike Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
Tel: 214-653-6962
Cell: 972-342-1474
Email: michael.gaciri@dallascounty.org

Thanks for your consideration.

Chief C. Douglas Bass, CEM
Dallas County Homeland Security & Emergency Management
509 Main Street, Suite 305
Dallas, Texas 75202
Main Phone: 214-653-7980
Doug.Bass@Dallascounty.org

LOCAL MITIGATION STRATEGY PLANNING TEAM MEETING SIGN-IN SHEET

Jurisdiction:	509 Main Street, Suite 305, Dallas 75202	**Meeting Date:**	June 17, 2013
Facilitator:	MICHAEL GACIRI, DALLAS COUNTY TX	**Place/Room:**	Dallas County, EOC

ATTENDEE SIGN IN

	Name	Title	Company	Phone	E-Mail
①	Robert DeLos Santos	DC Fire MARSHAL		214 653-7970	Robert.DeLosSantos@dallascounty.org
②	SCITG	DCHSEM			
③	Hon. Cedric Davis	Hon. / DCSD	Dallas Co. Security Dir.	Cell: 214-663-1151 214-653-7000	mayor08@live.com / cedric.Davis@dallascounty.org
④	Debbie Foster	Sheriff Ofc	DSO	214-653 3454	deborah.foster@dallascounty.org
⑤	Emily Gore	PH Manager	DCHHS	972-692-2715	emily.gore@dallascounty.org
⑥	Aaron McCarthy	Community Liaison	N.C.T.E.M.T. Group	972-835-5681	nctemtgroup@gmail.com
⑦	Doug Bass	Chief HSEM	DC HSEM	214 653 7980	doug.bass@dallascounty.org
⑧	Zachary Thompson	Director HHS	Dallas County	214 819 2000	zachary.thompson@dallascounty.org

Dallas County Office of Homeland Security and Emergency Management

Dallas County Hazard Mitigation Planning Team (HMPT) Meeting

June 17, 2013

AGENDA

1. Welcome and Introduction
2. Background of Hazard Mitigation Planning
3. Planning Process
4. Role and Purpose of the HMPT
5. Hazards Identified in Current Plan
6. Complete Hazard Identification and Risk Assessment (HIRA)
7. Next Steps

Dallas County

Department of Homeland Security and Emergency Management (HSEM)

Hazard Mitigation Planning

Hazard Mitigation Strategy - Planning Process

- Jurisdictions are required to develop a Hazard Mitigation Plan as a condition of receiving Hazard Mitigation Assistance (HMA) funding
- Requirements and procedures for local mitigation plans are found in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201.6 (44 CFR Part 201.6.)

Why should our jurisdiction participate?

- Money for projects e.g. Tornado Safe Room Rebate Program
  - Hazard Mitigation Grant Program (HMGP)
  - Pre-Disaster Mitigation Grant (PDM)
  - Flood Mitigation Assistance (FMA)
  - Repetitive Flood Claims(RFC)
  - Severe Repetitive Loss (SRL)
    - Over $750,000,000 in HMGP funding alone in Texas since 2001
- Hazard analysis for your jurisdiction
- Identify action items (mitigation projects)

The Basic Outline of the Hazard Mitigation Action Plan (HazMAP)

- **The Multi-Jurisdiction Planning Process:** Describes the process and organization of the County Multi-Jurisdictional Mitigation Action Plan
- **The Planning Process:** Describes the individual mitigation planning processes for each participating jurisdiction satisfying requirements §201.6(b) and §201.6(c)(1).
- **Hazard Analysis:** Describes the hazards identified, known national extent scales, location of hazards, previous events, and jurisdictional profiles satisfying requirements §201.6(c)(1)(i), §201.6(c)(1)(ii), §201.6(c)(2)(i)(A), §201.6(c)(2)(i)(B), §201.6(c)(2)(i)(C), and §201.6(c)(2)(ii).
- **Mitigation Goals and Actions:** Describes the county-wide goals established by the Local Mitigation Strategy and the Mitigation Action Items for each jurisdiction satisfying requirements §201.6(c)(3), §201.6(c)(3)(i), §201.6(c)(3)(ii), §201.6(c)(3)(iii), and §201.6(c)(3)(iv).
- **Plan Maintenance Process:** Describes the monitoring, evaluating, updating, plan incorporation, and future public updates for each participating jurisdiction satisfying requirements §201.6(c)(4)(i), §201.6(c)(4)(ii), and §201.6(c)(4)(iii).
- **Attachment A:** Public Meeting Announcement
- **Attachment B:** Verification of Planning Meetings
- **Attachment C:** Adoption Resolutions

Dallas County Hazard Mitigation Action Plan

Dallas County has a FEMA approved Hazard Mitigation Plan

- Plan was written by the NCTCOG
- Approved on January, 2009
- 11 jurisdictions participated; all adopted

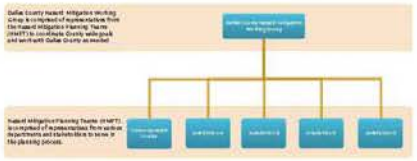
Planning Process

- Three Meeting Groups:
  1. Dallas County HazMAP Working Group Meetings
  2. Hazard Mitigation Planning Team (HMPT) Meetings
  3. Public Participation



1

Dallas County HazMAP Plannning Process



Action Items identified in Plan

- Dallas County Weatherization Program (WAP)
- Flood Plain Management
- Implement the Texas Individual Tornado Safe Room Rebate Program
- Surge Protectors and Lightening Protection
- Water Saving
- Warning Systems

Deliverables

- Public Involvement and Outreach method
- Hazard Identification and Risk Assessment (HIRA)
- Capabilities Assessment Worksheet
- Mitigation Goals
- Specific Vulnerability Analysis – Flooding; Wildfire; Dam/Levee Failure

Deliverables

- Mitigation Action Items
- Narrative detailing planning process at each meeting and who was involved
- Sign in sheets, meeting agenda and any other document used at each meeting
- In-kind reports for reimbursement

Questions?

Michael Gaciri
Hazard Mitigation Specialist
michael.gaciri@dallascounty.org
Tel: 214-653-6962

2

Michael Gaciri

From:	Michael Gaciri
Sent:	Tuesday, September 24, 2013 3:03 PM
To:	Emily Gore; Deborah Foster; Robert De Los Santos; 'cedric.davis@dallascounty.org'; 'NCTEMTSGroup@gmail.com'; Tammara Scroggins; Zachary Thompson; Rick Loessberg; Alberta Blair
Cc:	Doug Bass; Dariela Rodriguez
Subject:	Dallas County Hazard Mitigation Planning Team

Good Afternoon,
As part of the planning requirements for updating the Dallas County Hazard Mitigation Plan, I would like to convene a Dallas County Hazard Mitigation Planning Team meeting. I would like to propose setting the meeting for Tuesday, October 1, 2013 at 10:30 am at the HSEM Offices at 509 Main St. Suite 305. The purpose of the meeting is to review and discuss some of the deliverables that will be need to help us meet the planning requirements. The deliverables include:

1. Review of high hazards in Dallas County (unincorporated) using the HIRA
2. Capabilities Assessment Review
3. Goals and Objectives Review
4. Status Report on current Action Items
5. New Mitigation Action Items

Your department/organization's participation at this meeting will be crucial in helping us meet the planning requirements.

Please let me know your availability on this day and time.

Thank you.

Mike Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
Tel: 214-653-6962
Email: michael.gaciri@dallascounty.org

1

DALLAS COUNTY HAZARD MITIGATION PLANNING TEAM MEETING SIGN-IN SHEET			
Jurisdiction:	DALLAS COUNTY	**Meeting Date:**	October 1, 2013
Facilitator:	MICHAEL GACIRI, DALLAS COUNTY	**Place/Room:**	509 Main Street, Suite # 305, Dallas TX 75202

ATTENDEE SIGN IN

Name	Title	Company/Agency	Phone	E-Mail
Tammara Scriggins	Asst. Director PHP	DC HHS	214 819-2167	tammara.scriggins@dallascounty.org
MICHAEL GACIRI	HSEM	DC HSEM	214 653 6962	
A. McGrads/McCarthy	Instructor Dallas County CERT	N.C.T.E.M.T.S Group	214-466-0652	nctemtsgroup@gmail.com
WAYNE BARR	DALLAS County BRIDGE MANAGER	PUBLIC WORKS	214-653-6522	Wbarr@dallascounty.org


DALLAS COUNTY Texas
A 21st Century Mosaic
Home
LEPC
About / Contact
Partner Agencies
Search
Home
About / Contact
Emergency Information
Emergency Preparedness
Homeland Security
Hazard Mitigation Action Plan
City Emergency Planners
Chemical Emergency Planning
Links
Employee Access
Dallas County Hazard Mitigation Action Plan
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update
Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).
Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.
This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).
Click the link to access the Draft Base Plan.
Click the link to access the Unincorporated Dallas County Draft Plan.
This comment period will give the public the opportunity to review the draft and make comments regarding the draft base plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft base plan. Any comments or suggestions can be emailed to Michael Gacin at DSEMPlanning@dallascounty.org
You may also print, fill out and forward the Public Comment Form to:
Dallas County Office of Homeland Security and Emergency Management
Attn Michael Gacin
509 Main Street
Dallas, TX 75202
The plan will be available for public comment until November 29, 2013. All comments received by this date will be reviewed and considered.
FEMA Local Mitigation Handbook
Employees may access the text of the Hazard Mitigation Action Plan through the "Employee Access" page of the Dallas County Homeland Security and Emergency Management website.
Frequently Asked Questions
West Nile Virus
Winter Storms
Tornado Safety
Active Shooter
NTAS
NO ACTIVE ALERTS
Dallas County Live Radar
if you SEE something SAY something
KnoWhat2Do



Home LEPC About / Contact Partner Agencies

Search

31°F WEATHER/TRAFFIC

- Home
- About / Contact
- Emergency Information
- Emergency Preparedness
- Homeland Security
- Hazard Mitigation Action Plan
- City Emergency Planners
- Chemical Emergency Planning
- Links
- Employee Access

Dallas County Hazard Mitigation Action Plan

Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.

This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

Click the link to access the Draft Base Plan.

Click the link to access the Unincorporated Dallas County Draft Plan.

This comment period will give the public the opportunity to review the draft and make comments regarding the draft base plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft base plan. Any comments or suggestions can be emailed to Michael Gaciri at OSEMPlanning@dallascounty.org

You may also print, fill out and forward the Public Comment Form to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202

The plan will be available for public comment until November 29, 2013. All comments received by this date will be reviewed and considered.

FEMA Local Mitigation Handbook

Employees may access the text of the Hazard Mitigation Action Plan through the "Employee Access" page of the Dallas County Homeland Security and Emergency Management website.

Frequently Asked Questions

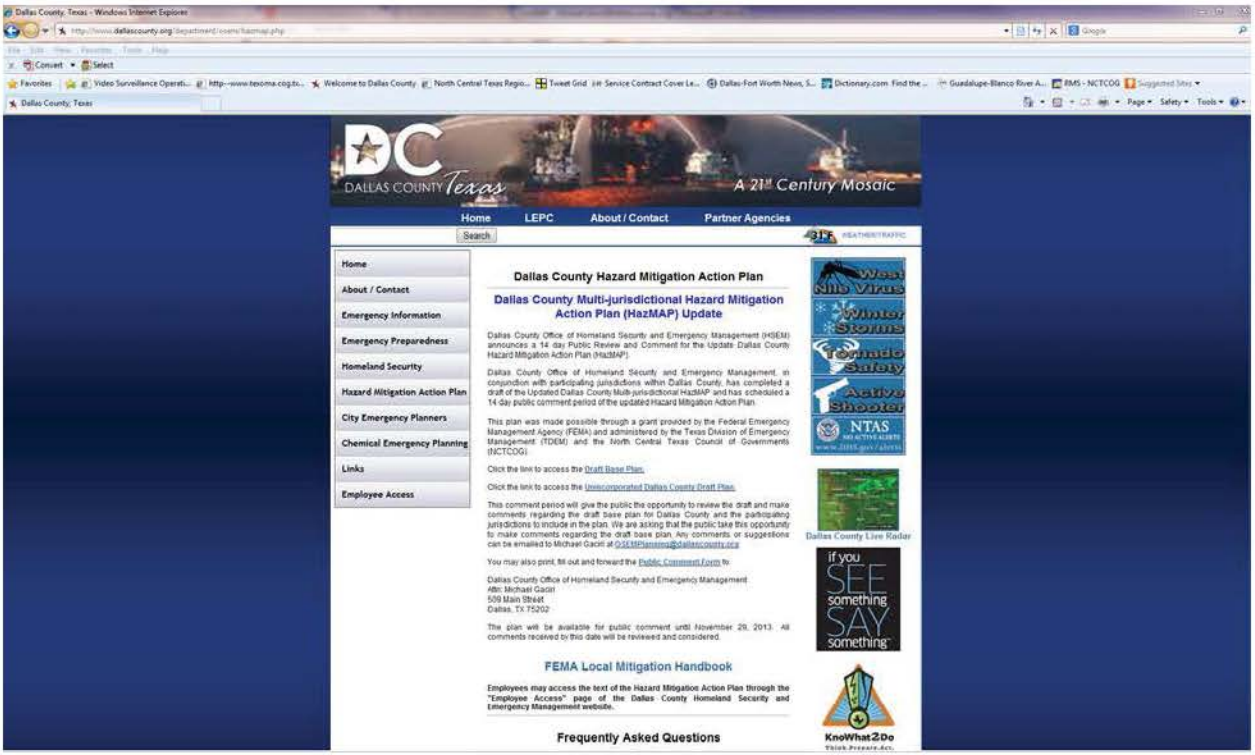




Dallas County Live Radar






Dallas County, Texas - Windows Internet Explorer
DALLAS COUNTY Texas
A 21st Century Mosaic
Home
LEPC
About / Contact
Partner Agencies
Search
Home
About / Contact
Emergency Information
Emergency Preparedness
Homeland Security
Hazard Mitigation Action Plan
City Emergency Planners
Chemical Emergency Planning
Links
Employee Access
Dallas County Hazard Mitigation Action Plan
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update
Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).
Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.
This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).
Click the link to access the Draft Base Plan.
Click the link to access the Unincorporated Dallas County Draft Plan.
This comment period will give the public the opportunity to review the draft and make comments regarding the draft base plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft base plan. Any comments or suggestions can be emailed to Michael Gacki at
You may also print, fill out and forward the Public Comment Form to:
Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gacki
509 Main Street
Dallas, TX 75202
The plan will be available for public comment until November 29, 2013. All comments received by this date will be reviewed and considered.
FEMA Local Mitigation Handbook
Employees may access the text of the Hazard Mitigation Action Plan through the "Employee Access" page of the Dallas County Homeland Security and Emergency Management website.
Frequently Asked Questions
West Nile Virus
Winter Storms
Tornado Safety
Active Shooter
NTAS
Dallas County Live Radar
if you SEE something SAY something
KnowWhat2Do

City of DeSoto Annex

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of DeSoto has a FEMA approved hazard mitigation plan that was adopted in 2009. The city was one of the 11 jurisdictions that participated in the initial Dallas County Hazard Mitigation Action Plan.

This annex serves as a complete hazard mitigation planning tool for the City of DeSoto and is an addition to the countywide hazards and strategies discussed in the previous section. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections



Introduction

DeSoto is located at 32.3557 N and 96.5132 W. It sits east of Cedar Hill, west of Lancaster, southeast of Duncanville and approximately 16 miles directly south of the City of Dallas.

DeSoto was settled in 1847 and is one of the oldest communities in North Texas. It was named after Thomas Hernando DeSoto Stewart, a well-known doctor in the community. After WWII, the area began to grow and the city became incorporated on March 3, 1949. The city grew from less than one square mile to over 15 square miles by 1953. Businesses were on the rise as well.



According to the 2010 U.S. Census, the population of DeSoto is 51,102. The racial makeup was 68.6% Black or African-American, 17.4% was non-Hispanic white, 0.4% American Indian and Alaska Native, 0.9% Asian, 1.9% from two or more races. 12.1% of the population was of Hispanic or Latino origin. The city has a total area of 21.6 square miles with all of it being land. There are approximately 18,210 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

The City of DeSoto operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all

personnel matters in the city and for preparing and submitting an annual budget for Council review.

DeSoto is the largest and most diverse city in Southwest Dallas County. In 2006, DeSoto received the "All American City" award for its high achievements in community support and participation. The largest employers in DeSoto include retailers, manufacturers, healthcare providers, a publisher, and governmental organizations. With incentives such as Tax Abatement, Triple Freeport Equivalency, Sales Tax Rebates, and Economic Development Cash Grants, it is ideal for businesses large and small.

Internal Planning Process

The table below lists members of the City of DeSoto Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of DeSoto.

Name	Title / Department or Agency	Role
Tracie Hlavinka	Assistant to the City Manager	Assisted in risk assessment and conducting capabilities assessment. Attended and participated in HMPT meetings.
Jerry Duffield	Fire Chief/ Emergency Management Coordinator	HMPT Coordinator; Hazard and plan development, assisted in risk assessment and conducting capabilities assessment. Provided input on the hazard identification process.
Tom Johnson	Development Services Managing Director	Provided technical information and capabilities assessment including land development, city codes and ordinance.
Edena Atmore	Finance Managing Director	Attended and participated in HMPT meeting Provided expertise in budget, Capital Improvement Plan, funding sources Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment.
John Crear	Drainage Engineer	Provided an updated capability assessment and supported mitigation planning projects. Provided information on Drainage Master Plan
Kathy Jones	Public Relations Manager	Provided technical, communication support and public information throughout the revision process. Attended HMPT meetings.
Renee Johnson	Parks and Recreation Managing Director	Provided expertise in open space planning and land development. Attended HMPT meetings
Joe Costa	Police Chief	Assisted in risk assessment and conducting capabilities assessment. Attended and participated in HMPT meetings.
Crystal Owens	City Engineer	Provided technical support, data for capability assessment. Attended HMPT meetings. Provided data and maps for risk assessment.
Jimmy Stephens	Environmental Health Manager	Attended and participated in HMPT meetings. Supported the mitigation project.
Lucile Dade	Library Managing Director	Attended and participated in HMPT meetings.
Skyla Pellum	Emergency Management Administrator	Assistant to the HMPT Coordinator; Hazard and Plan development, assisted in risk assessment and conducting capabilities assessment

Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal and the local city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

External stakeholders invited via email to participate in the planning and review process of the City of DeSoto HazMAP annex section included:

Representing	*Position/Department*	*Role*
DeSoto ISD	*Assistant Superintendent Operations, Compliance and Elementary Schools*	*Review Plan*

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection.

Meeting Dates	Summary of Discussions
6/12/2013	Hazard Mitigation Action Plan update process and timeline. Review of the Planning Process and Review HIRA as discussed at the Dallas County Hazard Mitigation Working Group. Reviewed survey questions and developed Strategy for promoting survey
7/29/2013	Reviewed hazards that impact the community. HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for City of DeSoto in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA Matrix
11/19/2013	Overview of the hazard mitigation vulnerability assessment and mitigation strategies. Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment. Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of DeSoto notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of DeSoto's outreach materials are included in Appendix Section.

Survey Results

The City of DeSoto made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 23 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The majority of the survey respondents from the City of DeSoto identified four hazards that were deemed as most likely to occur in their jurisdiction. Extreme heat, hail, high winds, and tornados were the hazards that were rated the most likely to occur (had an average rating of above 3.00). In terms of impact, the respondents identified tornado, hail and extreme heat as potentially having the most impact on the community. Overall the DeSoto Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. A significant number of DeSoto respondents indicated they would like to see an increase in public outreach programs (i.e. CERT) and better enforcement of building codes.

The results of the survey provide valuable information for the City of DeSoto hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

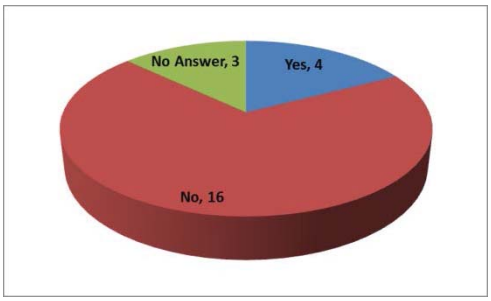
The City of DeSoto will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

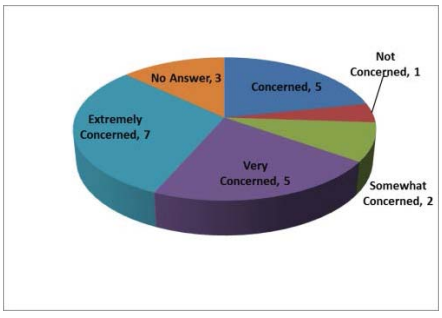
Survey Overview

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of DeSoto (23 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

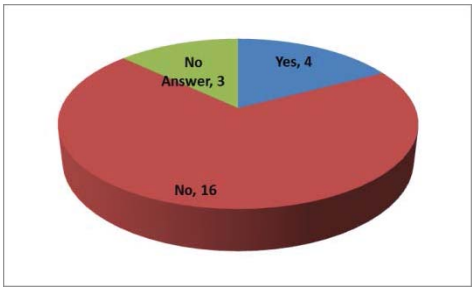
	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total Answered	Average Rating
Earthquake	13	3	3	0	4	19	1.47
Tornado	0	1	2	17	4	20	3.80
Hail	0	2	2	16	4	20	3.70
High Winds	0	2	3	15	4	20	3.65
Winter Storms	2	8	2	7	4	19	2.74
Summer Heat	0	1	6	13	4	20	3.60
Drought	0	1	8	10	4	19	3.47
Flooding	3	6	2	8	4	19	2.79
Dam Failure	18	1	0	0	4	19	1.05
Stream Bank Erosion	11	4	1	3	4	19	1.79
Levee Failure	17	2	0	0	4	19	1.11

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

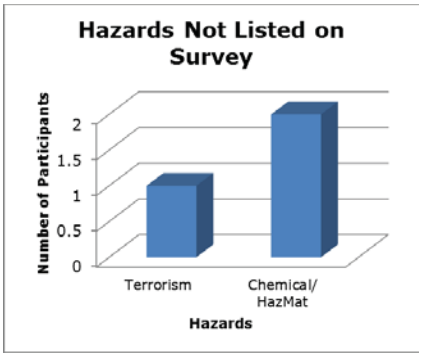
✓ Limited ✓ Minor
✓ Major ✓ Substantial

	Limited	Minor	Major	Substantial	Skipped	Total Answered
Earthquake	12	4	2	1	4	19
Tornado	0	1	7	12	3	20
Hail	0	2	8	10	3	20
High Winds	0	1	7	12	3	20
Winter Storms	1	9	4	6	3	20
Summer Heat	0	4	8	8	3	20
Drought	0	3	8	8	4	19
Flooding	3	6	5	4	5	18
Dam Failure	17	1	1	0	4	19
Stream Bank Erosion	12	4	2	1	4	19
Levee Failure	17	1	1	0	4	19

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	6
Improve, adopt and enforce building codes:	8
Implement the Texas Individual Tornado Safe Room Rebate Program:	17
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	14
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	5
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	12
Coordinate with Dam owners to conduct inundation studies of dams:	2
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	6
Purchase and improve on the Weatherization Assistance Program (WAP):	8
Conduct an earthquake vulnerability study:	5
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	9
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	**23**

List any other strategies you think should be included in the plan:

- ✓ "The City of DeSoto needs several emergency shelters for residents living in structures highly impacted by tornadoes, e.g. manufactured homes, wood framed structures, and nearby RV parks. Schools should have safe zones, other than hallway - which proved deadly in the recent Okla. tornadoes."

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ "Enhance television warning system before the tornado is at your door, as in the March 2012 tornado in DeSoto and Lancaster."
   - ✓ "Additional FEMA grants to homeowners; build tornado safe rooms."
   - ✓ "Desoto residents should have been able to apply for FEMA grants for storm shelters regardless if our homes are in flood zones or not. Much of the city is in a flood zone. I feel we were unfairly left out and not given any alternatives as if our lives did not matter!! I'm really angry about that!"

Public Review Period

On January 9, 2014 the City of DeSoto announced the availability of the City of DeSoto's Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the city's website that invited the public to provide input into the draft plan.

The announcement provided a 10 day public review and comment period. The plan was made available at the city website and a hard copy was made available at the public library. Comment forms were also made available on both sites and the public were encouraged to submit comments prior to January 24, 2014 for consideration and possible incorporation into this draft. It was indicated that comments received after the adoption of the plan is annex will be catalogued for consideration in future updates. Figure 1, provides a screen shot of the announcement.

Figure 1: Screen Shot of Public Review and Comment Announcement



The public comments were directed to the Skyla Pellum the Regional Emergency Management Administrator with the Cities of DeSoto.

Capability Assessment

The City of DeSoto identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of DeSoto, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments: The key departments involved in mitigation activities in the City of DeSoto are discussed below.

1. DeSoto Fire Rescue (DFR): The DeSoto Fire Department offers several services to the citizens of DeSoto. These include:

- ✓ Conducting annual fire inspections for local businesses through the Fire Marshal's Office.
- ✓ Emergency Medical Services
- ✓ Fire Prevention
- ✓ Public Education
- ✓ CPR and Fire Training
- ✓ Emergency Management
- ✓ Community Emergency Response Team (CERT)

2. Development Services Department: The Development Services Department for the City of DeSoto has the following functions:

- ✓ Planning and Zoning
- ✓ Design
- ✓ Building Inspections
- ✓ Engineering
- ✓ Maintenance of Public Infrastructure
  - o Streets
  - o Drainage
  - o Water & Wastewater Facilities

In this function the department reviews new private development, related site and infrastructure issues and provides development regulation information to the general public, business owners and developers. Other responsibilities of the department include:

- ✓ Capital Improvement Program
- ✓ "In-House" Design
- ✓ Manage Design Consultant Contracts
- ✓ Public Works
  - o Water Distribution System

- Wastewater Collection System
- Roadway System
- Construction Plan Reviews
- Flood Plain Administration

3. DeSoto Building Inspections Department: The Building Inspections Department works together with the planning, engineering, fire, and health departments to provide development plan review and inspection services for all building construction projects within the community. The services offered by the department include:

- ✓ Multi-discipline construction plan reviews and inspections for residential, commercial and miscellaneous construction.
- ✓ Issuing building permits and certificates of occupancy for all buildings and structure within the community that require permitting.

4. DeSoto Finance Department: The Finance Department function is to collect, disburse, safeguard, invest and maintain records of the city's assets. The mission of the department is to provide the City of DeSoto with:

- ✓ Fiscally prudent financial accounting
- ✓ Debt management
- ✓ Investment services
- ✓ Purchasing services

Other functions of the Finance Department include:

- ✓ Debt management:
  - Prepare bond rating and insurance information for debt issuance
  - Coordinate issuance of debt
  - Conduct maturity payments
- ✓ Investment Management:
  - Manage City funds
  - Make sound investments per City investment policy and Public Funds Investment Act
  - Investment performance reporting
  - Maintain authorized broker/dealer list
- ✓ Purchasing Services:
  - Conduct Citywide bids
  - Contract administration

5. Community Relations Department:

Community Relations Department: The Community Relations Department manages the city's communication with the public. Information is shared with the public using several avenues that include:

- ✓ Mass media: radio, television, newspapers and magazines
- ✓ Online: web sites, email subscriptions, social media, RSS feeds
- ✓ Direct mail: newsletters and flyers distributed with residents' water bills and placed at locations in the city
- ✓ Community involvement: City Council Meetings, Board and Commission meetings, Mayor's Leadership Meetings, visits to neighborhood organizations, special events

- ✓ Direct contact: at the Library, at the Recreation Center, as citizens conduct business with the city, interaction between citizens and emergency services personnel

6. Planning & Zoning Department: The planning and zoning department has the following functions:

- ✓ Oversees the development of the City through the administration of the Comprehensive Zoning Ordinance and Subdivision & Development Ordinance Processes all zoning, specific use permit, site plan, variance, and platting requests.
- ✓ Makes recommendations for requests to the Planning & Zoning Commission, Zoning Board of Adjustment or City Council.
- ✓ Provides zoning information to the general public, business owners, and developers.

Other responsibilities of the Planning and Zoning Department include:

- ✓ Comprehensive Development Review
- ✓ Administration and Interpretation of the Comprehensive Zoning Ordinance and Subdivision and Development Ordinance
- ✓ Oversees Land Use Planning
- ✓ Provides Comprehensive Long-Range Planning
- ✓ Implements City's Comprehensive Plan
- ✓ Sets the Planning & Zoning and Board of Adjustment Agendas
- ✓ Updates Zoning Ordinance and Maps
- ✓ Publishes public notices and provides property owner notification for zoning change requests
- ✓ Reviews Plat Applications

7. DeSoto Police Department: The DeSoto Police Department provides a safe and secure environment for all citizens and visitors of DeSoto. The department consists of 70 sworn officers and 36 civilian personnel**.** The Desoto Police Department is comprised of eight (8) divisions. These divisions include:

- ✓ Animal Control
- ✓ Code Enforcement
- ✓ Criminal Investigation Division
- ✓ Patrol Division
- ✓ Property and Evidence Division
- ✓ Records Division
- ✓ Reserve Police Officers
- ✓ Special Units

Summary of Capabilities

The tables below identify the current capabilities in the City of DeSoto.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	City's Master Plan dictates public policy in terms of transportation, utilities, land use, recreation, and housing. It covers a broad range of topic and can be used to implement mitigation actions.
Capital Improvements Plan	Yes 2013-2014	A Capital Improvement Plan can serve as an important mechanism to guide future development away from identified hazard areas. Limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Economic Development Plan	Yes 2003	The development of the remaining undeveloped land in DeSoto offers the opportunity to achieve, through careful planning and guidance, the type of community and the quality of life the citizens of DeSoto deserve.
Local Emergency Operations Plan	Yes Annually	The EOP clarifies the preparedness, response, and short-term recovery planning in the city and address hazards that may threaten our community.
Continuity of Operations Plan	Yes	
Transportation Plan	Yes 2008	
Storm Water Management Plan	Yes 2008	
Community Wildfire Protection Plan	NO	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes	Debris Management Plan

Building Code, Permitting, and Inspections	Yes / No	
Building Code	Yes	**Version / Year:** 2009 International Building Codes 2009 International Residential Code 2009 International Plumbing Code 2009 International Mechanical Code 2011 National Electric Code 2009 International Energy Conservation Code 2009 International Fuel Gas Code 2009 International Fire Code
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	**Score:** 3
Fire Department ISO rating	Yes	**Rating:** 2
Site Plan review requirements	Yes	
Land Use Planning and Ordinances	**Yes / No**	**Is the ordinance an effective measure for reducing hazard impacts?** **Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Ordinance is an effective measure reducing hazards.
Subdivision ordinance	Yes	Ordinance is an effective measure reducing hazards.
Floodplain ordinance	Yes	Ordinance is an effective measure reducing hazards.
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	
Flood insurance rate maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Administrative and Technical: To help identify the administrative and technical capabilities available in the jurisdiction

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	DeSoto Planning and Zoning Board
Mitigation Planning Committee	Yes	Hazard Mitigation Team involves the public and stakeholders and coordinate mitigation policy and actives.
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	
Mutual aid agreements	Yes	Ellis Dallas Unified Cooperative Team (EDUCT) Inter-jurisdictional Mutual Aid Agreement between cities in the south region of Dallas County.
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/ FT	Staffing is adequate to enforce regulations. Good coordination between agencies and staff
Floodplain Administrator	Yes/FT	Staffing is adequate to enforce regulations, Floodplain Administrator trained on hazards and mitigation. Coordination between agencies and staff is effective.
Emergency Manager	Yes/FT	Trained on hazards and mitigation. Good coordination between agencies and staff
Community Planner	Yes/FT	Good coordination between agencies and staff
Civil Engineer	Yes/FT	
GIS Coordinator	No	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Outdoor Warning System and Mass Emergency Notification System
Hazard data and information	No	
Grant writing	Yes	Individual departments apply for grants
HAZUS analysis	No	NCTCOG
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial: To help identify what funding resources the city has access to for the purpose of hazard mitigation

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Street/Drainage improvements water pump stations, debris clearing for Ten Mile Creek
Authority to levy taxes for specific purposes	Yes	Property Improvement District (PID) could be used to fund future mitigation actions
Fees for water, sewer, gas or electric services	Yes	
Impact fees for new development	Yes	
Storm water utility fee	No	
Incur debt through general obligation bonds and/or special tax bonds	Yes	
Incur debt through private activities	Yes	Certificate of Obligation could be used for future mitigation action
Community Development Block Grant	Yes	
Other federal funding programs	Yes	Citizen Corp and Assistant Firefighter Grant
State funding programs	Yes	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Identify more funding resources to fund future mitigation actions. This would allow for effective mitigation actions and reduce risk		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Civic Academy, Citizen Emergency Response Team,(CERT) Cops on Patrol (COPs)and Medical Reserve Corp (MRC) are just a few organization that could help with future mitigation activities
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Prevention/Safety, KnoWhat2Do Disaster Preparedness. Keep DeSoto Beautiful, Xeriscaping Water Conservation, Crime Prevention and Safety program.
Natural disaster or safety related school programs	Yes	Fire Prevention Week, Emergency Preparedness Awareness program.
StormReady certification	Yes	StormReady provides emergency managers with clear-cut guidelines on how to improve their hazardous weather operations.
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		✓
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?		✓
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?	✓	

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	✓	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	196 NFIP Policies $ 28,539,600 premium and coverage
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	95 claims paid $15,45,990 amount claims paid Substantial damage 8
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	N/A
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	No
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Engineering capability, permit review and inspections.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Staffing and funding are barriers
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		May 2013
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	Initial FHBM Identified 8/2/74 Initial FIRM Identified 5/5/81
Are the FIRMs digital or paper?	Community FPA	Digital and Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Regulations meet the state requirement through Zoning Ordinances, Building Codes that are implemented.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	A permit is required before construction or development begins within any Special Flood Hazard Area (SFHA). Permits are required to ensure that proposed development projects meet the requirements of the NFIP and the city's floodplain management ordinance.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No, Community Rating System is a voluntary incentive program.
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of DeSoto HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of DeSoto are as follows:

High Risk (over 65% on HIRA)	Extreme Heat High Winds Tornado
Moderate Risk (41%- 65% on HIRA)	Hail Lightning Wildfire Flooding Drought Winter Storms
Low Risk (12 %-40% on HIRA)	Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	Dam/Levee Failure

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan, i.e., tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of DeSoto. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in DeSoto**.**

A. Flood: As discussed in the capabilities section above the City of DeSoto adopted Floodplain Management regulations in the 1980s. Since then the City of DeSoto has established criteria and standards to govern the use of natural streams and flood plains and to serve as guidelines for the development of man-made drainage facilities and improvement of natural channels. The city's method of reducing flood losses is to prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other land.

Floodplains in the city are controlled by a Flood Damage Prevention ordinance passed by the DeSoto City Council on March 16, 1987. The City of DeSoto Drainage Master Plan and Drainage Design and Storm Water Pollution Prevention Manual were adopted by ordinance September 2001. Included in the scope of Drainage Master Plan was a hydraulic study of all tributaries to Ten Mile Creek. A 100-year flood level was established through this study of all tributaries. This study insures that no structures will encroach in stream areas as the City of DeSoto continues to develop.

Ten Mile Creek and tributaries have provided the community along its stream banks with a pleasant amenity. The area surrounding Ten Mile Creek and Spring Creek is made up of made up of primarily of residential areas. After the May 17, 1989 Ten Mile Creek Flood, a Corps of Engineers project widened the Ten Mile Creek Channel at the Hampton Road Bridge to reduce the likelihood of future flood damage.

In June of 2000 DeSoto experience moderate flooding along Ten Mile Creek. Since then the Ten Mile Creek has drainage improvements have been carried out along Brookview Drive, the alley of Brookview Drive to help to carry and contain storm waters caused by heavy rains resulting in flooding of homes.

Both sides of Woodhaven Drive and north side of Ten Mile Creek Drive have experience flooding. Based on past flood history, approximately 39 housing units would be at risk from flooding along Ten Mile Creek. In the past heavy rains have resulted in a localized flooding event in Wolf Creek subdivision. This has led to drainage improvements of upsizing the existing storm drain pipes, building a dirt barrier north of the Wolf Creek addition and constructing a detention pond just north of the Wolf Creek subdivision.

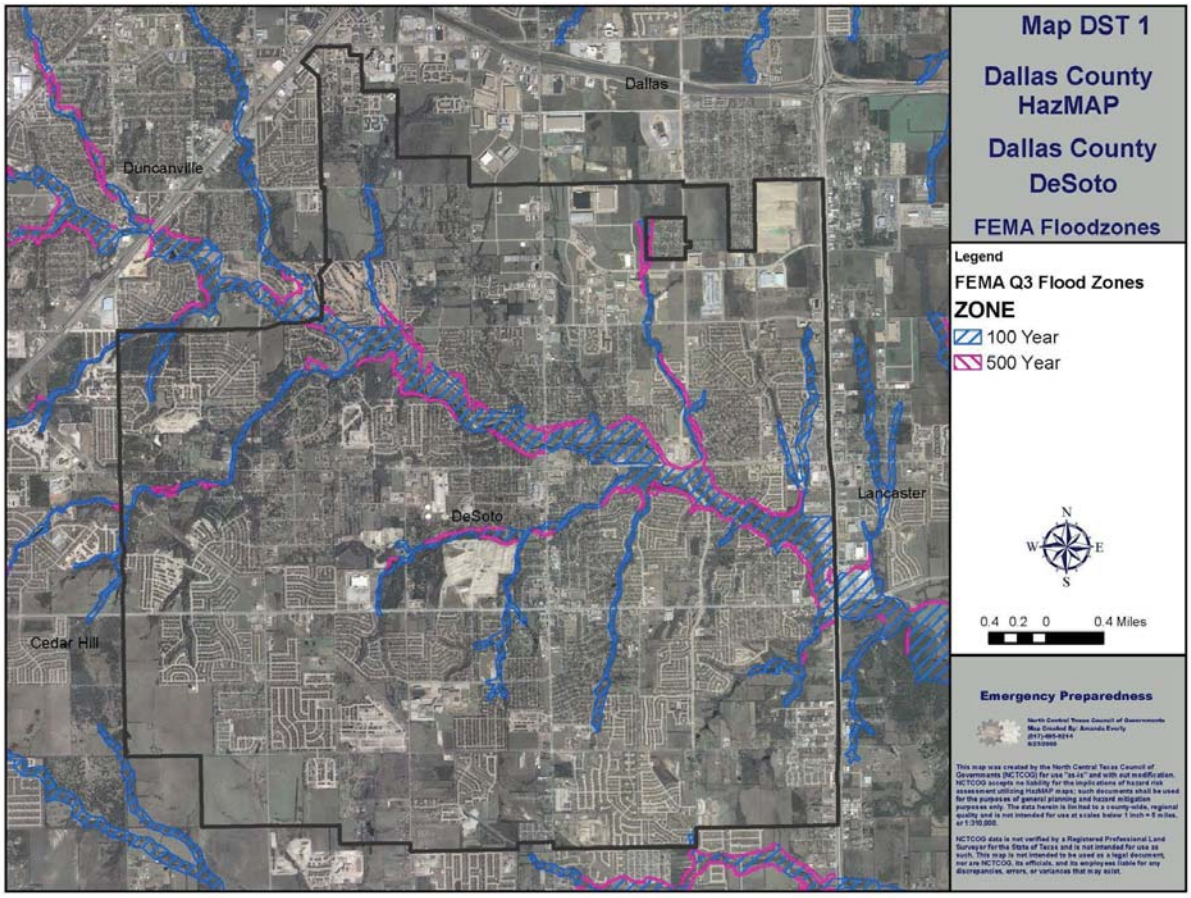
The City of DeSoto developed the Drainage Design and Strom Water Pollution Prevention Manual. This manual establishes criteria procedures and data for drainage evaluation to ensure the adequacy of new drainage facilities. The intent is to minimize potential negative drainage impacts caused by development. The city mitigation goals and long-term strategies are to reduce the likelihood of structural flooding by eliminating development within the floodplain and provide onsite detention of storm water runoff. It is the policy of the city to limit development or fill in the 100-year floodplain. **Map DST1** Depicts the 100 and 500 year designated flood zone for the City of DeSoto.

The City of DeSoto participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. According to the Texas Water Development Board there are 9 properties that are considered repetitive loss or severely repetitive loss properties. See Table 5.8.1

DeSoto	Years	Properties	Number of losses	Payments
Single Family	1981, 1983, 1985, 1986, 1987, 1989, 1992, 1999, 2000, 2001,	8	20	$222,002.98
Other Residential	2000, 2004	1	2	$81,526.28
Non Residential	-	-	-	-
Total		**9**	**22**	**$303,529.26**

Using this plan the City of DeSoto will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

Map DST 1: City of DeSoto Floodplain Map

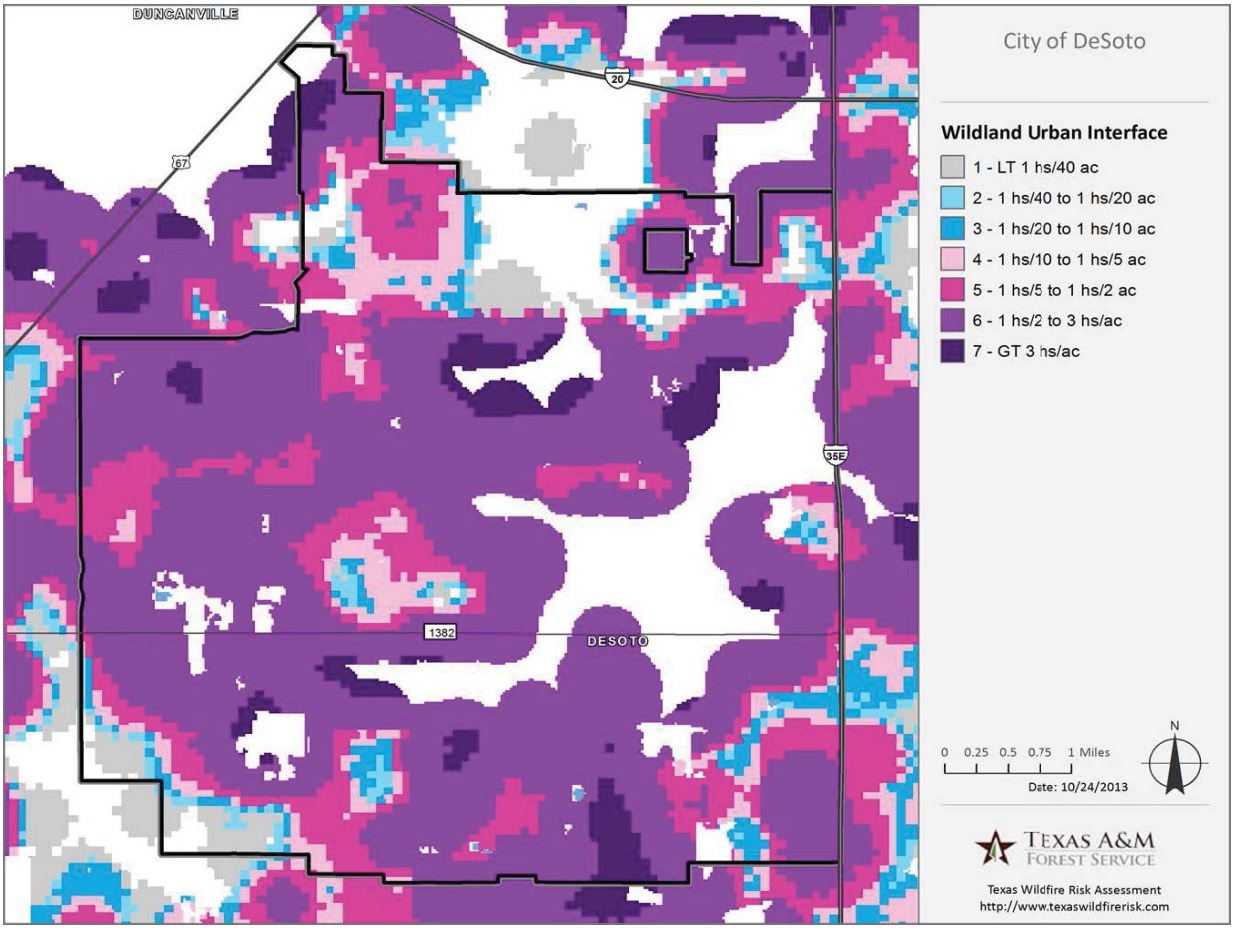


B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 32,343 people or 72 percent of the total population of the City of DeSoto live within the WUI.

Map DST 2 below depicts the WUI for the City of DeSoto.

Map DST 2: City of DeSoto WUI



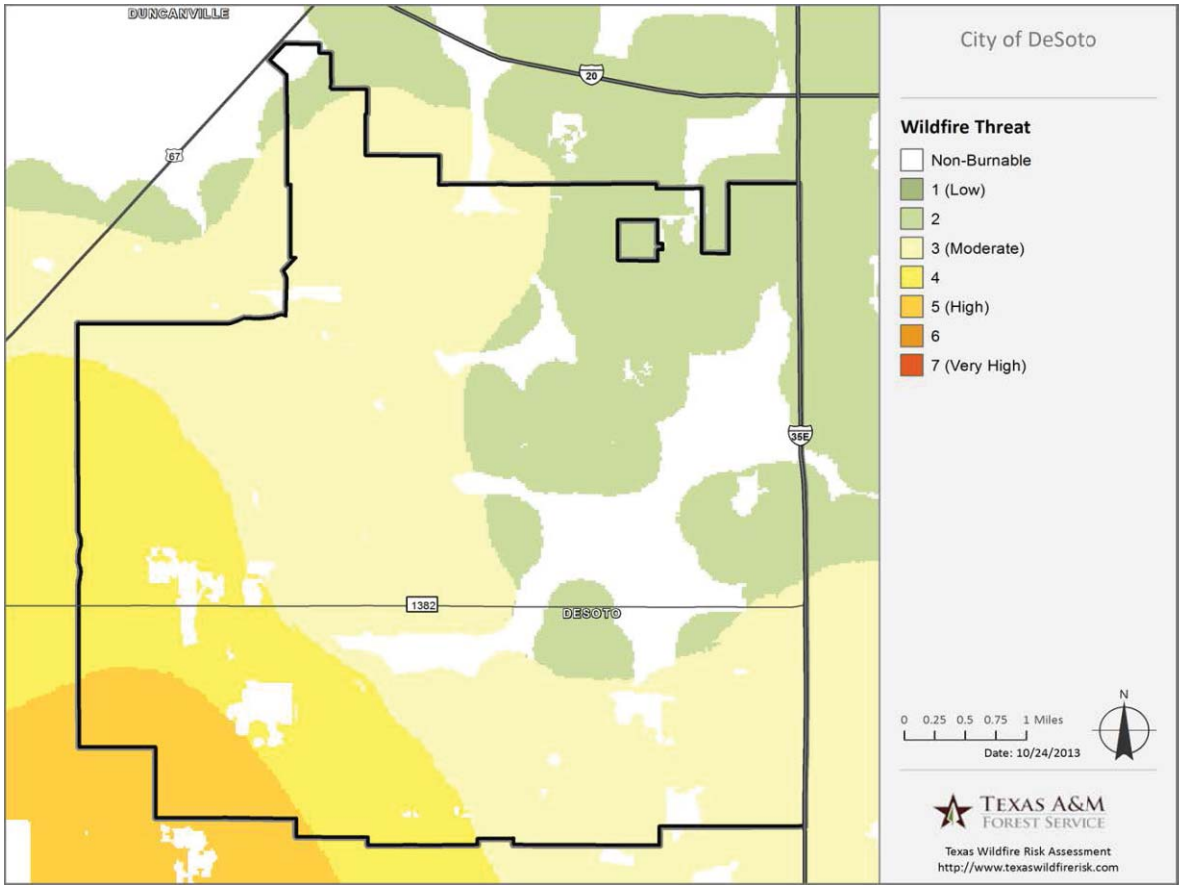
A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of DeSoto ranges from Non-Burnable to High. Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations,

and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat. The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map DST 3: City of DeSoto Wildfire Threat



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of DeSoto as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults and no historical data of earthquakes in the City of DeSoto. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly

E. Stream Bank Erosion: The City of DeSoto is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the City of DeSoto. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of DeSoto. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in DeSoto. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in DeSoto.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in DeSoto.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in DeSoto.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of DeSoto due to winter storm events. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in DeSoto are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in DeSoto are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in DeSoto are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of DeSoto is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of DeSoto. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in DeSoto are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in DeSoto are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in DeSoto are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of DeSoto have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of DeSoto. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in DeSoto are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in DeSoto are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in DeSoto are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of DeSoto. All the population of City of DeSoto is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $1 Million in property damages were reported from tornados in the City of DeSoto during the period under review. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in DeSoto are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in DeSoto are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in DeSoto are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of DeSoto is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of DeSoto. All property, new, improved and existing property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for DeSoto indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in DeSoto are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in DeSoto are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of DeSoto are exposed to this hazard.

Wildfire	
Population	Based on geographical data 72% of the population in City of DeSoto who live in the WUI areas are ex[posed to this hazard.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All new, improved and existing properties in the WUI areas are exposed to this hazard.
Emergency Facilities	Based on geographic information the no fire stations and city administration facilities have a moderate threat of wildfire.
Critical Facilities	Based on geographic information there no schools are at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges or dams are at risk from wildfire events. However the wastewater treatment/water treatment facility has a moderate threat of wildfire

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the City of DeSoto area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	0 % of railways/highways and bridges, 0 % of dams, 0 % of water treatment works, and 0 % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

Changes in Population and Development

The City of DeSoto was a participant in the last Dallas County Hazard Mitigation Action Plan. The table 3.1 shows that the estimated growth in population for the City of DeSoto was from 49,047 to 50,520 an increase of 3 %. There were 951 new residential housing developments and 49 new commercial developments between 2008 and 2014. Major structural and economic development, include warehouse and industrial business park facilities. These developments total to over 2.6 million square feet. No new developments have been built in floodplains.

To help mitigate the impacts of the hazards identified the city has identified varies mitigation strategies to lower the vulnerability on the population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stricter rules and regulations such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

Essential Infrastructure Summary Report for the City DeSoto Texas

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals		0
Schools DeSoto ISD		13
• Elementary	32.584196,-96.891217 32.584915,-96.833733 32.600338,-96.867332 32.610943,-96.845726 32.576900,-96.853264 32.607895,-96.830132	7
• Middle	32.602242,-96.872444 32.592068,-96.844353 32.563408,-96.881569	3
• High School	32.579994,-96.869797 32.580317,-96.874076	2
• Alternative Education Program	32.599250,-96.874150	1
Police Station	32.588028,-96.842522	1
Fire Stations		3
Station 261	32.620983,-96.846252	
Station 262	32.588894,-96.857933	
Station 263	32.604310,-96.891341	
Emergency Operations Facilities		4
DeSoto Town Center	32.605511,-96.854912	
DeSoto Service Center	32.600759,-96.874529	
Pump Station N Westmoreland Road	32.600517,-96.874166	
Pump Station Bulton Boone	32.633097,-96.878461	

Structure/Property and Flood Vulnerability

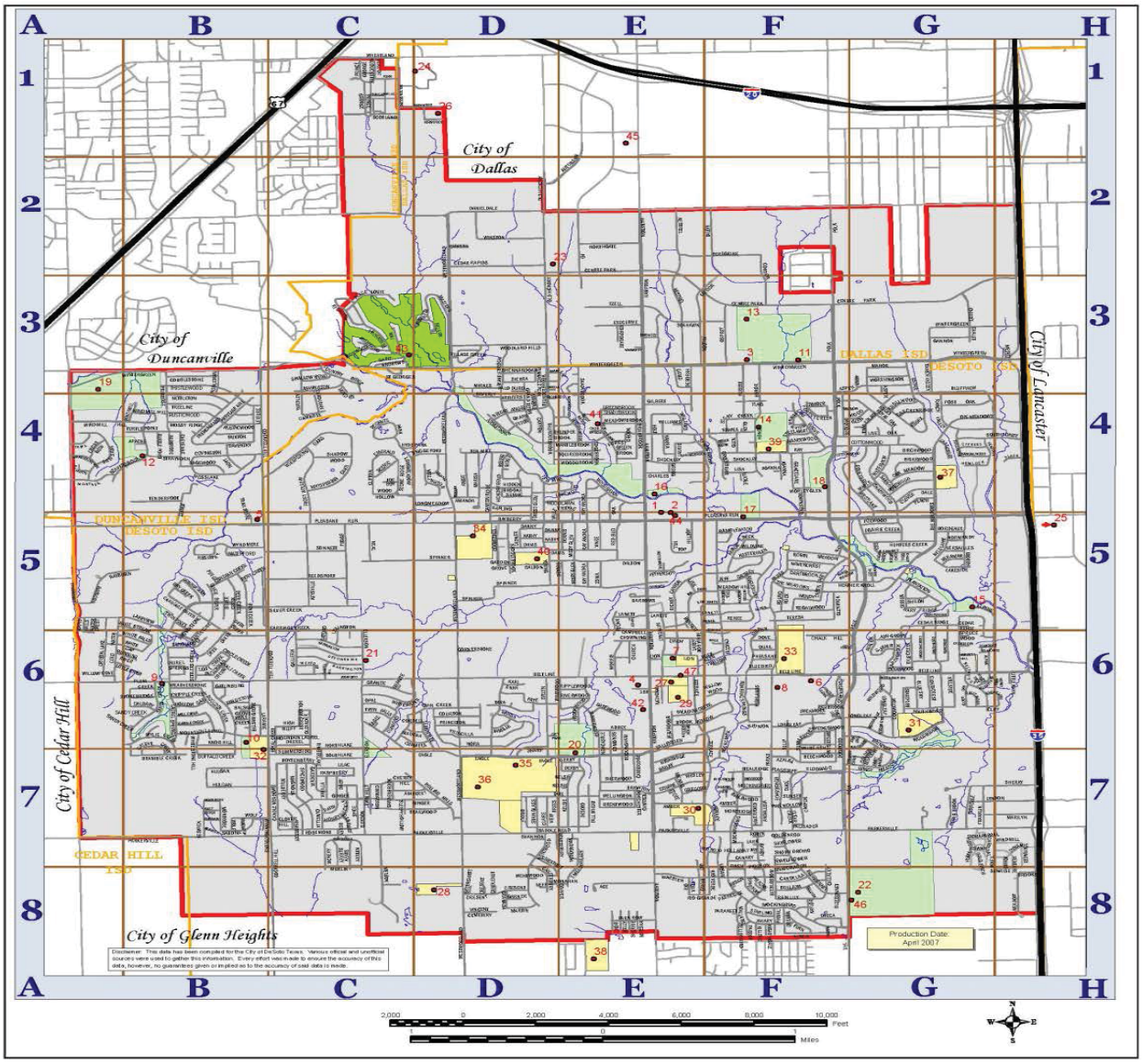
Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	$7,406,971	100	Within
Residential	$563,170	500	Within
Commercial	$3,057,340	100	Within
Commercial	$1,390,220	500	Within
Industrial	N/A	N/A	N/A
Government / Public	N/A	N/A	N/A

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$1,386,062,566	Within	Within	Low and Moderate
Commercial	$355,660,655	Within	Within	Low and Moderate
Government / Public	$ 25,521,260	Within	Within	Low and Moderate

Map DST4 depicts the location of several of the city facilities identified below.

Map DST 4: City Facilities



City of DeSoto, Texas

CITY OF DESOTO • POINTS OF INTEREST

City Facilities

1 Town Center
- Chamber of Commerce ..... (972) 224-3565
- City Hall ..... (972) 230-9600
- Civic Center/Banquet Rooms ..... (972) 230-9650
- Corner Theatre ..... (972) 230-4288
- Public Library ..... (972) 230-9656
- Recreation Center ..... (972) 230-9655

2 Municipal Court ..... (972) 230-9673

3 Fire Station #261/Central ..... (1) (972) 230-5801
501 E. Wintergreen

4 Fire Station #262 ..... (2) (972) 230-5720
105 First Street

5 Fire Station #263 ..... (3) (972) 230-5730
1301 W. Pleasant Run Rd.

6 Police Department ..... (469) 658-3000
714 E. Belt Line Rd.

7 Senior Citizen Center ..... (972) 230-5825

8 Regional Comm. ..... (972) 223-6111

Area Parks

9 Briarwood Park - 1600 W. Beltline Rd., DeSoto

10 Cockrell Hill Park at Cockrell Hill Elementary

11 Grimes Park ..... (972) 228-2255
500 E. Wintergreen, DeSoto

12 Kiva Park - Ten Mile Creek Estates, 1155 Beaver Brook Lane

13 DeSoto BMX Facility ..... (972) 224-6664
600 E. Wintergreen, DeSoto

14 Mosley Pool/Park ..... (972) 228-3553
1300 Honor Dr., DeSoto

15 Murphy Hills Park - 500 Alpine St.

16 Roy Orr Nature Trails (begins behind Town Center)

17 Ernie Roberts Park - 515 E. Pleasant Run

18 Townsend Park - 1001 Polk St., DeSoto

19 Windmill Hill Nature Preserve (SW corner of Duncanville and Wintergreen Roads) - 1450 Duncanville Rd.

20 Zeiger Park - 400 Eagle Dr., DeSoto

21 Elerson Rd. Park - 250 North Elerson Rd.

22 Meadow Creek Football Complex - 1400 Uhl Rd.

Medical Facilities

23 Cedars Hospital (Psychiatric) ..... (972) 298-7323

24 Charlton Methodist Hospital ..... (214) 947-7777

25 Medical Center at Lancaster ..... (972) 223-9600

26 Select Specialty Hospital ..... (972) 572-6357

Schools

27 DeSoto ISD Instructional Support Center ... (972) 223-6666

28 Agricultural Complex ..... (972) 223-3873

29 Alternative Education ..... (972) 223-2242

30 Amber Terrace Elementary ..... (972) 223-8757

31 Woodridge Elementary ..... (972) 223-3800

32 Cockrell Hill Elementary ..... (972) 230-1962

33 DeSoto East Middle ..... (972) 223-0690

34 DeSoto West Middle ..... (972) 230-1820

35 DeSoto High School ..... (972) 230-0726

36 DHS Freshman Campus ..... (972) 274-1818

37 Meadows Elementary ..... (972) 224-0960

38 Moates Elementary ..... (972) 230-2881

39 Northside Elementary ..... (972) 224-6709

40 Ruby Young Elementary ..... (972) 223-6505

Other

41 Nance Farm (Historical Site) - 1325 Greenbrook, DeSoto

42 Post Office ..... (800) 275-8777
229 S. Hampton, DeSoto ..... (972) 223-1011

43 Thorntree Country Club ..... (972) 296-2146
825 W. Wintergreen, DeSoto (Private)

44 DEDC - DeSoto Economic Devel. ..... (972) 230-9611
211 E. Pleasant Run Rd.

45 University of North Texas System Center at Dallas ..... (972) 228-8100

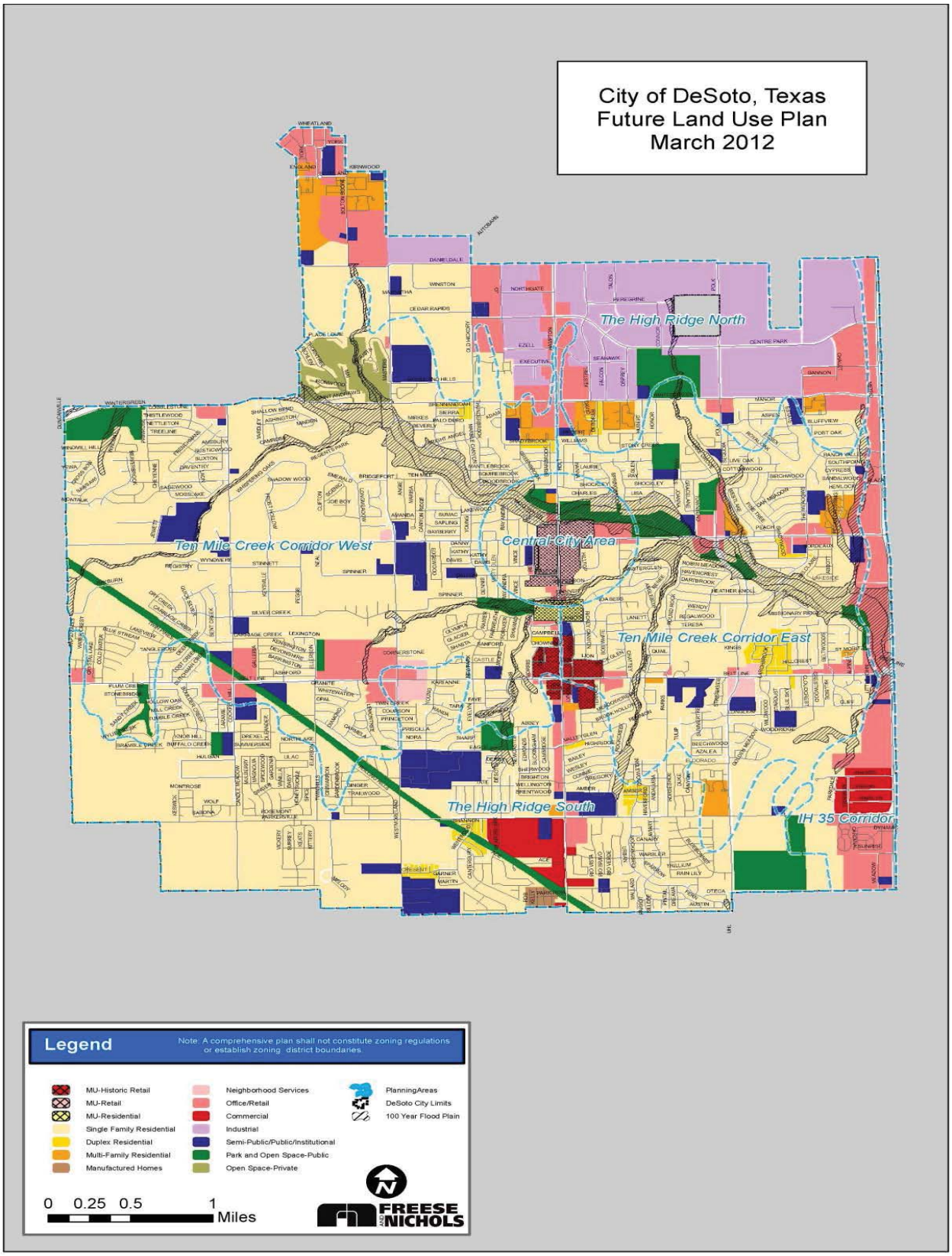
46 Meadow Creek Park

47 Joint Tax Office ..... (972) 223-6400

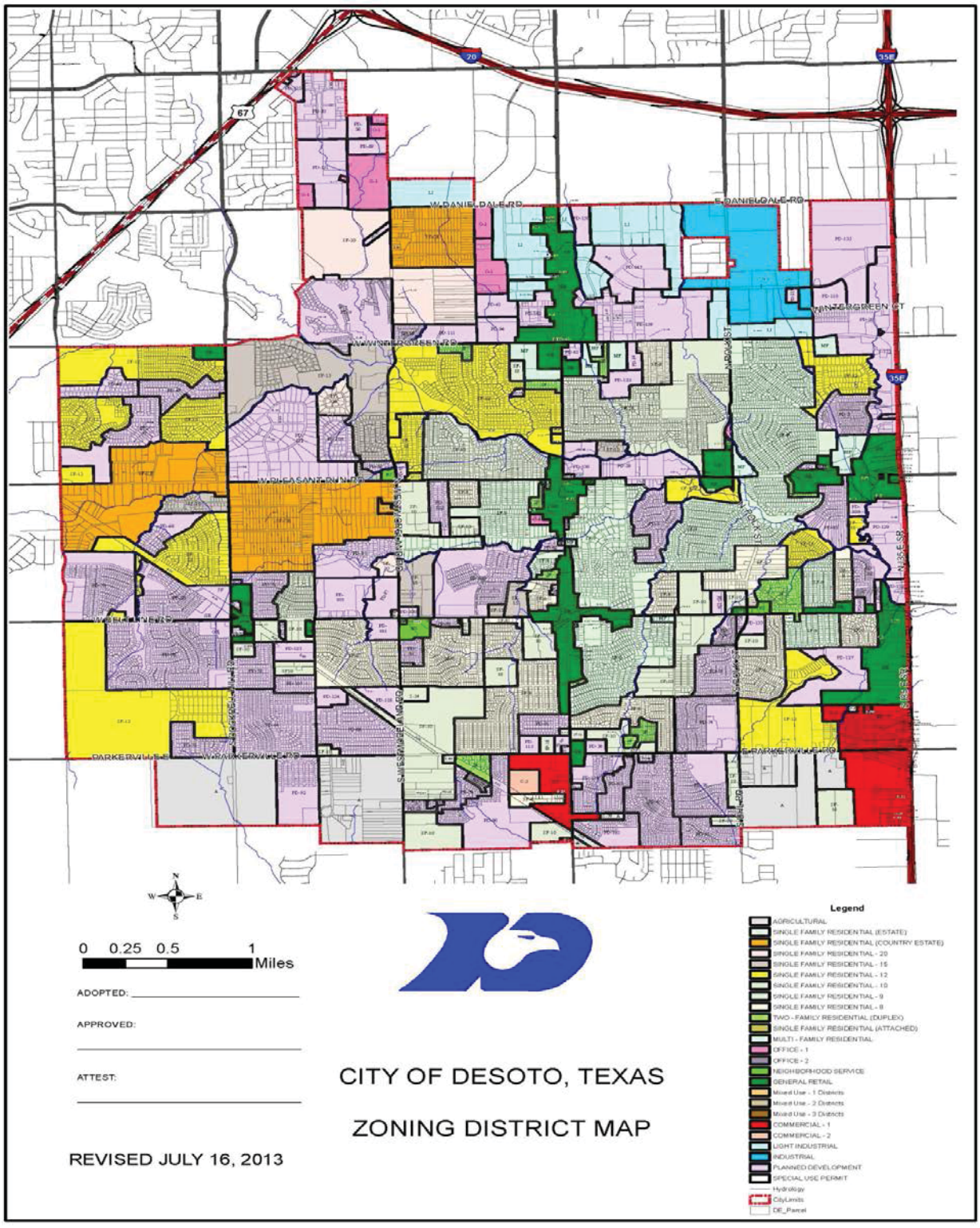
Land Use: The Future Land Use Plan for the City of Desoto illustrates the desired pattern of growth for the foreseeable future. It is intended to guide public and private decision making for development and redevelopment in the City for the next several years. For purpose of this plan, the future Land use Plan assists in decision making in incorporating hazard mitigation planning activities for the city. **Map DST 5** depicts the future land use for the City of DeSoto.

Zoning Districts: Zoning is a form of land use control permitted by both the federal and state governments. According to the Texas Local Government Code, there is a requirement that zoning be in conformance with the comprehensive plan. When a zoning change is requested, the first step in considering the change is to determine what the Future Land Use Plan indicates as the appropriate use of the property. If the use differs substantially, the request should be denied. To grant the requested change would require that the Future Land Use Plan be amended before the zoning change could occur. This requires careful consideration to be sure that the change is in accordance with the principles, goals and objectives of the future land use element of the comprehensive plan. The use of the Future Land Use Plan in decision-making relating to zoning and subdivision approvals is to ensure that development and redevelopment are consistent with the city's comprehensive plan. Each new development or redevelopment should be reviewed for general compliance to the comprehensive plan. **Map DST 6** depicts the Land Use Map for the City of DeSoto as of July 2012.

Map DST 5: Future Land Use for the City of DeSoto



Map DST 6: Zoning District Map for the City of DeSoto



Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of DeSoto

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

DeSoto Action Item	Install a combined technology of structural protection devices (lightning rods) and grounding minimize lightning damage to critical facilities and emergency communications infrastructure.
Hazard(s) Addressed	Lightning
Goal/Objective	2-D
Priority(High, Medium, Low)	Medium
Estimated Cost	$50,000
Potential Funding Sources	City Budget
Lead Department	Parks and Recreation Department
Implementation Schedule	Within 1-2 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The benefits outweigh the cost
Discussion	The purchase of this equipment could save lives by providing the early warning of the possibility of lightning in the immediate area and increase public safety during outdoor activities.

DeSoto Action Item	Reduce Urban Heat Island Effect by distributing cool roof products to home owners that reflect sunlight and heat away from buildings
Objective(s) Addressed	1-A
Hazard(s) Addressed	Extreme Heat
Priority(High, Medium, Low)	Low
Estimated Cost	TBD
Potential Funding Sources	Homeowners
Lead Agency/Department Responsible	Public Works Department, Building Inspections Department
Implementation Schedule	2 years after approval of initiative
Effect on Old Buildings	Buildings will be required to meet the new standards
Effect on New Buildings	Buildings will be required to meet the new standards
Cost Effectiveness	The benefits outweigh the cost
Discussion	The use of this technics will not only conserve energy but will also mitigate the effects of extreme heat

DeSoto Action Item	Install lightning prediction system in Mosely Park and Grimes Park to provide early warning of the possibility of lightning in the immediate area and increase public safety during outdoor activities.
Hazard(s) Addressed	Lightning
Goal/Objective	2-D
Priority(High, Medium, Low)	Low
Estimated Cost	$20,000
Potential Funding Sources	City Budget
Lead Department	Parks and Recreation Department
Implementation Schedule	Within 1 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The benefits outweigh the cost
Discussion	The purchase of this equipment could save lives by providing the early warning of the possibility of lightning in the immediate area and increase public safety during outdoor activities.

DeSoto Action Item	Improve and increase the capacity of storm-water system by extending the Ten Mile Creek downstream channel
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Priority(High, Medium, Low)	Medium
Estimated Cost	$2,000
Potential Funding Sources	City Budget, Capital Improvement Plan
Lead Agency/Department Responsible	Development Service Department, Engineering Department
Implementation Schedule	24 months upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The benefits of this program exceed the cost associated with flooding of this affected areas
Discussion	Improving the storm-water capacity along the Ten Mile Creek areas will minimize future flooding and increase the capacity of storm drainage system that involves Ten Mile Creek.

DeSoto Action Item	Adopt and enforce new building codes for construction of storm shelters and safe rooms in existing and new construction recreational, institutional and commercial buildings
Hazard(s) Addressed	Tornadoes, high winds
Goal/Objective	1-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Building Inspections Department
Implementation Schedule	Within one year of funding and approval
Effect on Old Buildings	None
Effect on New Buildings	New building will be required to meet the new standards
Cost Effectiveness	The benefits are much more than the cost
Discussion	Adopting and enforcing new building codes will mitigate the damages and injuries as a result of severe winds and tornados

DeSoto Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority(High, Medium ,Low)	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	City Budget, Donations
Lead Department	Fire Department - Office of Emergency Management and Public Relations Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

DeSoto Action Item	Incorporate of drought tolerant, fire resistant and xeriscaping practices for existing and new city facilities. This program will also be expanded to include residential areas through regulatory and incentive measure mitigate the risk. The program can also include installing water saving equipment in city facilities
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority(High, Medium, Low)	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget, Texas Agriculture Extension Service, DeSoto HOA Grant Program
Lead Department	Developmental Services, Utilities Billing Department
Implementation Schedule	Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire where applicable.

DeSoto Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies.
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority(High, Medium, Low)	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective.
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

DeSoto Action Item	Create a Weatherization Assistance Program to assist vulnerable populations and protect them from Extreme Temperatures/Heat.
Objective(s) Addressed	4-B
Hazard(s) Addressed	Winter Weather, Extreme Heat
Priority(High, Medium, Low)	Low
Estimated Cost	TBD
Potential Funding Sources	Private, Federal and State Grants, City Budget
Lead Agency/Department Responsible	Utility Billing Department, City Health Inspector Dallas County Health and Human Serves
Implementation Schedule	As funding is available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

City of DeSoto Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	DeSoto Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of DeSoto	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of DeSoto

Plan Maintenance

The City of DeSoto Department Fire Rescue Department through the Emergency Management Division will be responsible for ensuring that this plan is monitored on an on-going basis under the direction of the Emergency Management Coordinator (EMC).

The EMC will call the DeSoto Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of DeSoto	Fire Chief/Emergency Management Coordinator	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the DeSoto Administration. DeSoto's HMPT will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of DeSoto or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of DeSoto is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of DeSoto will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of DeSoto will engage stakeholders in community emergency planning.

The City of DeSoto's plans, studies, and improvements such as Fire and Building Codes, drainage improvements, Capitol Improvement Plans, Corps of Engineers studies, master drainage/storm water management plan, construction codes, permits, and flood plain management regulations will be used referenced in the updating of this plan. The plans will be used in the following ways:

- ✓ Assessing and evaluating mitigation goals already established within these plans and expounded on in the Dallas County HazMAP
- ✓ Creating Action Items from the goals identified in the goals identified above

- ✓ Creating Action Items as a result of a review of the various city plans and capability assessment gaps in order to support mitigation efforts currently being done in the City of DeSoto.

The planning integration tables below shows how this integration will be done.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of DeSoto	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	The City Manager and/or Water Utilities Superintendent	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting & Meeting Documentation

c. Complete Survey Results

d. References

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of DeSoto
Hazard Identification and Risk Assessment (HIRA)
Date: July 29, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	3	3	1	1	1	3	100%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	2	1	1	4	50%
Winter Storms	3	3	2	2	2	1	1	4	50%
Tornado	4	3	4	5	3	3	1	7	79%
Flooding	3	2	2	3	2	2	1	5	60%
Extreme Temperatures/Heat	4	4	4	4	3	1	2	6	66%
Wildfire	2	2	3	3	1	3	3	7	43%
Utility Failure									
Energy/Fuel Shortage	1	1	1	1	2	1	1	4	25%
Terrorist Attack	2	1	2	4	4	2	1	7	57%
Urban Fire	4	4	2	2	2	3	1	6	33%
Earthquake	2	1	1	2	1	2	2	5	40%
Levee/Dam Failure	1	1	1	1	3	3	3	9	11%
Drought	4	4	3	3	1	2	2	5	60%
Aircraft Accident	2	1	1	1	1	1	1	6	66%
Stream Bank Erosion	2	4	1	1	1	1	1	3	33%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

NB: This City of DeSoto HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

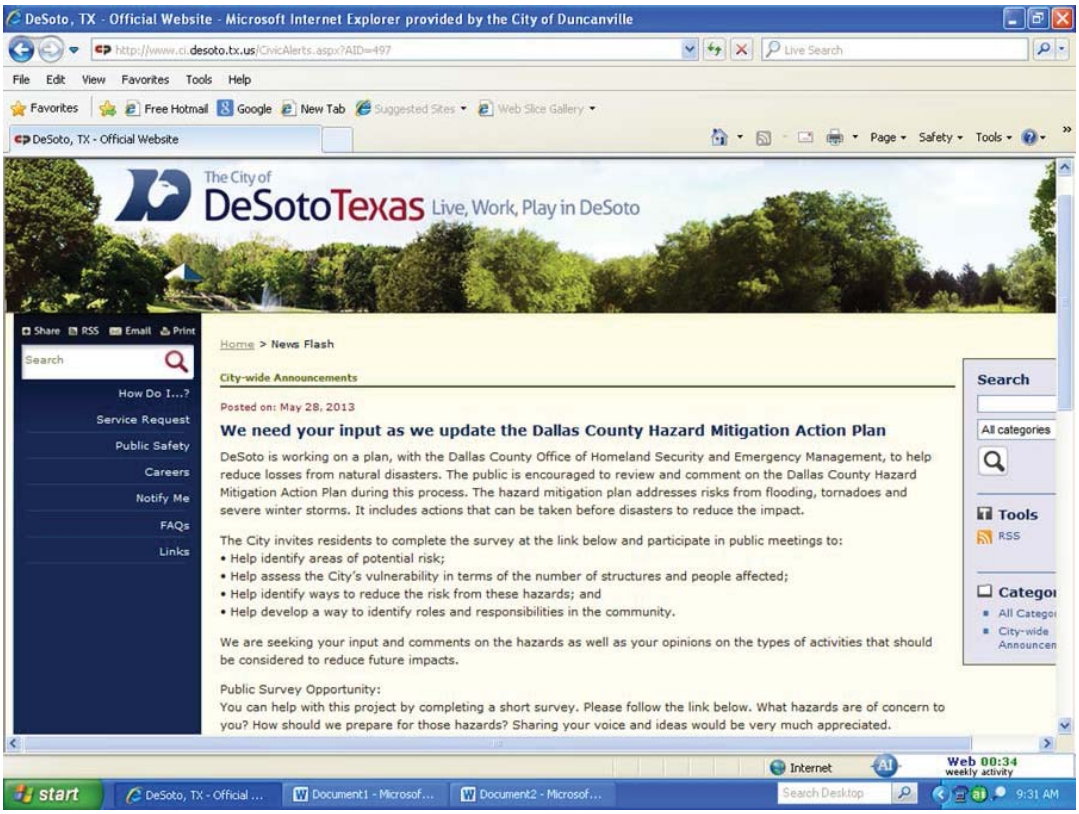
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix DST B-1: Meeting Documentation



CITY OF DESOTO, TEXAS - DALLAS COUNTY HAZARD MITIGATION ACTION PLAN WEBSITE PUBLIC INPUT



LOCAL MITIGATION STRATEGY PLANNING TEAM MEETING SIGN-IN SHEET

Jurisdiction:	City of DeSoto	Meeting Date:	11/19/2013
Facilitator:		Place/Room:	Conference Room

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
Kathleen Shields	HR Dir	City of DeSoto	972.230.9637	kshields@desototexas.gov
Karima Dash	911 Director	City of DeSoto	972-230-5053	Karima.dash@swicc.net
Crystal Owens	City Egr.	City of DeSoto	972-230-9672	cowens@desototexas.gov
Kisha Morris	City Secretary	City of DeSoto	972.230.9646	kmorris@desototexas.gov
Karen Kirby	IT Manager	city of DeSoto	972.230.9696	KKirby@desototexas.gov
Kathy Jones	Public Info Community Relations Mgr.	City of DeSoto	972-230-9648	kathy.jones@desototexas.gov
Tracie Hlavinka	Asst. to the City Mgr.	City of DeSoto	972-230-9689	thlavinka@desoto texas.gov
Isom Cameron	Public Utilities Director	DeSoto	972-230-9640	icameron@desototexas.gov
Jimmy Stephens	Environmental Health Mgr.	DESoto	972-230-9606	jSTEPHENS@desototexas.gov
Lucile Dade	Library	DeSoto	972-230-9658	ldade@desototexas.gov
Scott Kurth	Judge	DESOTO	972-230-9619	SKURTH@DESOTOTEXAS.GOV
M. [illegible]	Parks & Rec Coord.	DeSoto	972-230-9625	rjohnson@desototexas.gov
Joe Costa	Chief of Police	DeSoto	2146583000	JCOSTA@DESOTOTEXAS.GOV
Edena Atmore	Finance Director	City of DeSoto	972-230-9635	eatmore@desototexas.gov
Tarron Richardson	City Manager	" " "	972-230-9644	trichardson@desstotexas.gov



Dallas County Hazard Mitigation Action Plan Update

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

The Hazard Mitigation Action Plan Update for the City of DeSoto is intended as a blueprint for future hazard mitigation. This Plan Update is designed to help maintain a sustainable community that, when confronted by natural or man-caused disasters will sustain fewer losses and recover more quickly. The goal of the update is to minimize or eliminate long-term risks to human life and property from known hazards by identifying and implementing cost effective mitigation actions. The purpose of the update is to protect people and structures, and to minimize the costs of disaster response and recovery. The Plan Update will enable the city to take advantage of mitigation grant opportunities as they arise; and ensure that the City of DeSoto maintains its eligibility for the full range of future Federal disaster relief.

The plan will be available for public comment until January 24, 2014. All comments received by this date will be reviewed and considered.

From: Skyla Pellum
To: gabrielle.lemonier@desotoisd.org
Subject: City of DeSoto Hazard Mitigation Plan

Dr. Gabrielle Lemonier,

The City of DeSoto and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite DeSoto Independent School District to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Sincerely,

Skyla Pellum
Regional Emergency Management Administrator
Cedar Hill * DeSoto * Duncanville
Duncanville Fire Department
PO Box 380280
Duncanville, Texas 75138

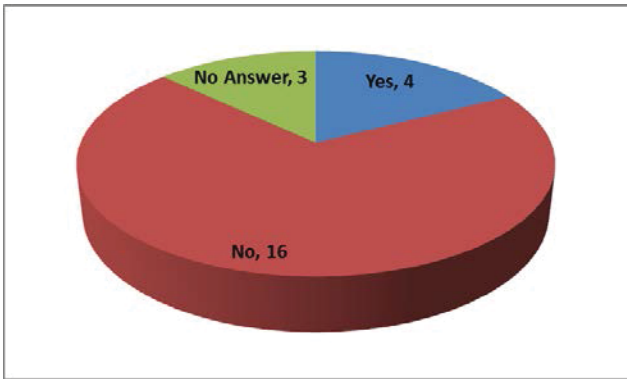
Office: 972.780.5054
Fax: 972.780.4928
spellum@ci.duncanville.tx.us

Appendix DST C-1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    - ✓ City of DeSoto (23 responses)

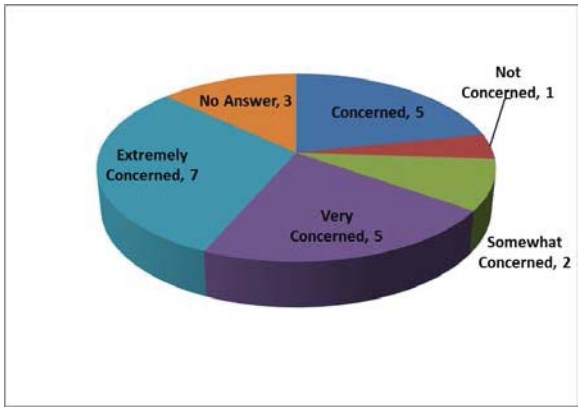
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

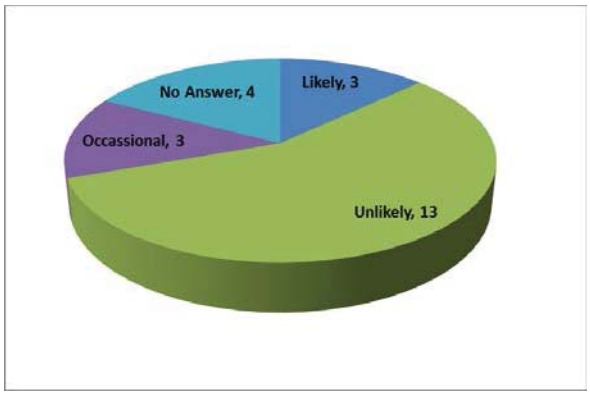
- ✓ "Residential flooding on 10 Mile Creek in DeSoto, TX – 1989. Several feet of water entered our home and we had to evacuate the house by crawling out a bedroom window, linking arms and walking to higher ground. The water was up to our armpits when we evacuated."
- ✓ "Tornadoes – DeSoto/Duncanville/Tulsa"
- ✓ "Hail Storm"
- ✓ "Roof damage, car port damage, patio damage"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

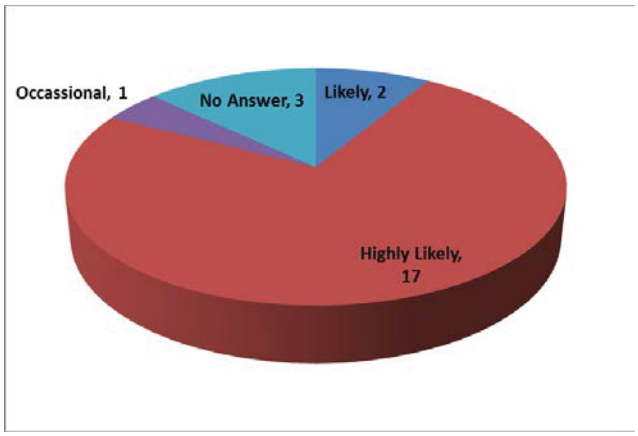


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

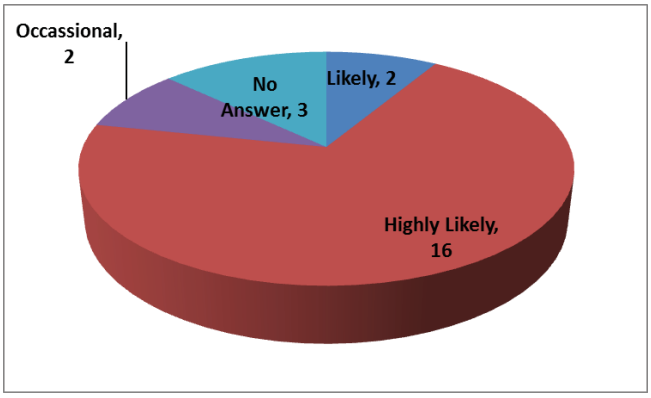
a. Earthquake



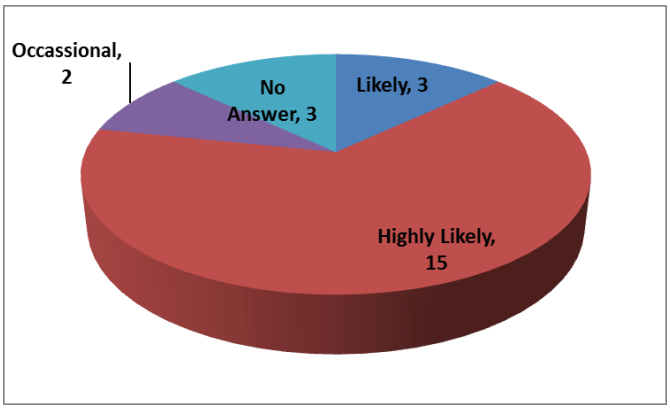
b. Tornado



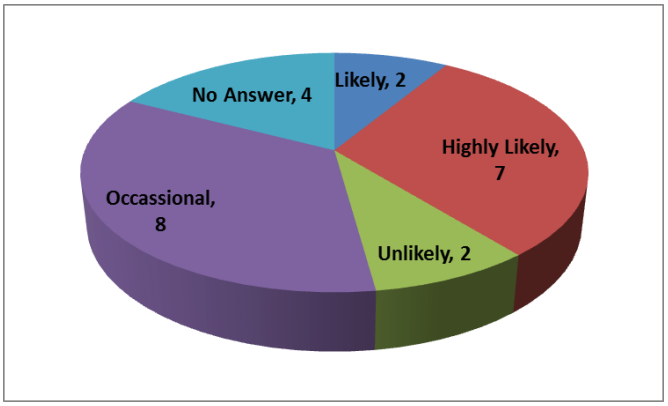
c. Hail



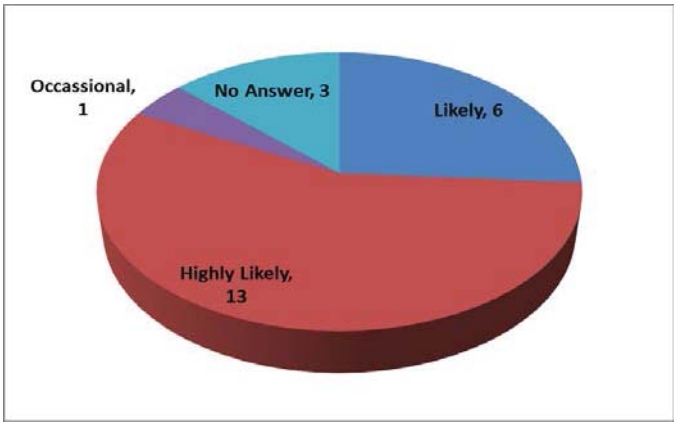
d. High Winds



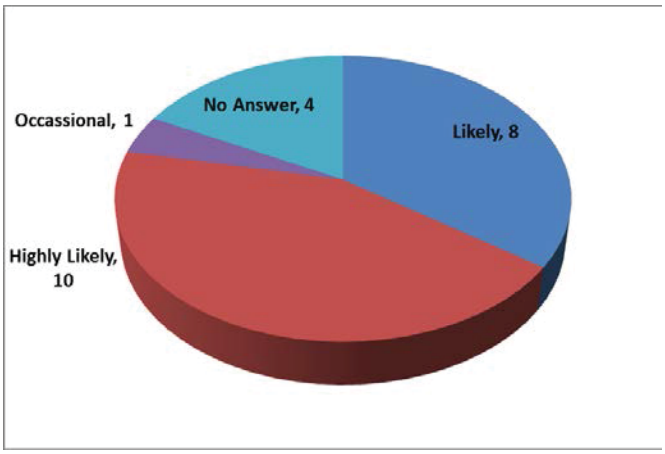
e. Winter Storms



f. Extreme Heat



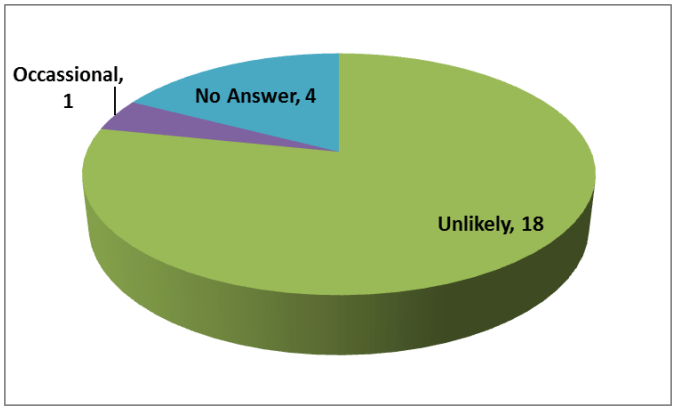
g. Drought



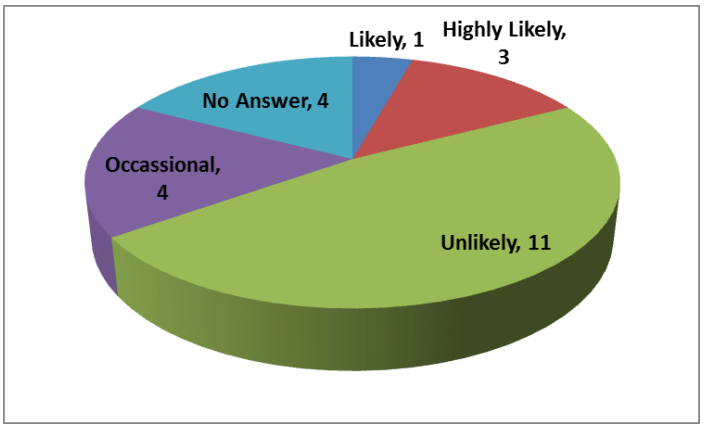
h. Flooding



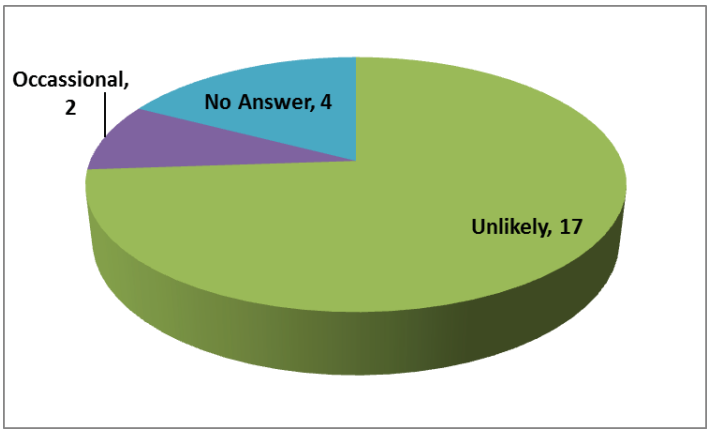
i. Dam Failure



j. Stream Bank Erosion

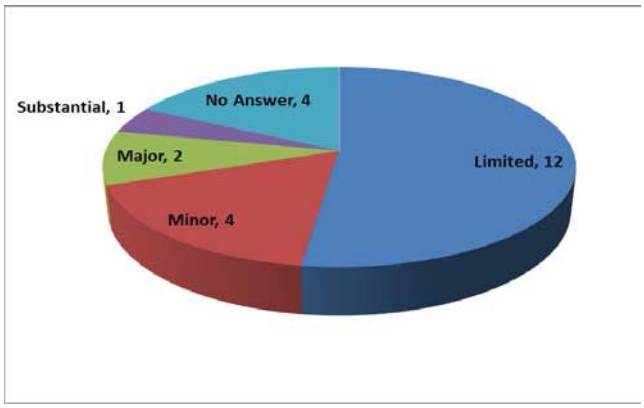


k. Levee Failure

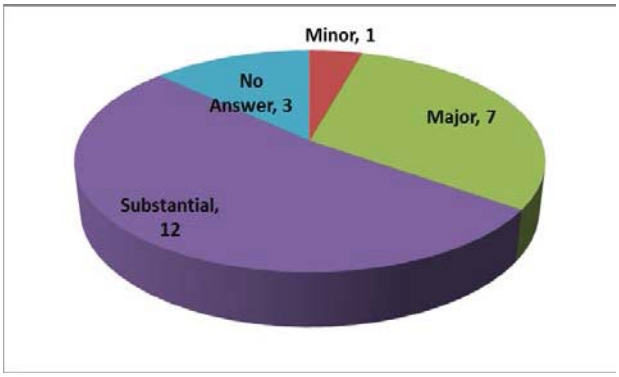


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

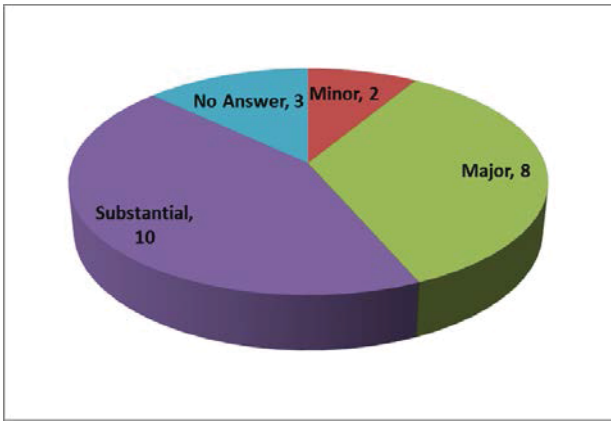
   a. Earthquakes



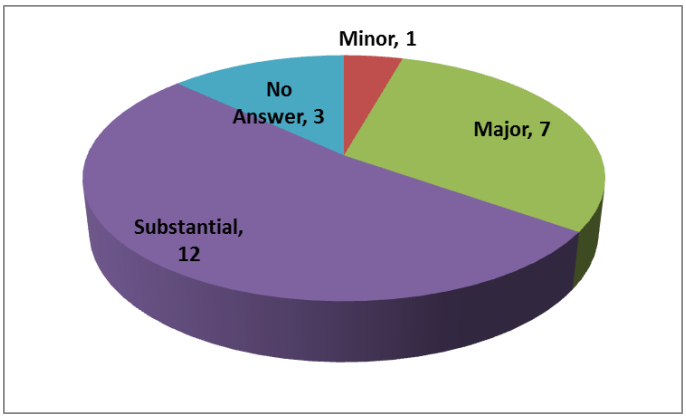
   b. Tornado



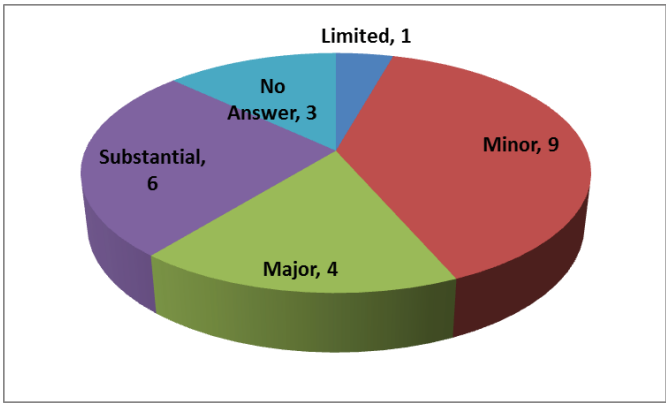
   c. Hail



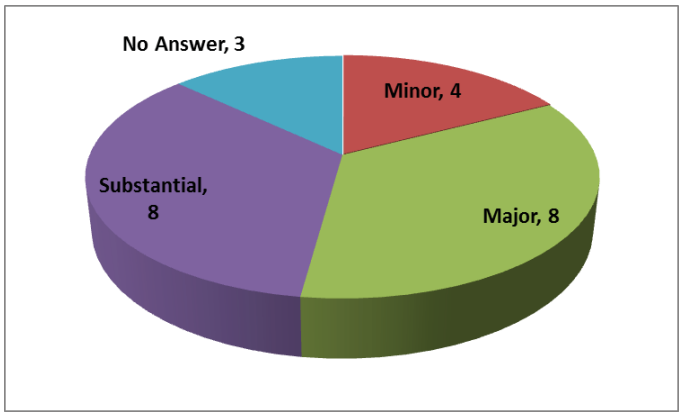
d. High Winds



e. Winter Storms



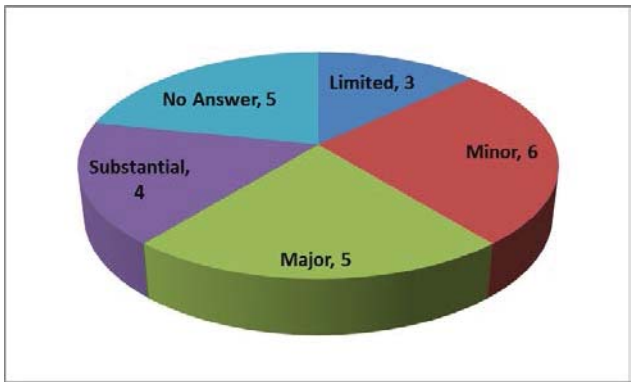
f. Extreme Heat



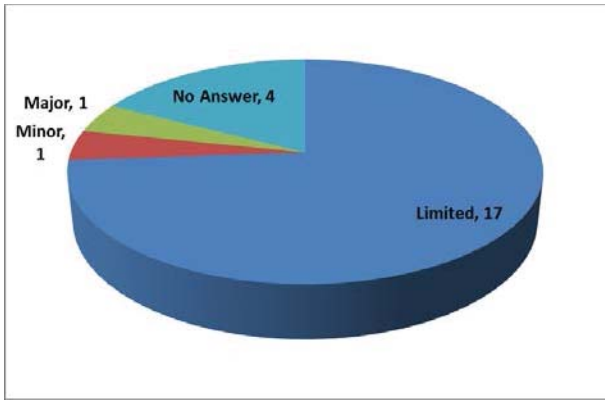
g. Drought



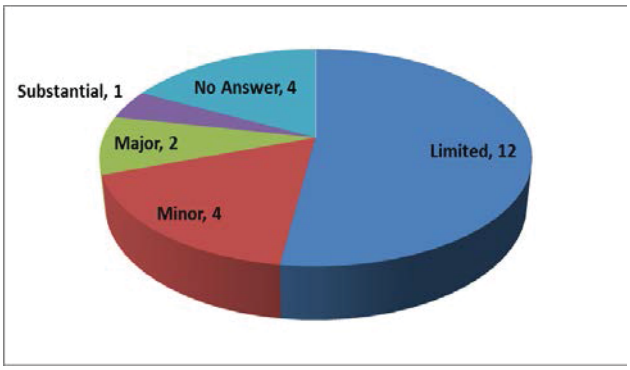
h. Flooding



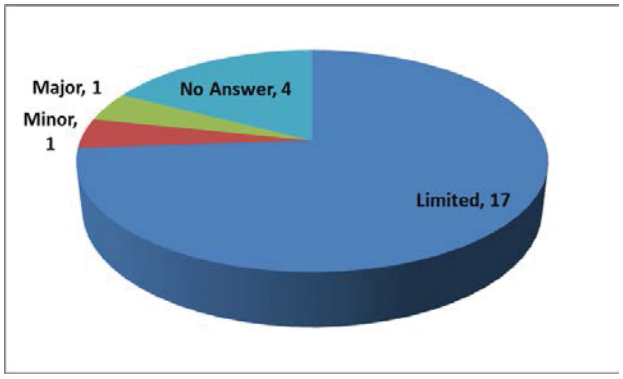
i. Dam Failure



j. Stream Bank Erosion

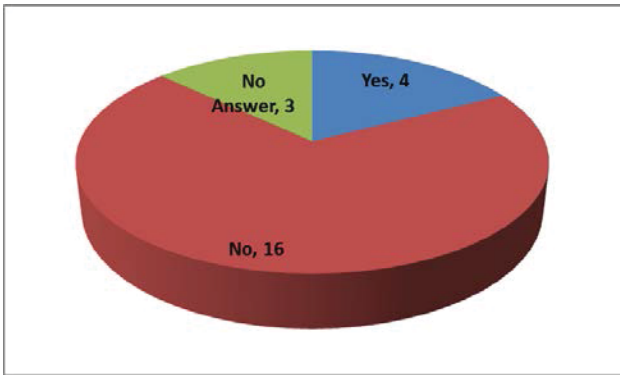


k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

a. Yes (4)
b. No (16)
c. Skipped (3)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

- ✓ "It is my opinion terroristic attacks are a real threat or hazard everywhere there are people. Terroristic threats could be of any severity and any type because terrorists seem to love the element of surprise."
- ✓ "Wildfires due to drought conditions: Likely; Impact: Medium. Spills of hazard material on freeways; Likely; Impact: High."
- ✓ "Chemical/hazardous material transportation on I35."

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	6
Improve, adopt and enforce building codes:	8
Implement the Texas Individual Tornado Safe Room Rebate Program:	17
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	14
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	5
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	12
Coordinate with Dam owners to conduct inundation studies of dams:	2
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	6
Purchase and improve on the Weatherization Assistance Program (WAP):	8
Conduct an earthquake vulnerability study:	5
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	9

Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	**23**

List any other strategies you think should be included in the plan:

- ✓ "The City of DeSoto needs several emergency shelters for residents living in structures highly impacted by Tornadoes, e.g. manufactured homes, wood framed structures, and nearby RV parks. Schools should have safe zones, other than hallway - which proved deadly in the recent Okla. Tornadoes."

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ "Enhance television warning system before the tornado is at your door, as in the March 2012 tornado in DeSoto and Lancaster."
   - ✓ "Additional FEMA grants to homeowners; build tornado safe rooms."
   - ✓ "Desoto residents should have been able to apply for FEMA grants for storm shelters regardless if our homes are in flood zones or not. Much of the city is in a flood zone. I feel we were unfairly left out and not given any alternatives as if our lives did not matter!! I'm really angry about that!"

This page intentionally left blank.

City of Duncanville Annex

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Duncanville has a FEMA approved hazard mitigation plan that was adopted in 2009. The city was one of the 11 jurisdictions that participated in the initial Dallas County Hazard Mitigation Action Plan.

This annex serves as a complete hazard mitigation planning tool for the City of Duncanville and is an addition to the countywide hazards and strategies discussed in the previous section. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections

Introduction

Duncanville is located at 32.3847 N and 96.5441 W. It sits north of Cedar Hill, northwest of DeSoto and south of Oak Cliff. Highway 67 runs vertically through the left portion and Interstate 20 runs laterally through the northern portion of Duncanville's city limits.



Settlement Duncanville began in 1845, when Crawford Trees purchased several thousand acres south of Camp Dallas. In 1880 the Chicago, Texas, and Mexican Central Railway reached the area and built Duncan Switch, named for a line foreman. Charles P. Nance, the community's first postmaster, renamed the settlement Duncanville in 1882. During World War II, the Army Air Corps established a landing field for flight training on property near the present-day intersection of Main and Wheatland roads (villageprofile.com).

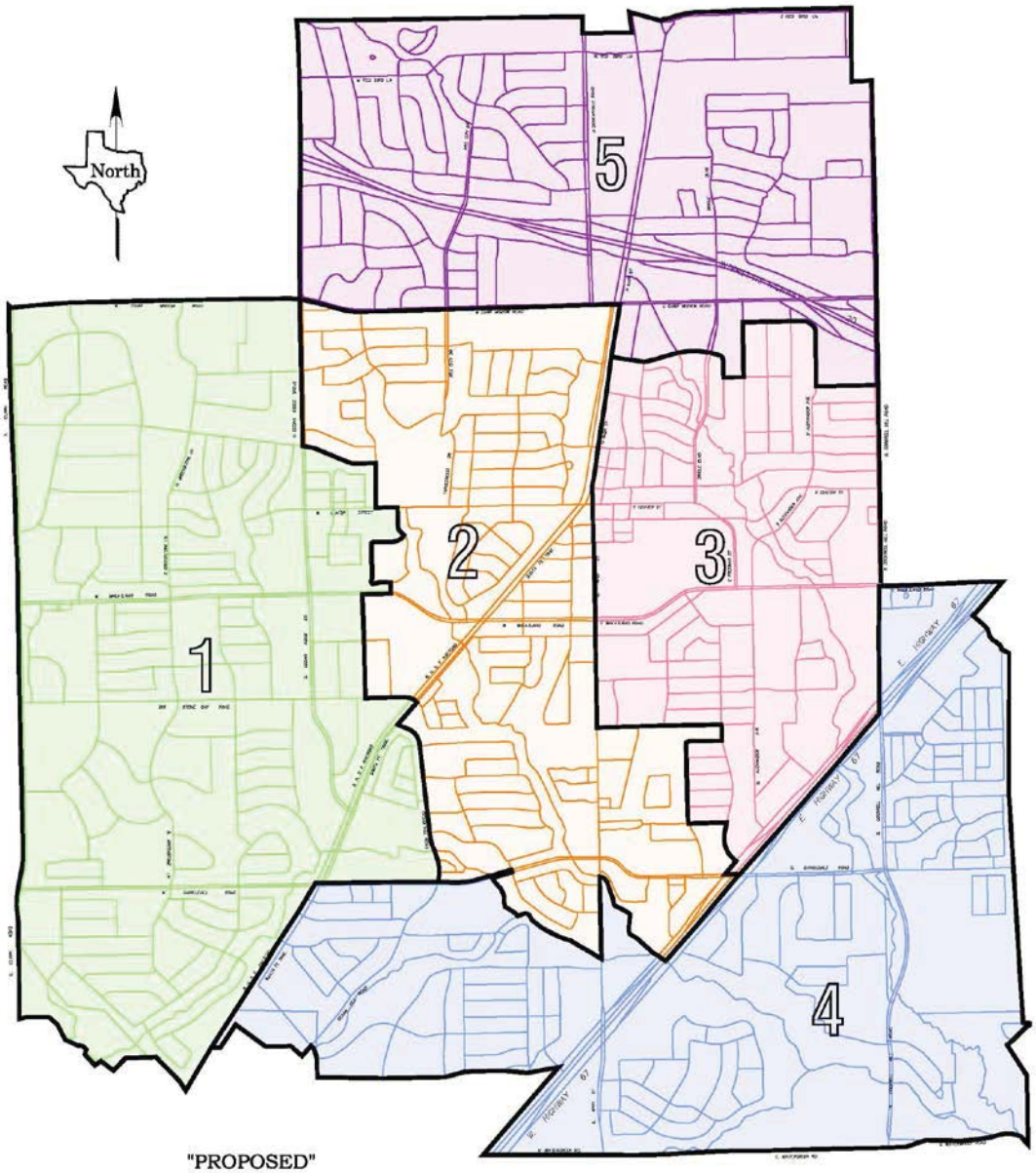
According to the 2010 U.S. Census, the population of Duncanville is 38,524. The racial and ethnic makeup of the population was 32.3% non-Hispanic white, 29.4% non-Hispanic black, 0.7% Native American, 1.7% Asian, 0.1% Pacific Islander, 0.1% non-Hispanic from some other race, 2.5% reporting two or more races and 35.0% Hispanic or Latino of any race. The city has a total area of 11.3 square miles with all of it being land. There are approximately 14,011 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.



The City of Duncanville operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget,

appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

The Map Below Depicts the City District Map for the City of Duncanville



After the completion of Joe Pool Lake in the 1980s, Duncanville began to see an increase in tourism. Many of the businesses in the area accommodate to vacationers such as hotels, eateries, and shopping centers. Duncanville also boasts of it convenient geographic location to Dallas Love Field Airport and to nearby cities such as Fort Worth and Dallas.

Internal Planning Process:

The table below lists members of the City of Duncanville Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Duncanville.

Name	Title / Department or Agency	Role
Greg Contreras	City Manager	Assisted in risk assessment and conducting capabilities assessment. Attended and participated in HMPT meetings.
Sam Rohde	Fire Chief/ Emergency Management Coordinator	HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment Provided input on the hazard identification process.
Steve Miller	Director of Public Works	Provided technical information and capabilities assessment including land development, city codes and ordinance. Provided building code and permitting regulations.
Richard Summerlin	Finance Director	Attended and participated in HMPT meeting Provided expertise in budget, Capital Improvement Plan, funding sources Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment.
Claudia Garibay	Public Information Officer	Provided technical, communication support and public information throughout the planning process. Attended HMPT meetings.
Bart Stevenson	Director of Parks and Recreation	Provided expertise in open space planning and land development. Attended and participated in HMPT meeting
James Roote	Assistant Fire Chief	Provided technical support, data for risk assessment. Attended HMPT meeting.
Robert Brown	Chief of Police	Assisted in risk assessment and Invited to HMPT meetings and supported mitigation planning project.
Skyla Pellum	Emergency Management Administrator	Assistant to the HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, Texas A&M Forest

Services Wildfire Assessment Portal and the local city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
6/12/2013	Reviewed Hazard Mitigation Action Plan and update process. Review of the Planning Process and Review HIRA as discussed at the Dallas County Hazard Mitigation Working Group. Reviewed survey questions and developed Strategy for promoting survey
7/29/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for City of Duncanville in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA Matrix
9/10/2013	Identified mitigation capability assessment and public participation activities
11/21/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment. Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks

External stakeholders invited via email to participate in the planning and review process of the City of Duncanville HazMAP included:

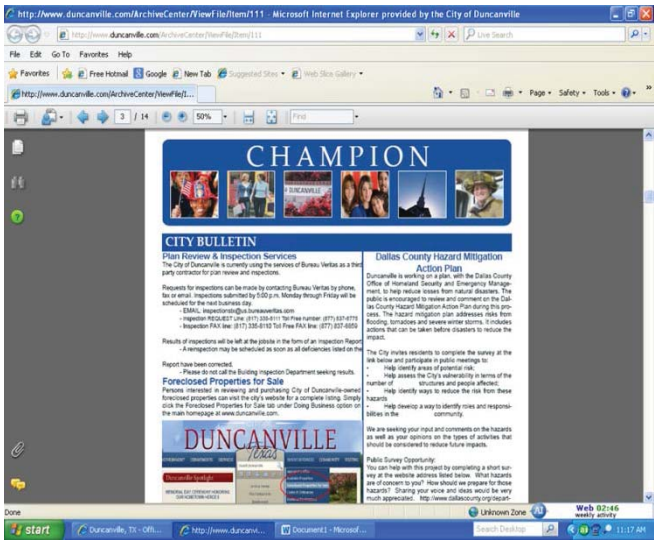
Representing	Position/Department	Role
Duncanville ISD	Director of School Safety and Security	Review Plan

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Duncanville notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website through their online Champion Letter Newsletter. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results



The City of Duncanville made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 13 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The majority of the survey respondents from the City of Duncanville identified four hazards that were deemed as most likely to occur in their jurisdiction. Extreme heat, hail, high winds, and tornados as the hazards that were rated the most likely to occur (had an average rating of above 3.00) and impact the community. Overall the Duncanville Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. A significant number of Duncanville respondents indicated they would like to see an increase in public outreach programs (i.e. CERT) and better enforcement of building codes.

The results of the survey provide valuable information for the City of Duncanville hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed

the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

The City of Duncanville will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

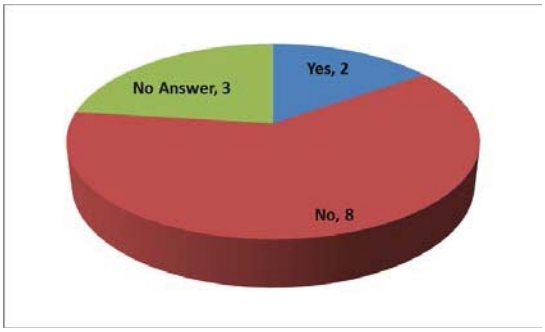
A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

Survey Overview

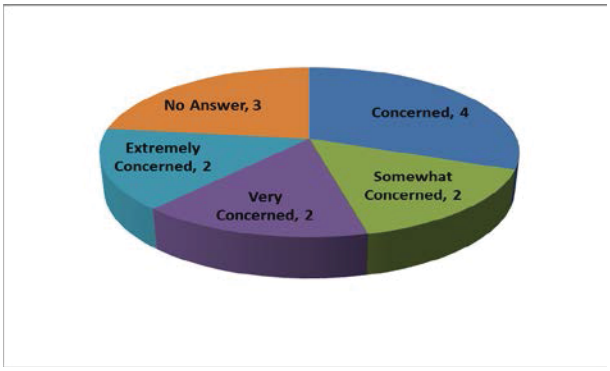
1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    - ✓ City of Duncanville (13 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



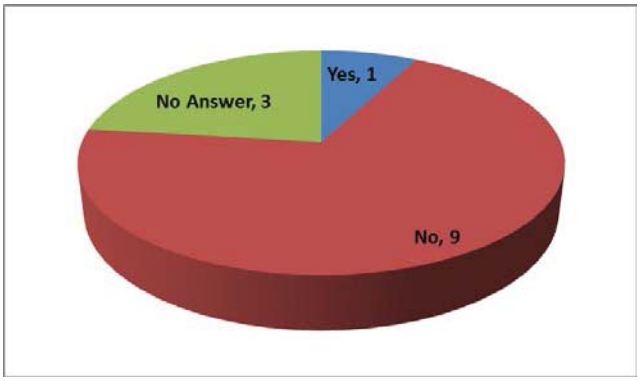
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total Answered	Average Rating
Earthquake	8	2	0	0	3	10	1.20
Tornado	0	4	2	4	3	10	3.00
Hail	0	1	2	7	3	10	3.6
High Winds	0	1	2	6	4	9	3.56
Winter Storms	0	3	5	2	3	10	2.9
Summer Heat	0	2	2	6	3	10	3.40
Drought	1	2	4	3	3	10	2.90
Flooding	2	6	1	1	3	10	2.10
Dam Failure	9	1	0	0	3	10	1.10
Stream Bank Erosion	3	4	3	0	3	10	2.00
Levee Failure	8	2	0	0	3	10	1.20

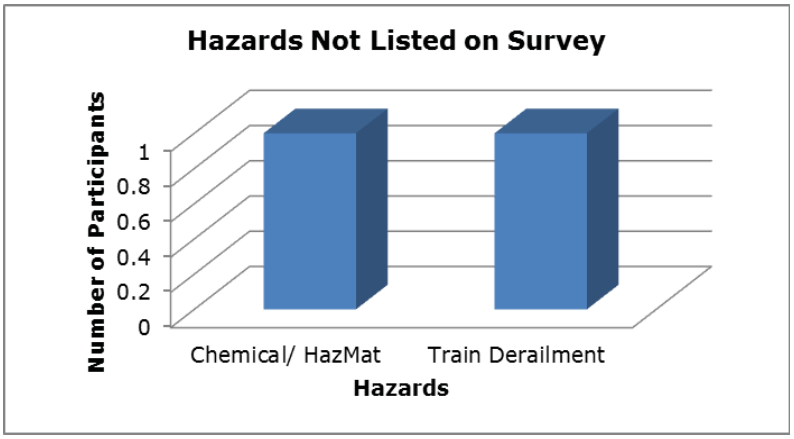
5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

	Limited	Minor	Major	Substantial	Skipped	Total Answered
Earthquake	6	4	0	0	3	10
Tornado	0	3	2	5	3	10
Hail	0	2	4	4	3	10
High Winds	0	2	4	4	3	10
Winter Storms	0	3	6	1	3	10
Summer Heat	0	3	5	1	4	9
Drought	0	3	4	3	3	10
Flooding	1	6	3	0	3	10
Dam Failure	9	1	0	0	3	10
Stream Bank Erosion	6	4	0	0	3	10
Levee Failure	8	1	0	0	4	9

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ✓ Yes (1)
   - ✓ No (9)
   - ✓ Skipped (3)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	4
Improve, adopt and enforce building codes:	5
Implement the Texas Individual Tornado Safe Room Rebate Program:	8
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	7
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	3
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	9
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	5
Purchase and improve on the Weatherization Assistance Program (WAP):	6
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	3
Total Respondents:	**13**

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ No Respondents

Public Review Period

On January 9, 2014 the City of Duncanville announced the availability of the City of Duncanville's Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the city's website as well as the city's Champion Newsletter that invited the public to provide input into the draft plan.

The announcement provided a 10 day public review and comment period. The plan was made available at the city website and a hard copy was made available at the Public Library. Comment forms were also made available on both sites and the public were encouraged to submit comments prior to January 21, 2014 for consideration and possible incorporation into this draft. It was indicated that comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

The public comments were directed to the Skyla Pellum the Regional Emergency Management Administrator with the cities of Cedar Hill, DeSoto and Duncanville.

Capability Assessment:

The City of Duncanville identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Duncanville, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments
The key departments involved in mitigation activities in the City of Duncanville are discussed below:

1. Fire Department: The Duncanville Fire Department is staffed by 55 dedicated career professionals providing a broad range of emergency and non-emergency services to residents of Duncanville and surrounding areas. The city has two fire stations and has an ISO public protection classification of two. The department provides emergency medical response and transport, fire response, and other related emergency services. The department also provides for the safety of our residents through commercial building surveys, code enforcement activities, and public education.



The three divisions of the department include:

- ✓ Emergency Management: The purpose of the office of emergency management is to coordinate the activities of various agencies and city departments responsible for operations during disasters. The Mayor of the City of Duncanville is the director of emergency management for the city while the fire chief serves as the emergency management coordinator for the city.
- ✓ Fire/EMS Operations: Emergency operations is a fully paid career organization staffing one quint, one engine, two mobile intensive care ambulances and one command vehicle from two fire stations. Additional apparatus include two reserve engines, two MICU capable ambulances and one brush response vehicle. Emergency operations consist of forty-eight personnel split between three shifts. Emergency operations personnel provide fire suppression, emergency medical response and transport, and other emergency services to the community.



Emergency operations personnel also participate in non-emergency duties such as public education, hydrant maintenance, and commercial building surveys.

- ✓ Fire Prevention: The fire prevention division of the department has a diverse range of responsibilities. One full time battalion chief is responsible for the annual and bi-annual fire inspections of all schools and businesses within our city and the investigation of all fires to determine cause and origin. Along with these responsibilities, the battalion chief / fire marshal is responsible for providing oversight to the departments' public education programs.



2. Public Works: The City of Duncanville's Public Works Department is comprised of several divisions. These include:

- ✓ Administration and Engineering
- ✓ Building Inspection, Health Inspection, Code Services: The purpose of the Permit and Inspection Services Department is to maintain and enhance safety, property values, and quality for the citizens of Duncanville. The city has therefore adopted ordinances and health and building codes that set standards for the construction, repair, maintenance, and upkeep of business and residential property, and for the safe operation of food service establishments within the city.

  The responsibilities include:
  - o To promote construction methods that provide for the safety of occupants and that are consistent with best practices adopted by other municipalities in this area
  - o To monitor the operation of restaurants and other food service establishments in the city as a means of preventing outbreaks of food-borne illness
  - o To prevent the deterioration of property
  - o To abate dangers to public health and safety
  - o To correct nuisances as defined by ordinance
- ✓ Floodplain Management: The director of Public Works is responsible for administering and implementing the provisions of the city's Flood Damage Prevention Ordinance. It is the floodplain administrator's responsibility to:
  - o Approve or deny land-disturbing activities in the Special Flood Hazard Area
  - o Assure that all other necessary permits, including federal and state permits, are approved
  - o Maintain records
  - o Make necessary interpretation of floodplain boundaries where conflict between mapped boundaries and actual field conditions exists
  - o Notify adjacent communities, TCEQ, and FEMA prior to any alteration of watercourse
  - o Obtain, review, and reasonably utilize base flood elevation data in order to administer the provisions of the Flood Damage Prevention Ordinance
  - o Review and approve floodplain development permit applications
- ✓ Equipment Services

- ✓ Planning and Zoning: The Planning and Zoning Commission consists of Duncanville residents comprising a seven-member board who are appointed by the City Council to serve a term of two years. The Planning and Zoning Commission shall act as an Advisory Board to the City Council on planning and zoning matters. The Planning and Zoning Commission has three principal duties:
  - o Approving plats, which is the process of creating lots and blocks out of raw land, or approving replats, which is the process of rearranging previously approved lot lines
  - o Make recommendations to City Council on specific zoning changes on property requested by the property owner or appropriate zoning changes initiated by the City Council.
  - o Tackle special studies and make recommendations or reports on those studies back to the City Council



- ✓ Signs and Signals: The Signs and Signals division maintains traffic signals, school flashing lights, pavement markings and signs
- ✓ Solid Waste/Trash Collection
- ✓ Street Maintenance: The function of the Street Maintenance division is to maintain paved streets, alleys, bridges, and roadside drainage channels. The services offered include:
  - o Maintaining drainage facilities
  - o Repair utility cuts
  - o Repairing and maintaining paved streets and alleys
  - o Repairing sidewalks
  - o Street sweeping
- ✓ Storm water Quality: The City of Duncanville's Storm Water Management Plan (SWMP) includes best management practices developed for each of the following six minimum control measures:
  - o Public education and outreach on storm water impacts;
  - o Public involvement / participation;
  - o Illicit discharge detection and elimination;
  - o Construction site storm water runoff control;
  - o Post-construction storm water management in new development and redevelopment; and
  - o Pollution prevention / good housekeeping for municipal operations.
- ✓ Water and Wastewater: The Water department for the City of Duncanville is responsible for the following areas of service:
  - o Water
    - ▪ The repair and maintenance of the water distribution system for the City of Duncanville
    - ▪ Conducting preventive maintenance of water lines, fire hydrants, and valves
    - ▪ Maintaining the pumps and motors at the Danieldale, Summit, and North Main pump stations
    - ▪ Conducting emergency repair of main breaks

- Repair and change out of meters
- Installing new water taps and water meters

o Wastewater

- The repair and maintenance of sanitary sewer lines
- Preventative maintenance of lines by cleaning and replacing sanitary sewer mains as necessary
- Repairing sanitary sewer leaks
- Installing new sewer taps



3. Public Information Department: The Public Information Office is tasked with communicating the city's message to the public and the media. The department is responsible for producing the annual State of the City Address presentation, maintaining Duncanville TV and televising City Council Meetings, producing the city's newsletter, disseminating news releases and conducting interviews with the media, and providing oversight of the city's website.

4. Finance Department: The Finance Administration Department oversees all of the fiscal activities of the city. The department is responsible for maintaining a governmental accounting and budgeting system that provides full disclosure of accurate financial information to both external users and internal management. Other direct responsibilities include:

Texas Comptroller Leadership Circle Gold Member

- ✓ Accounts payable
- ✓ Accounts receivable
- ✓ Annual audit preparation
- ✓ Budget development and coordination
- ✓ Cash and investments management
- ✓ Debt management
- ✓ Financial policies
- ✓ Financial reporting
- ✓ Unclaimed property
- ✓ Debt management

5. Police Department: The Duncanville Police Department provides 24-hour emergency services, criminal investigations, traffic enforcement and crime prevention through use of the community policing philosophy. The department is comprised of two main divisions of an Administrative Divisions and the Operations Divisions. These divisions a wide array of services that include:



- ✓ Administrative Divisions
  - o Crime Prevention
  - o Internal Affairs
  - o Records
  - o Training/Personnel
- ✓ Operation Divisions
  - o Animal Control
  - o Communications
  - o Criminal Investigation Division
  - o Jail
  - o Patrol
  - o Southwest Regional Communication Center

Summary of Capabilities

The tables below identify the current capabilities in the City of Duncanville.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2008	A Comprehensive Plan establishes the overall vision for a community and helps to guide municipal decision making. This plan identifies on going priorities for land use.
Capital Improvements Plan	Yes	This plan can discuss the community's desired physical development, desired rate and quantity of growth, community character, transportation services, location of growth, and siting of public facilities and transportation.
Economic Development Plan	Yes	Land use planning can be used as a hazard mitigation tool to reduce vulnerability and simultaneously promote economic growth, ensure natural resource protection, or encourage livability initiatives.
Local Emergency Operations Plan	Yes 2009	Duncanville is part of the Dallas County Emergency Operations Plan (EOP).The City of Duncanville has an Emergency Operations Plan in place, which is overseen by the Office of Emergency Management.
Continuity of Operations Plan	No	
Transportation Plan	Yes	
Storm water Management Plan	Yes 2008	Duncanville Storm water Management Plan provides planning and design of drainage improvements to further protect against floods.
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	

Building Code, Permitting, and Inspections	Yes/No	
Building Code	Yes	**Version/Year:** 2009 International Building Codes 2009 International Residential Code 2009 International Plumbing Code 2009 International Mechanical Code 2011 National Electric Code 2009 International Energy Conservation Code 2009 International Fuel Gas Code 2009 International Fire Code
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	**Score:** 5
Fire Department ISO rating	Yes	**Rating:** 2
Site Plan review requirements	Yes	Yes, Code Enforcement
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Development controls through zoning and building regulations can be used to prevent structures from encroaching on sensitive land. Codes can also be coordinated with zoning changes to incorporate sustainability measures such as requiring height limits or design regulations
Subdivision ordinance	Yes	
Floodplain ordinance	Yes	Floodplain Ordinance provide a framework for corrective and preventative actions, the City has also established similar projects and programs under the broad goal of reducing flood-related impacts
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Storm water Management Ordinance provides planning and design of drainage improvements to further protect against floods. Adopt regulations relating to the reduction of Storm water pollutants in the city's sewer system Clean Water Act
Flood insurance rate maps	Yes	FIRM
Acquisition of land for open space and public recreation uses	Yes	In addition to limiting hazardous development, zoning practices can encourage a sustainable recovery process by providing guidelines for street-scraping and uniform set-backs
How can these capabilities be expanded and improved to reduce risk?		
Setting regulations that limit development in floodplains or on steep slopes are mitigation strategies that affect development at the local level; broader measures may include policies that promote compact development to limit sprawling development patterns while promoting hazard mitigation goals Increase funding and hire more staff		

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	Yes	Planning and Zoning Commission promote economic and community development and neighborhood preservation through thorough orderly review, study, and consideration of zoning issues relative to state and local laws.
Mitigation Planning Committee	Yes	Hazard Mitigation Team comprise of city staff and stakeholders. The team implement hazard mitigation activities
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Debris clearing of Ten Mile Creek.
Mutual aid agreements	Yes	Ellis Dallas Unified Cooperative Team (EDUCT) Inter-jurisdictional Mutual Aid Agreement between cities in the south region of Dallas County. Shared resource of equipment and manpower.
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	
Floodplain Administrator	Yes/FT	
Emergency Manager	Yes/FT	
Community Planner	Yes	
Civil Engineer	No	This position is currently vacant
GIS Coordinator	Yes	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Mass Emergency Notification System. Emergency Management Officials can opt to call all of the telephone numbers within Duncanville that are in our notification system. Outdoor warning signals
Hazard data and information		Data and information maintain in different department
Grant writing	Yes	City departments apply for grants
HAZUS analysis	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	CIP can be a resource to fund future mitigation actions.
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas or electric services	Yes	
Impact fees for new development	Yes	
Storm water utility fee	Yes	
Incur debt through general obligation bonds and/or special tax bonds	Yes	
Incur debt through private activities	No	
Community Development Block Grant	Yes	
Other federal funding programs	Yes	Assistant Firefighter Grant
State funding programs	Yes	NCTTRAC North Central Texas Trauma Regional Advisory Council LEOSE Law Enforcement Officers Standards and Education
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

The Finance and Administration Departments is crucial component to managing the financial aspect of implementing mitigation actions

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	These community-based efforts include Community Emergency Response Teams (CERTs), Neighborhood Watch, Volunteers in Police Service, and the Medical Reserve Corps
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	KnoWhat2Do Emergency Preparedness, Fire Prevention Public Education, Water Conservation Public Awareness, Crime Prevention Public Education, Storm Drainage Awareness
Natural disaster or safety related school programs	Yes	Fire Prevention and Safety Program week, Disaster Preparedness events
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Increase funding and hire more staff		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	X	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	X	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	X	
Transportation		
1. Does the transportation plan limit access to hazard areas?	X	
2. Is transportation policy used to guide growth to safe locations?	X	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	X	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	X	
2. Do environmental policies maintain and restore protective ecosystems?	X	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	X	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	X	
2. Is safety explicitly included in the plan's growth and development policies?	X	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	X	
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	X	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	X	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	X	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?		
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	X	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	X	
3. Do the regulations allow density transfers where hazard areas exist?	X	

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	X	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	X	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	X	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	X	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	X	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	X	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	X	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf

Note: The City Council for the City of Duncanville comprising of the City Mayor and City Council the councilmembers and mayor, have the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	NCTCOG	180 NFIP policies $24,000,000 total premium/coverage
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	NCTCOG	Substantial damage since 1978 (1) Total losses paid- $160.000
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	N/A
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Certified Floodplain Manager
Is floodplain management an auxiliary function?	Community FPA	Public Works Director is the Floodplain Manager
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit review, inspections, education and outreach
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Staffing and funding are barriers
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		N/A
Is a CAV or CAC scheduled or needed?		N/A

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	Initial FHBM Identified 2/8/74 Initial FIRM Identified 4/15/81
Are the FIRMs digital or paper?	Community FPA	Paper and digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Floodplain development regulations meet FEMA /State requirements. The city participates in NFIP and CRS rating is 7/15. Zoning ordinances for Flood Damage prevention. Standards for areas of shallow flooding (AO/AH zones) Encroachments are prohibited
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	Yes
What is the community's CRS Class Ranking?	Flood Insurance Manual	7/15%
What categories and activities provide CRS points and how can the class be improved?	FEMA	Public Education provides information about ways to reduce flood damage. Mapping areas not shown on the FIRM, preserving open space, protecting natural floodplain functions, enforcing higher regulatory standards.
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Yes

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Duncanville HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Duncanville are as follows:

High Risk (over 65% on HIRA)	Extreme Heat High Winds Tornado
Moderate Risk (41%- 65% on HIRA)	Hail Lightning Wildfire Flooding Drought Winter Storms
Low Risk (12 %-40% on HIRA)	Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	Dam/Levee Failure

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and stream bank erosion.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan, i.e., tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Duncanville. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Duncanville**.**

Flooding: The City of Duncanville joined the Federal Emergency Management Program on April 15, 1981. The original Flood Insurance Study (FIS) for the City of Duncanville was published in August 1979. A Flood Insurance (DFIRM) Remapping effort began for all of Dallas County in 2004 to update all floodplain mapping. The remapping effort includes the Bentle Branch watershed in Duncanville as part of the remapping effort.

A Flood Control Feasibility Study Report of Ten Mile Creek & Tributaries for the City of Duncanville, Texas was published. This report included the reach of Bentle Branch that flows through Duncanville. The 100 year frequency flood elevation and discharges were developed based on a fully developed watershed and, channel improvements were recommended.

Criteria and standards have been established by the City of Duncanville to govern the use of natural streams and flood plains and to serve as guidelines for the development of man-made drainage facilities and improvement of natural channels. Floodplains in the city of Duncanville are controlled by a flood damage prevention ordinance passed by the

Duncanville City Council on March 16, 1987. The floodplains delineated in this report are subject to this ordinance. The city also generally utilizes the City of Dallas' Drainage Design Manual for all development plans.

Existing development which is subject to overbank flooding is primarily residential, but also includes some commercial and light industrial property. An estimated 140 buildings are within the limits of the 100-year flood plain, which covers about 402 acres. All of the 47 acres in the Bentle Branch flood plain in Duncanville is privately owned. There is no City owned property within the floodplain. **Map DUN.1** depicts the FEMA flood zones for the City of Duncanville

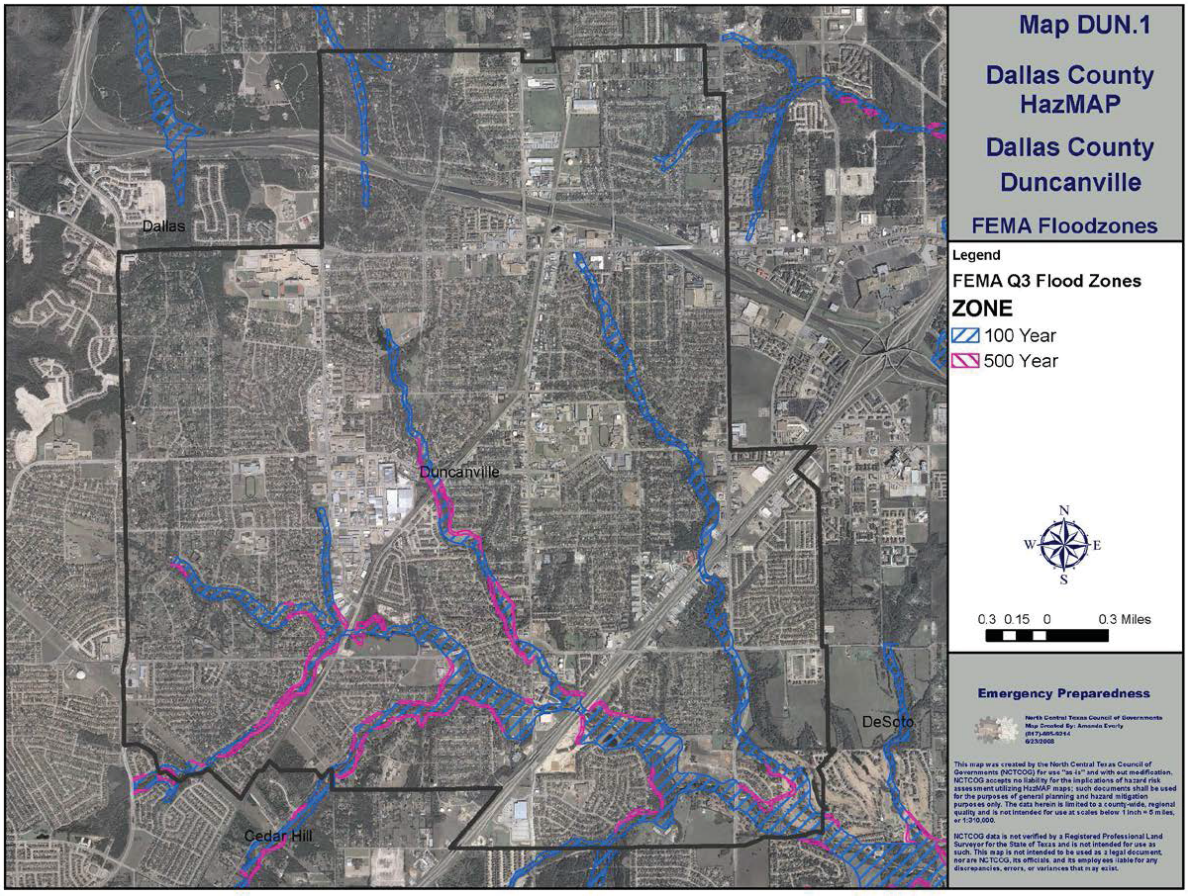
The City of Duncanville participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. According to the Texas Water Development Board there are 4 properties that are considered repetitive loss or severely repetitive loss properties. See Table 5.8.1

Duncanville	Years	Properties	Number of losses	Payments
Single Family	1986, 1989, 1996, 2002, 2004, 2012, 2013, 2014	4	10	$164,605.22
Other Residential	-	-	-	-
Non Residential	-	-	-	-
Total		**4**	**10**	**$164,605.22**

Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

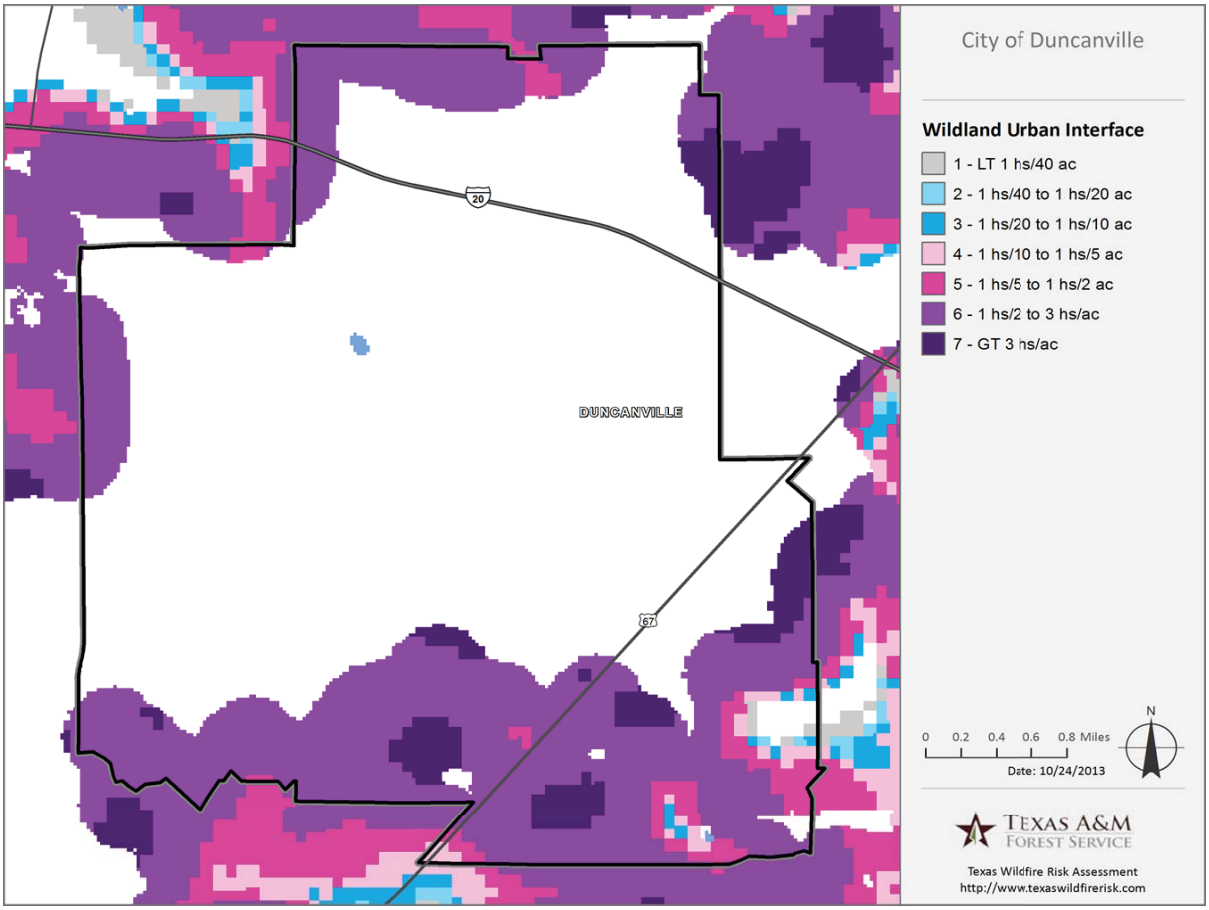
According to the Texas A&M Forest Service an estimated 10,707 people or 27 percent of the total population of the City of Duncanville live within the WUI. **Map DUN.2** below depicts the WUI for the City of Duncanville.

Map DUN.1: Floodplain Map for the City of Duncanville



Source: North Central Texas Council of Governments

Map DUN.2: City of Duncanville Wildland Urban Interface (WUI)



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Duncanville ranges from Non-Burnable to Moderate.

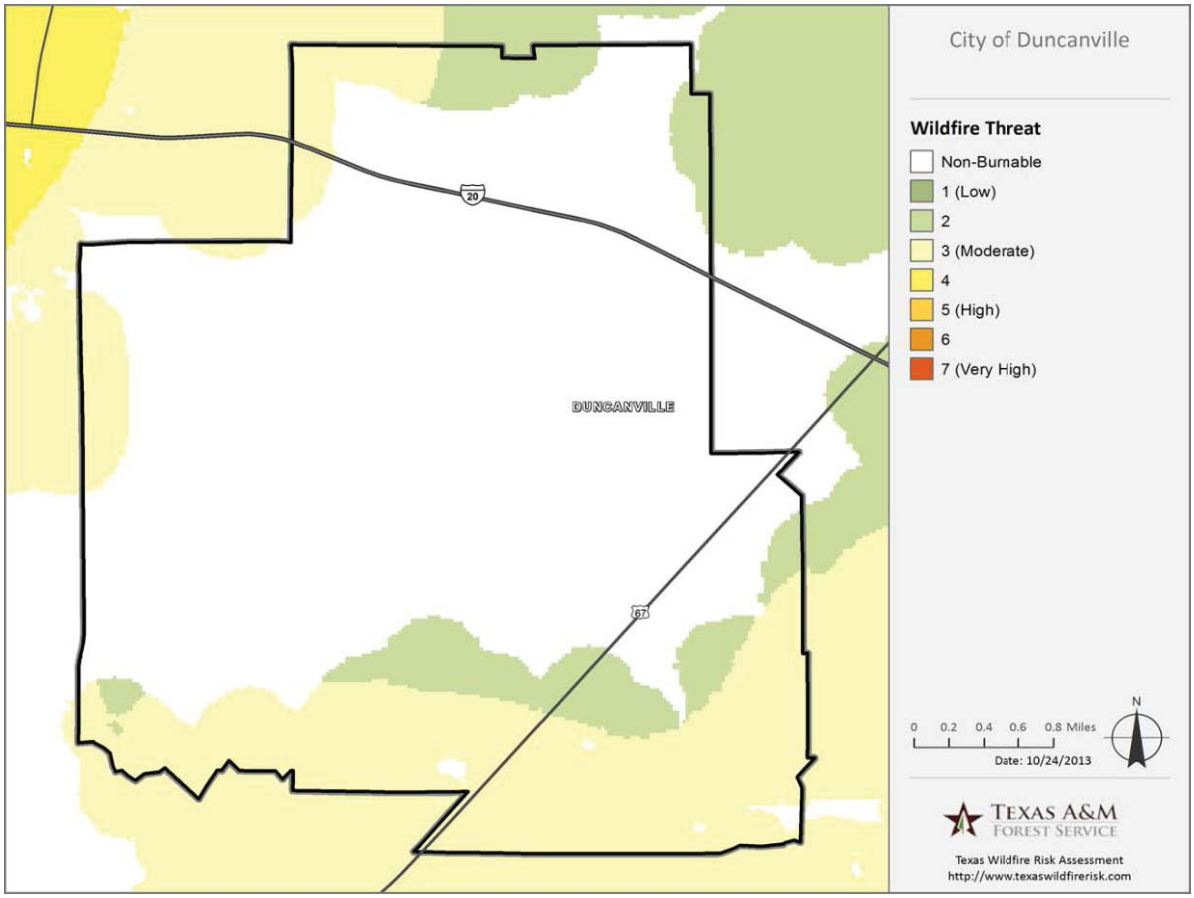
Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map DUN.3: City of Duncanville Wildfire Threat



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Duncanville as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults or historical data of earthquakes within the City of Duncanville. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

E. Stream Bank Erosion: The City of Duncanville is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative

initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the City of Duncanville. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Duncanville. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought*	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved properties are exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat*	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Duncanville. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Duncanville.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Duncanville.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Duncanville.
Winter Storm*	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Duncanville due to winter storm events. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Duncanville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Duncanville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Duncanville are exposed to this hazard.

High Wind*	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Duncanville is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $5,000 of property damage has been recorded due to high wind events in the City of Duncanville during the period under review. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Duncanville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Duncanville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Duncanville are exposed to this hazard.

Lightning*	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Duncanville have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Duncanville. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Duncanville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Duncanville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Duncanville are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Duncanville. All the population of City of Duncanville is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Duncanville. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Duncanville are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Duncanville are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Duncanville are exposed to this hazard.

Hail*	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. . The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $1.2 Million of property damage was reported for City of Duncanville. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Duncanville indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Duncanville are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Duncanville are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Duncanville are exposed to this hazard.

Wildfire*	
Population	Based on geographical data 27% of the population in City of Duncanville who live in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved property in the WUI areas are exposed to this hazard.
Emergency Facilities	Based on geographic information the no fire stations and city administration facilities have a moderate threat of wildfire.
Critical Facilities	Based on geographic information there no schools are at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges or dams are at risk from wildfire events. However the wastewater treatment/water treatment facility has a moderate threat of wildfire

Flooding*	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	$2,000 of property damage as a result of flooding has been reported. There are no valued of improvements to the City of Duncanville area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	0 % of railways/highways and bridges, 0 % of dams, 0 % of water treatment works, and 0 % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

**Note: The period under review is from January 1, 2008 through November 30, 2013.*

The table below provides a summary of the essential infrastructure and vulnerable structures in the City of Duncanville

Changes in Population and Development

The City of Duncanville was a participant in the last Dallas County Hazard Mitigation Action Plan. The table 3.1 shows that the estimated growth in population for the City of Duncanville was from 38,524 to 39,170 an increase of 1.7%. The City of Duncanville issued 94 new housing developments permits between 2009 and 2014. There were 19 new structural and economic development permits issued during the same period. These developments included mixed commercial use facilities, office, storage, restaurants, shopping and warehouse facilities. None of these new developments were built in floodplains.

To help mitigate the impacts of the hazards identified, the city identified broad mitigation strategies to lower the vulnerability due to the changes in population and property from the natural hazards identified. These include establishing additional natural system protection

programs, adopted stricter rules and regulations such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

Essential Infrastructure Summary Report for the City of Duncanville

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals		0
Schools Duncanville ISD		18
• Elementary	32.653983, -96.879200 32.631234, -96.922190 32.631234, -96.922190 32.645089,-96.908219 32.651110, -96.921901 32.624153, -96.920120 32.665584, -96.929263 32.640818, -96.946925 32.653320, -96.974533	9
• Middle	32.650237,-96.900095 32.645798,-96.932320 32.648987,-96.947884	3
• Intermediate	32.658308,-96.927610 32.622715,-96.904556 32.640272,-96.931780 32.644306,-96.924911	3
• High School/PACE	32.662406,-96.927514 32.658308,-96.927610	2
Police Station	32.646020,-96.910054	1
Fire Station 1	32.662273,-96.913490	1
Fire Station 2/EOC	32.631325,-96.907692	1
Emergency Operations Facilities		6
• Duncanville City Hall	32.646020,-96.910054	
• Duncanville Recreation Center	32.649200,-96.907234	
• Duncanville Service Center	32.631222,-96.905853	
• Pump Station N Main	32.668282,-96.904221	
• Pump Station Danieldale	32.632217,-96.905983	
• Pump Station Summit	32.631169,-96.955415	
Dams (Moderate to High Hazard)		0
Hazardous Materials Sites		0
Military Institutions		0
Nuclear Power Plants		0
Water Treatment Facility		0

Structure / Property and Flood Vulnerability

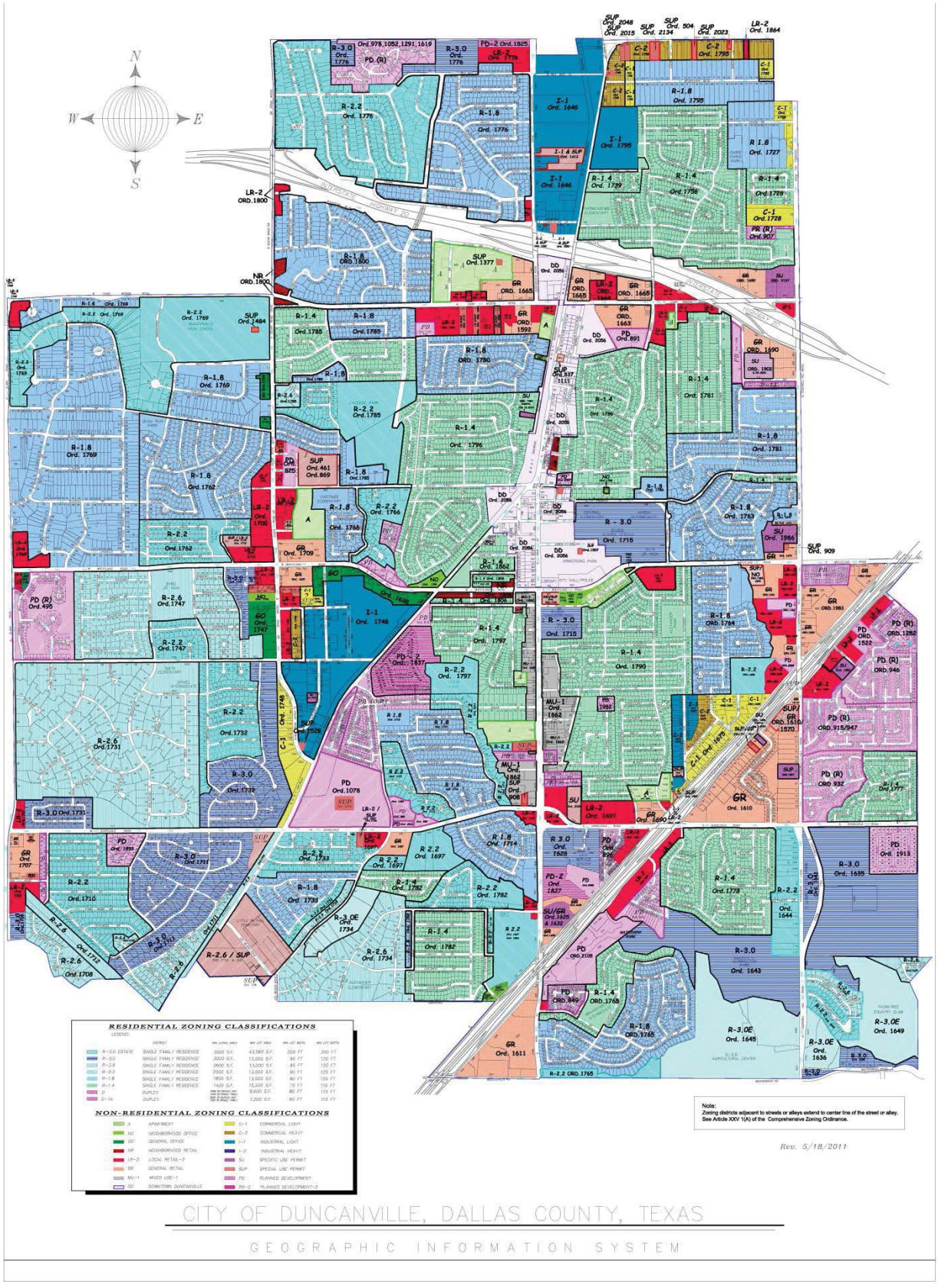
Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	28,135,089	100	Within
Residential	3,217,230	500	Within
Commercial	$15,079,060	100	Within
Industrial	N/A	N/A	N/A
Government / Public	$13,130,450	100	Within

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$1,161,200,140	Outside	Outside	Low
Commercial	$518,946,930	Outside	Outside	Low
Industrial	$72,406,806	Outside	Outside	Low
Government / Public	$64,324,580	Outside	Outside	Low

Zoning is a form of land use control permitted by both the federal and state governments. According to the Texas Local Government Code, there is a requirement that zoning be in conformance with the comprehensive plan. When a zoning change is requested, the first step in considering the change is to determine what the future land use plan indicates as the appropriate use of the property. If the use differs substantially, the request should be denied. To grant the requested change would require that the future land use plan be amended before the zoning change could occur. This requires careful consideration to be sure that the change is in accordance with the principles, goals and objectives of the future land use element of the comprehensive plan. The use of the future land use plan in decision-making relating to zoning and subdivision approvals is to ensure that development and redevelopment are consistent with the city's comprehensive plan. Each new development or redevelopment should be reviewed for general compliance to the comprehensive plan. **Map DUN.4** depicts the Land Use Map for the City of Duncanville.

Map DUN.4: Zoning Area Map for the City of Duncanville



Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in unincorporated areas of Dallas County

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5*-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Duncanville Action Item	Improve storm water drainage system capabilities within the Ten Mile Creek area to prevent flooding in flood prone area. This can l involve structural stormwater management projects
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Goal/Objective	1-B
Priority	Medium
Estimated Cost	$25,000
Potential Funding Sources	City Budget, Pre-Disasters Mitigation Grant
Lead Department	Public Works Department
Implementation Schedule	Within 1-2 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is effective compared to the cost of flood damage
Discussion	Structural stormwater management projects that include stream restoration and expansion to ensure adequate drainage and preserve the undisturbed natural area of Ten Mile Creek and its tributaries within Duncanville

Duncanville Action Item	Install lightning prediction system in six city parks to provide early warning of lightning in the immediate area
Hazard(s) Addressed	Lightning
Goal/Objective	2-D
Priority	Medium
Estimated Cost	$44,000
Potential Funding Sources	City Budget, Capital Improvement Plan
Lead Department	Parks and Recreation Department
Implementation Schedule	Within 1 year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The benefits outweigh the cost
Discussion	Provide advance warning to park patrons of lightning strikes and increase public safety during outdoor activities. Lightning can also ignite a wildfire.

Duncanville Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Duncanville Action Item	Adopt new building codes for construction of storm shelters and safe rooms in existing and new construction recreational, institutional and commercial buildings
Hazard(s) Addressed	Tornadoes, High Winds
Goal/Objective	1-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	Community Development Block Grant, Hazard Mitigation Grant, Pre-Disaster Mitigation Program
Lead Department	Building Inspections Department, Public Works Department
Implementation Schedule	Within one year of funding and approval
Effect on Old Buildings	None
Effect on New Buildings	New building will be required to meet the new standards
Cost Effectiveness	The benefits are much more than the cost
Discussion	Adopting and enforcing new building codes will mitigate the damages and injuries as a result of severe winds and tornados

Duncanville Action Item	Develop Weatherization Assistance Program to assist vulnerable populations and protect them from Extreme Temperatures/Heat
Objective(s) Addressed	4-B
Hazard(s) Addressed	Winter Weather, Extreme Heat
Priority(High, Medium, Low)	Low
Estimated Cost	TBD
Potential Funding Sources	Private, Federal and State Grants, City Budget
Lead Agency/Department Responsible	Utility Billing Department, City Health Inspector Dallas County Health and Human Serves
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work

Duncanville Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	Emergency Management and Public Relations Departments
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Duncanville Action Item	Improve stream bank stabilization measures with the use of hard/soft engineering techniques that combine low profile rock with vegetative plating to allow for a more natural condition of Bentle Branch and Ten Mile Creek.
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Goal/Objective	1-B
Priority	Medium
Estimated Cost	$440,000
Potential Funding Sources	City Budget, Pre-Disasters Mitigation Grant
Lead Department	Public Works Department
Implementation Schedule	Within 1-2 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is effective compared to the cost of flood damage
Discussion	These measures increase drainage and absorption capacities. Also preserve natural creek areas and the undisturbed natural area of Ten Mile Creek and its tributaries within Duncanville.

Duncanville Action Item	Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities. This program will also be expanded to include residential areas through regulatory and incentive measure mitigate the risk.
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Public Work, Utilities Billing Department
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire where applicable.

City of Duncanville Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Duncanville Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Duncanville	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion and its effect on the community. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion for the City of Duncanville

Plan Maintenance

The City of Duncanville Fire Department through the Emergency Management Division will be responsible for ensuring that this plan is monitored on an on-going basis. Emergency Management Coordinator will be responsible for leading the monitoring, evaluation and update efforts of the plan.

The Emergency Management Coordinator will call the Duncanville Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Duncanville	Emergency Management Coordinator/Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Duncanville's HMPT will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Duncanville or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Duncanville is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The city of Duncanville will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Duncanville will engage stakeholders in community emergency planning.

Plan Incorporation: During the planning process the City of Duncanville used the FEMA Local Mitigation Planning Handbook, March 2013 provided a Capabilities Assessment worksheet. This worksheet allowed the city to review various capabilities in the areas of Planning and Regulatory, Administrative and Technical, Financial, and Educational and Outreach. These involved reference several documents such as the comprehensive plans, Capital Improvement Plans, SWMP, building codes, and floodplain ordinances. Other

documents referenced include the Bentle Branch Storm Water and Stream Stabilization Study and information provided in the initial Dallas County HazMAP.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Duncanville	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director – Water Utilities Department	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

c. Complete Survey Results

d. References

Appendix DUN A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

DUNCANVILLE, TEXAS

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Duncanville
Hazard Identification and Risk Assessment (HIRA)
Date: _____July 29, 2013_____

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	3	3	1	1	1	3	100%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	2	1	1	4	50%
Winter Storms	3	3	2	2	2	1	1	4	50%
Tornado	4	3	4	5	3	3	1	7	79%
Flooding	3	2	2	3	2	2	1	5	60%
Extreme Temperatures/Heat	4	4	4	4	3	1	2	6	66%
Wildfire	2	2	3	3	1	3	3	7	43%
Utility Failure									
Energy/Fuel Shortage	1	1	1	1	2	1	1	4	25%
Terrorist Attack	2	1	2	4	4	2	1	7	57%
Urban Fire	4	4	2	2	2	3	1	6	33%
Earthquake	2	1	1	2	1	2	2	5	40%
Levee/Dam Failure	1	1	1	1	3	3	3	9	11%
Drought	4	4	3	3	1	2	2	5	60%
Aircraft Accident	2	1	1	1	1	1	1	6	66%
Stream Bank Erosion	2	4	1	1	1	1	1	3	33%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

NB: This City of Duncanville HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

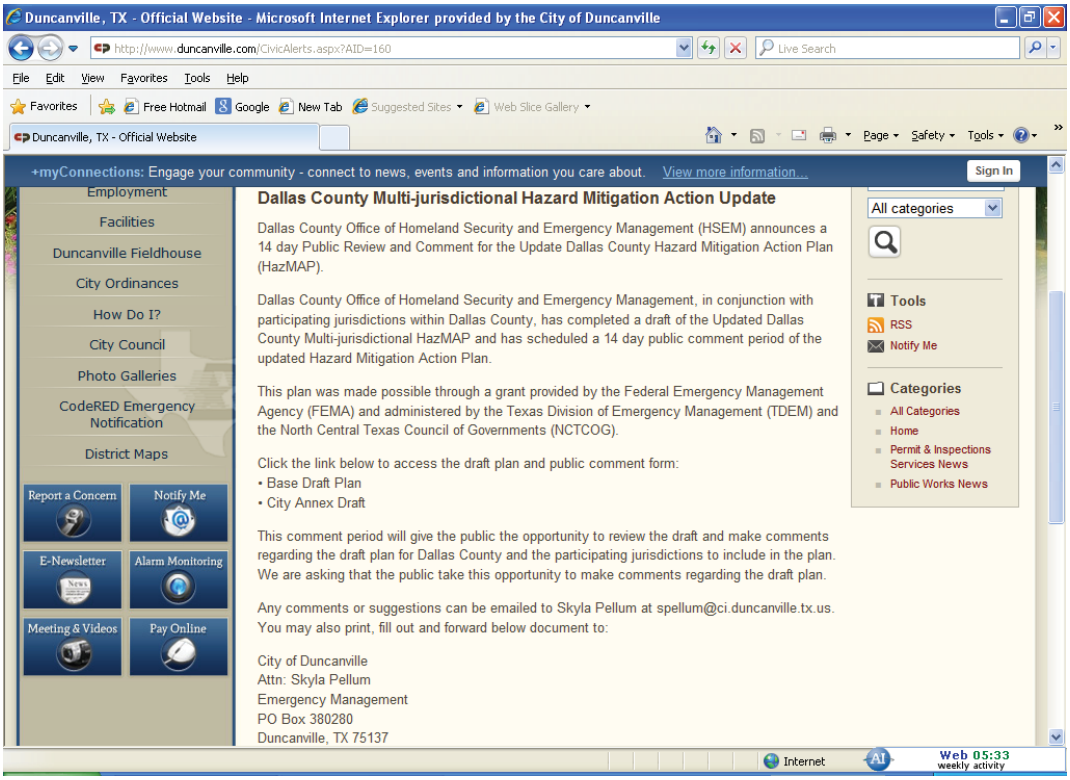
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

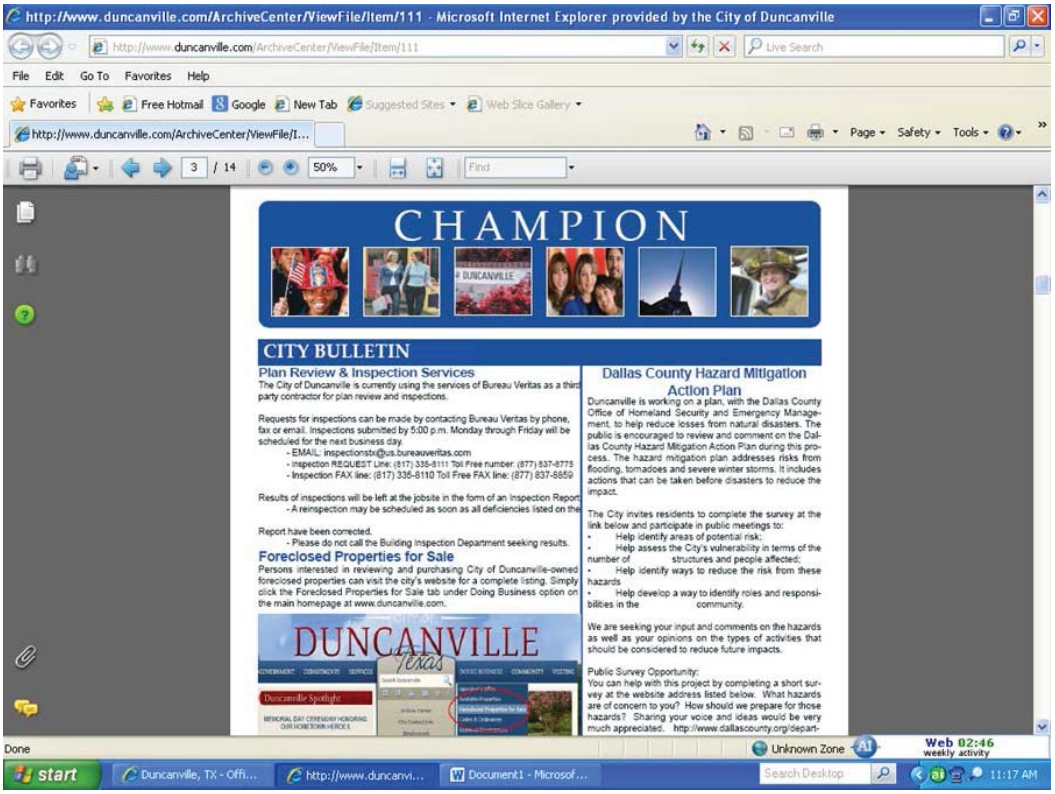
6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

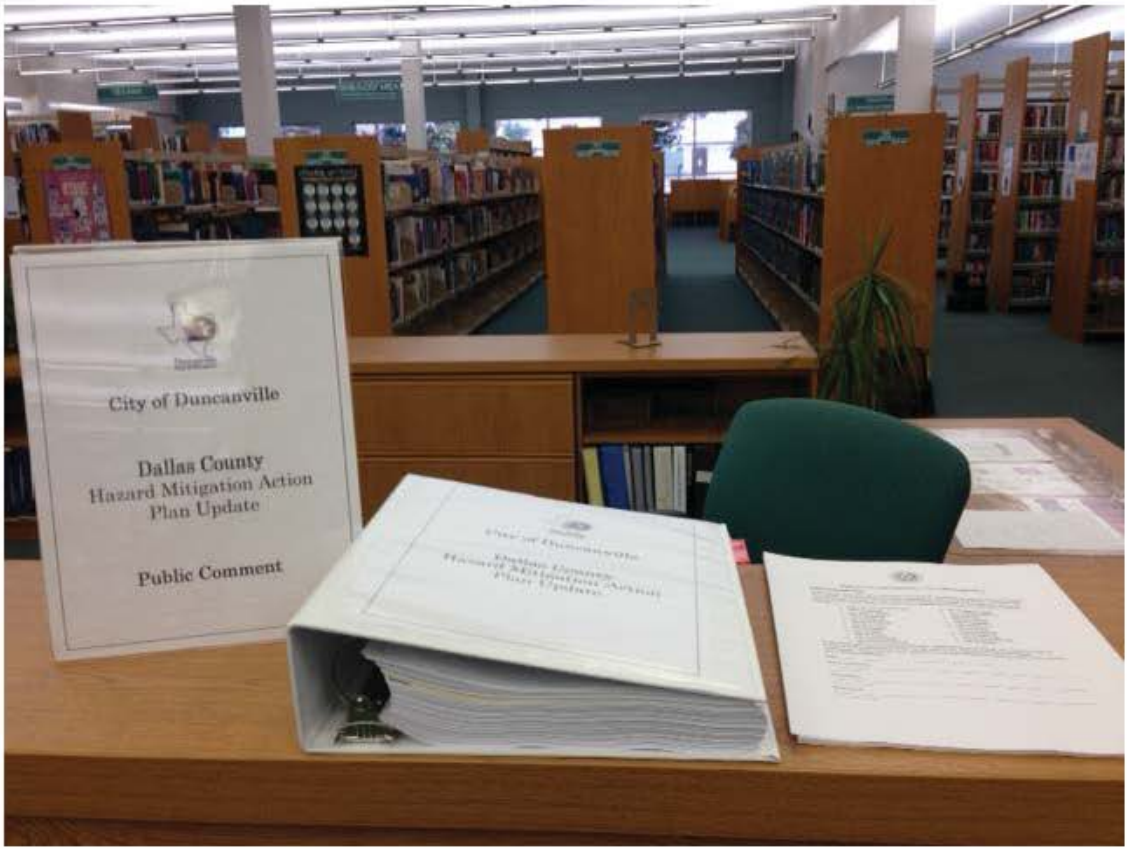
7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3

Appendix DUN B-1: Meeting and Outreach Documentation





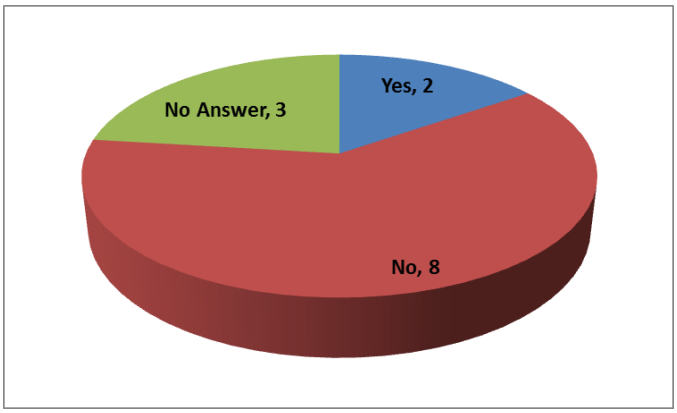

City of Duncanville
Dallas County
Hazard Mitigation Action
Plan Update
Public Comment

Appendix DUN C-1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    ✓ City of Duncanville (13 responses)

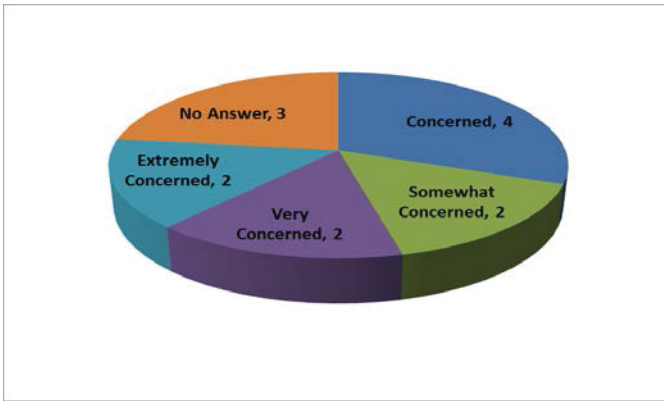
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

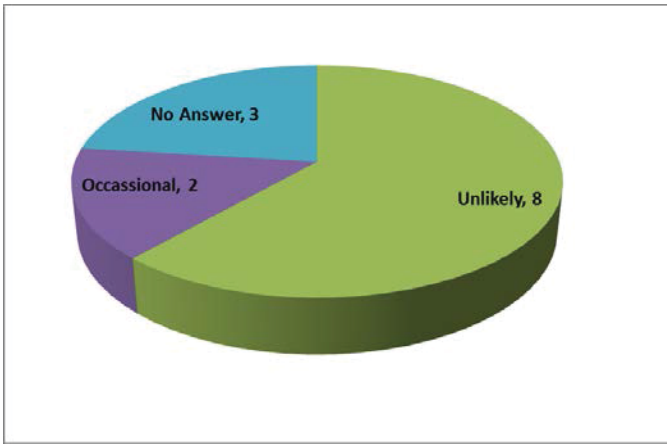
    ✓ "Ice storm, Watdville, OK 1999"

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

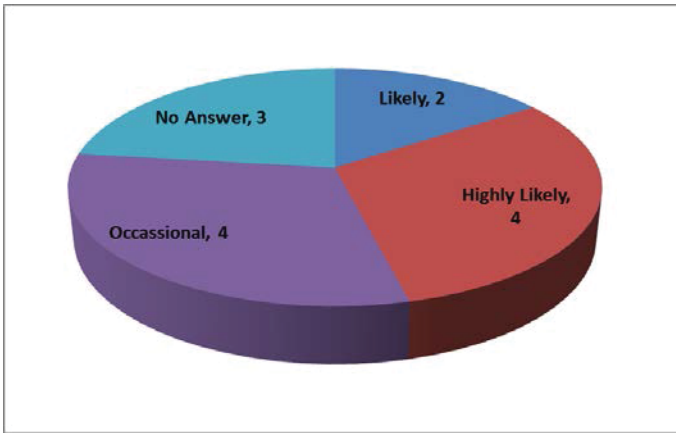


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

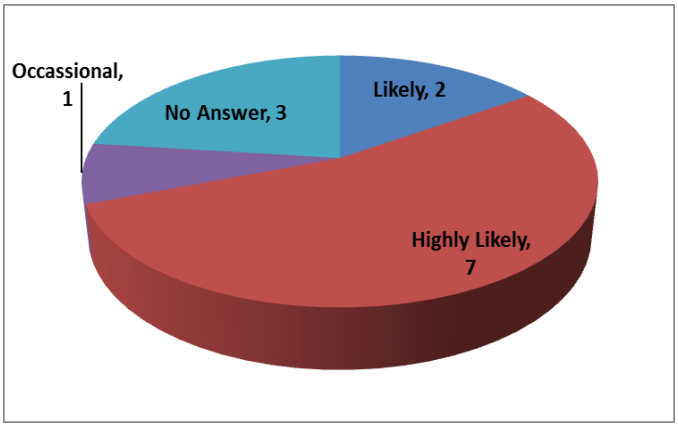
a. Earthquake



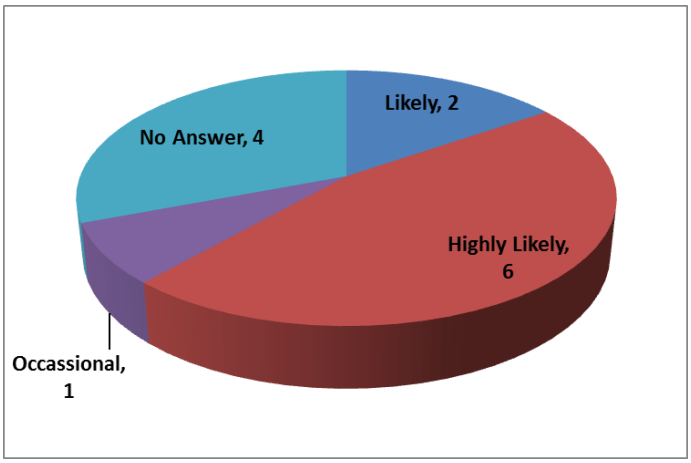
b. Tornado



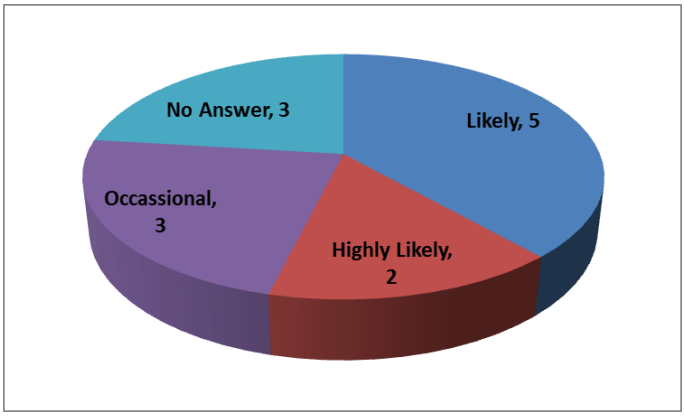
c. Hail



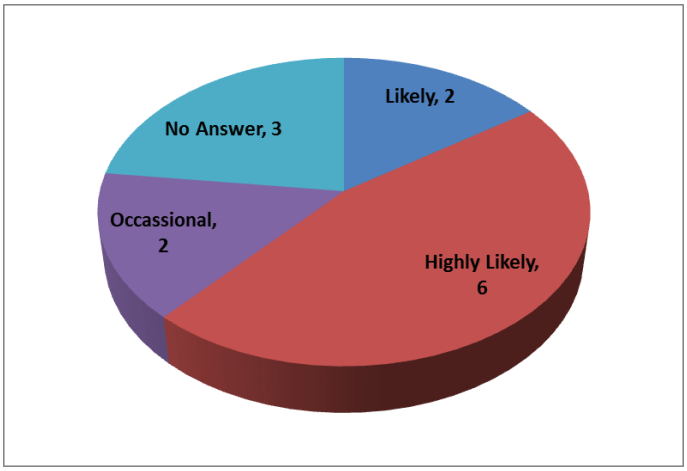
d. High Winds



e. Winter Storms



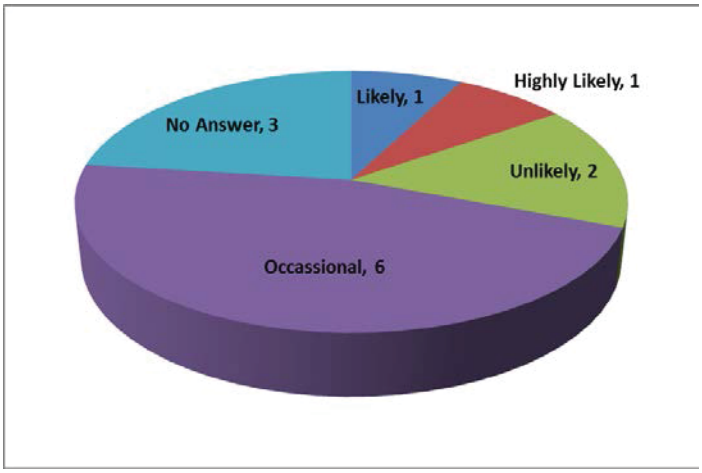
f. Extreme Heat



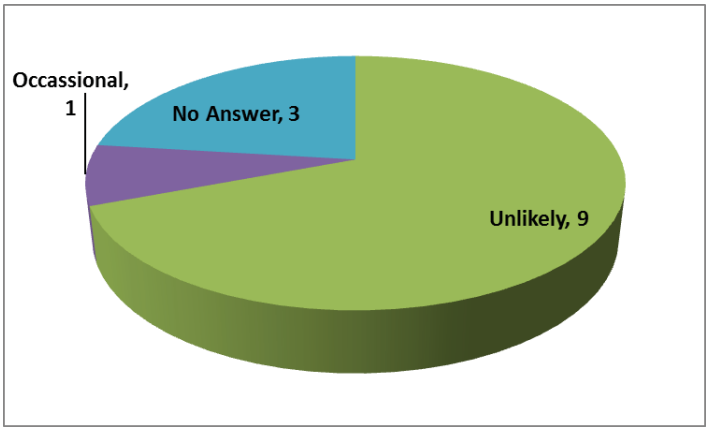
g. Drought



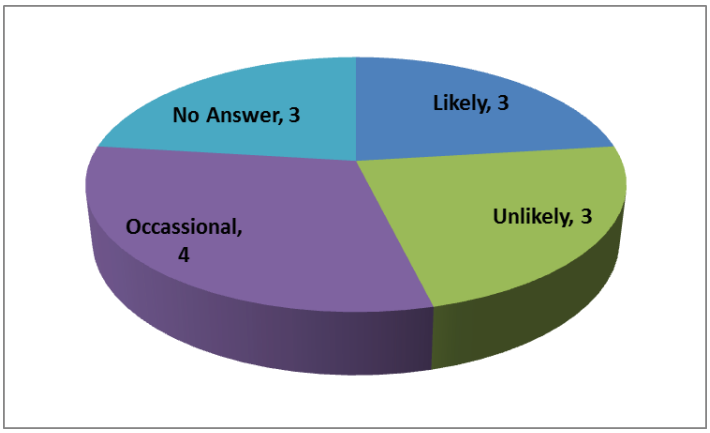
h. Flooding



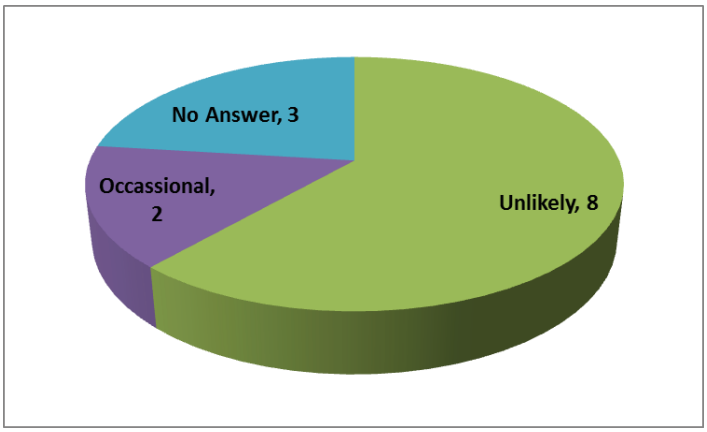
i. Dam Failure



j. Stream Bank Erosion

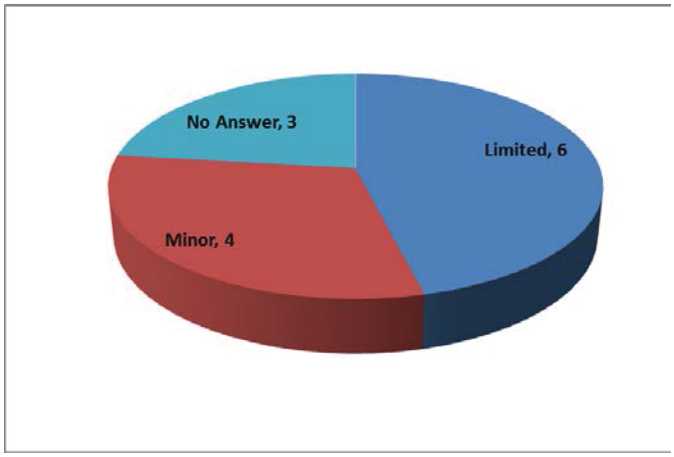


k. Levee Failure

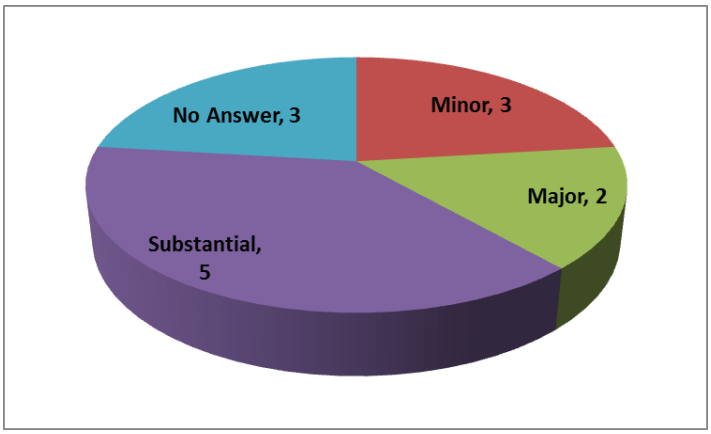


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

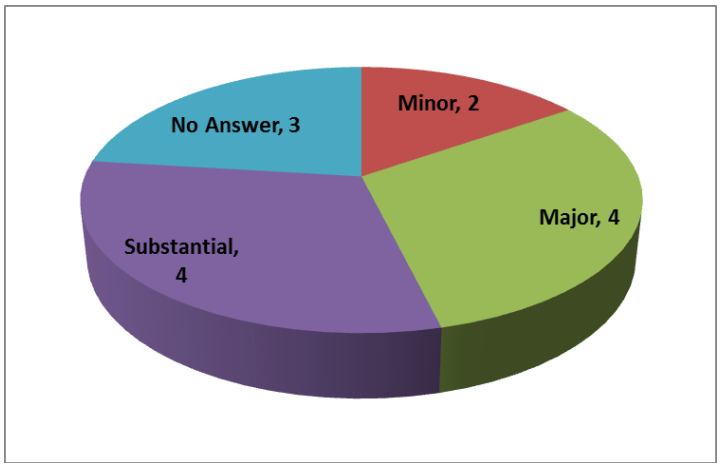
a. Earthquakes



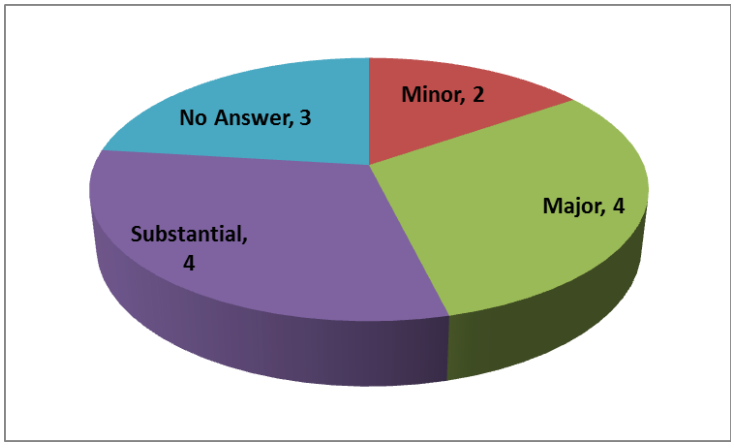
b. Tornado



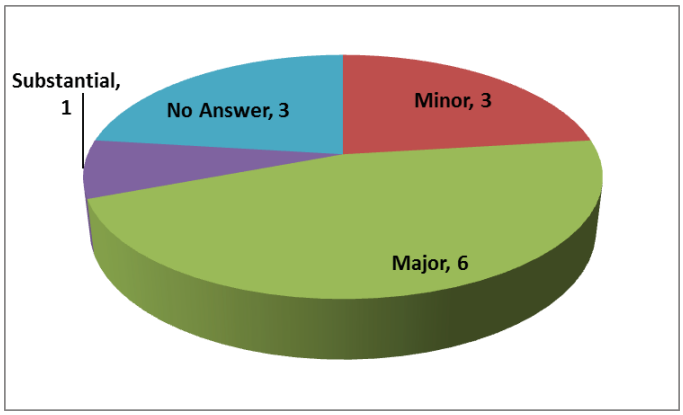
c. Hail



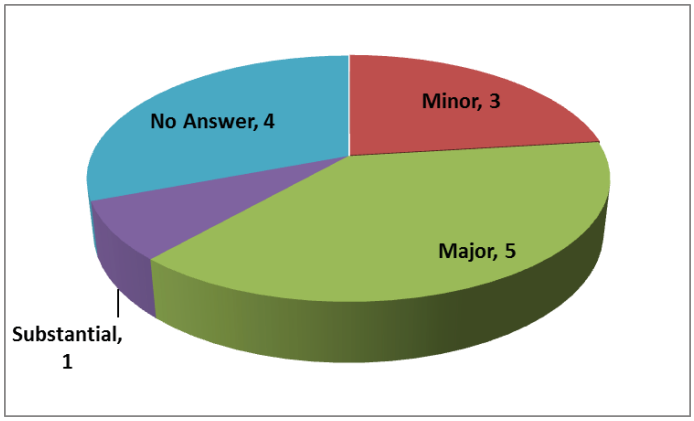
d. High Winds



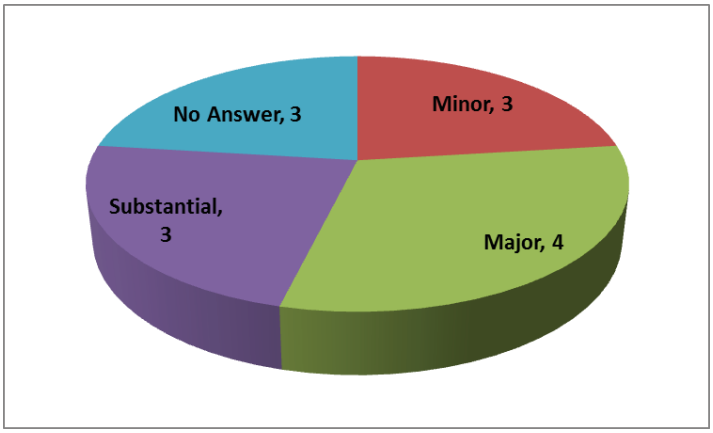
e. Winter Storms



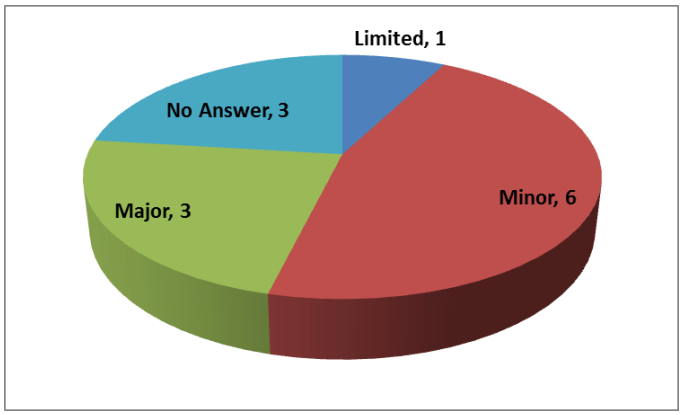
f. Extreme Heat



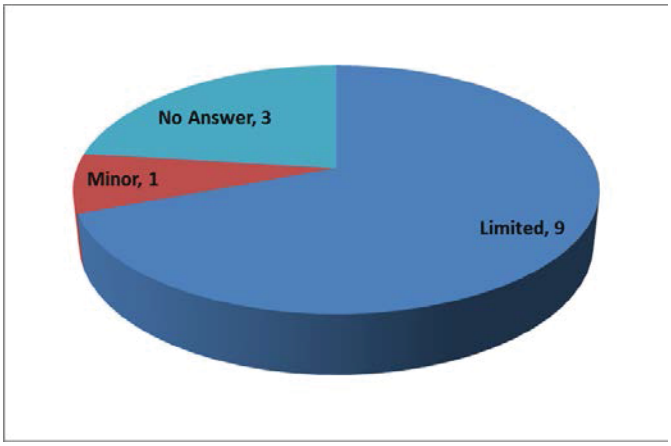
g. Drought



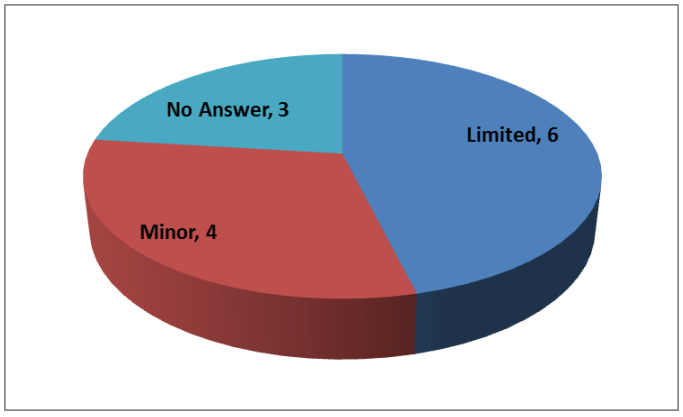
h. Flooding



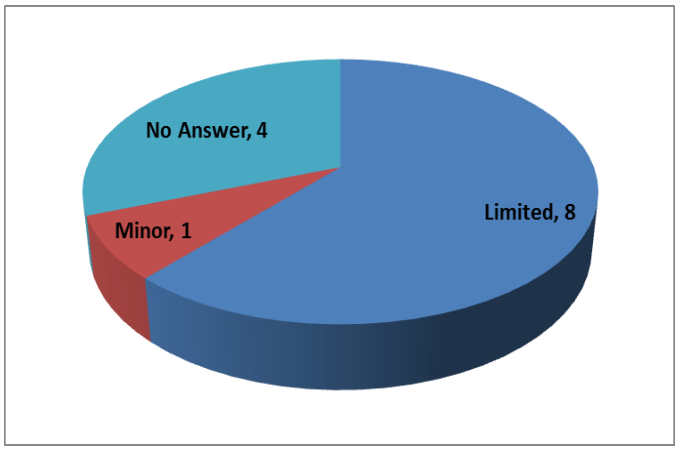
i. Dam Failure



j. Stream Bank Erosion

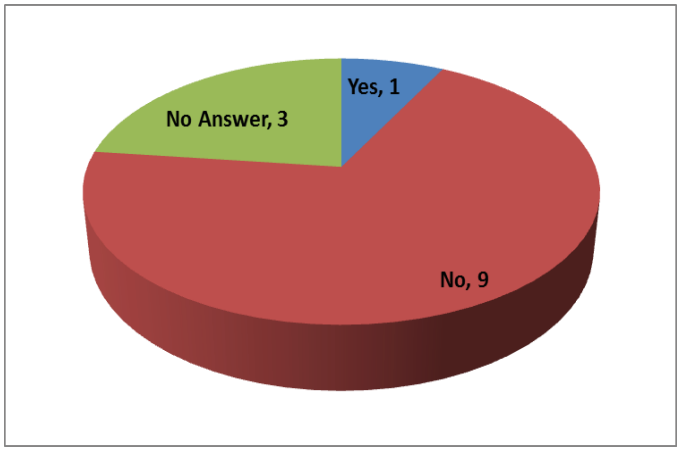


k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

d. Yes (1)
e. No (9)
f. Skipped (3)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

- ✓ "Transportation/chemical on our highways/highly likely/impact high/extent high."

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	4
Improve, adopt and enforce building codes:	5
Implement the Texas Individual Tornado Safe Room Rebate Program:	8
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	7
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	3
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	9
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	5
Purchase and improve on the Weatherization Assistance Program (WAP):	6
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	7
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	3
Total Respondents:	**13**

List any other strategies you think should be included in the plan:

- ✓ "Pre-determined, written alternate/detour routes in winter storm for those bridges and high overpasses that typically ice-over, such as the interchange at I-20 & Spur 408/Clark Rd. and at I-20 & Hwy 67. Every municipality within Dallas County should have written plans for every overpass within their city limits (such as those streets that pass over I-20 or Hwy 67) for anticipated diversion of traffic or placement of temporary emergency warning signs. Brush removal"
- ✓ "Thorough and aggressive tree trimming around power lines."

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ None Provide

City of Farmers Branch Annex

This annex was prepared in 2013 as part of the update to the Farmers Branch Hazard Mitigation Action Plan (HazMAP) of the 2009 mitigation plan. The City of Farmers Branch was represented at the Countywide Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan Working Group meetings. In addition to the countywide hazards and strategies discussed in the previous sections, this annex together with the Base Plan discussed in sections 1 through 8, serves as a complete hazard mitigation planning tool for the City of Farmers Branch. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following section.

Introduction

Farmer Branch is located at 32.5544 N and 96.5239 W. It sits just north of Dallas, east of Coppell, west of Farmers Branch and south of Carrollton. Interstate 35 runs vertically through its city limits and highway 635 cuts through the southern half, running horizontally.



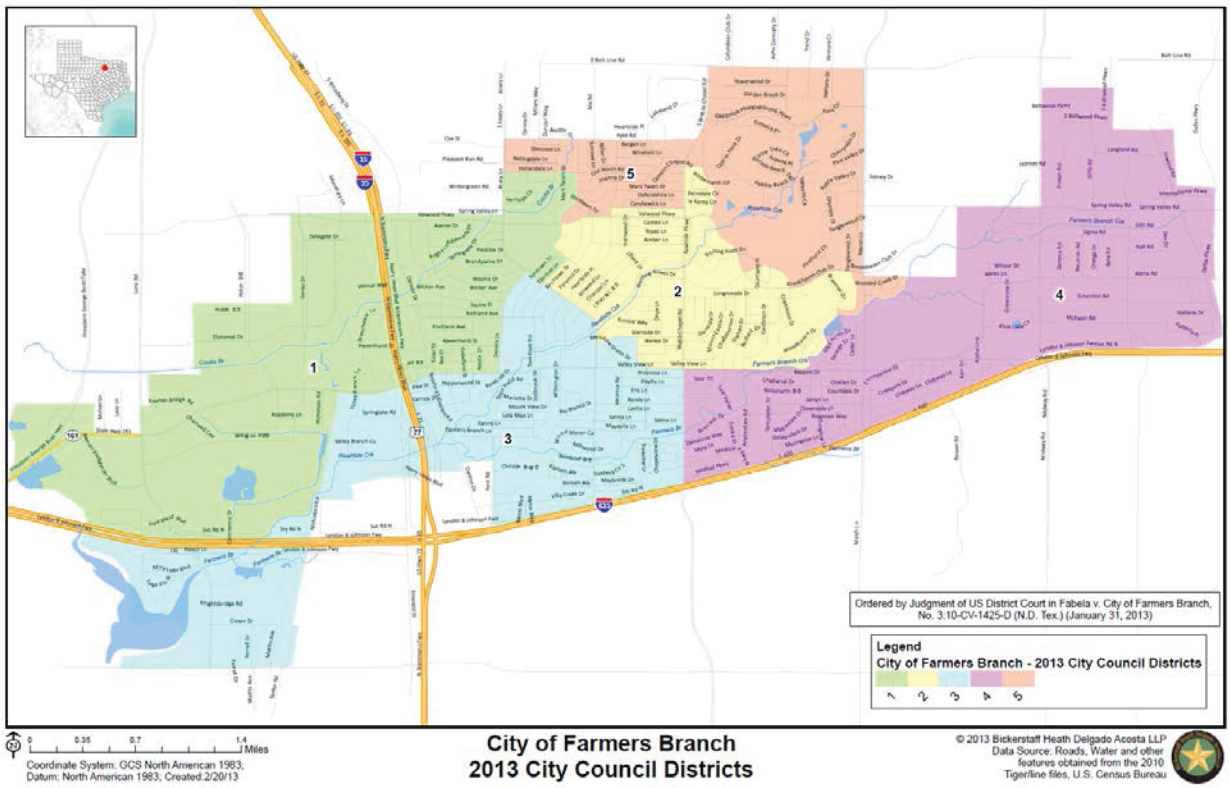
Thomas Keenan, Isaac B. Webb, and William Cochran received original land grants in the area. By 1843, a community called Mustang Branch had been established. Mr. Cochran later changed the name to Farmers Branch to reflect the area's rich soil and farmland (The Handbook of Texas). Farmers Branch was the first location of the Texan Land and Emigration Company (or Peters Colony) in 1845. This made the community one of the best-known places in Dallas County during the 1840s because of its advertising throughout Europe and the United States. Farmers Branch became incorporated as a city on February 23, 1946.



According to the 2010 U.S. Census, the population of Farmers Branch is 28,616. The racial makeup of the city was 73.4% White, 4.8% African American, 0.7% Native American, 4.4% Asian, 13.8% from other races, and 2.9% from two or more races. Hispanic or Latino of any race is 45.4% of the population. There are approximately 11,549 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats and RVs) units.

The city of Farmer's Branch operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The City Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the city Manager is responsible

for all personnel matters in the city and for preparing and submitting an annual budget for Council review.





Farmers Branch is home to 4,000 companies and over 250 corporate headquarters including JDA Software, Occidental Chemical, Iidon Security, Taco Bueno, SoftLayer Technologies, and Maxim Integrated Products. According to the city's most recent Comprehensive Annual Financial Report Fund Financial Statements, the city's various funds had $50.0 million in Revenues, $64.5 million in expenditures, $33.8 million in total assets, $6.5 million in total liabilities, and $38.2 million in investments (City of Farmers Branch 2009 CAFT).

Internal Planning Process

The City of Farmers Branch Emergency Management Coordinator decided the city should participate in the Dallas County Hazard Mitigation Multi-jurisdictional Planning process. This decision was made to take advantage of the resources offered by Dallas County to assist the community in developing a functional plan that could obtain the appropriate approvals.

Farmers Branch HMPT appointed the City Fire Inspector as the Hazard Mitigation Coordinator. The HazMAP Coordinator worked with the City's Emergency Coordinator to establish committee members. The committee members are as follows:

Name	Department	Position	Role
Don Ross	Fire Department	Fire Inspector	HMPT Coordinator
Tom Bryson	Communications	Communications Director	Public Awareness/Education
Steve Parker	Fire Department	Fire Chief	Emergency Preparedness and Response
Jim Olk	Community Services	Director of Community Services	Disaster Recovery, Damage Assessment, Building Codes and Permits, Property Condemnation
Charles (Trey) Dibrell	Engineering Department	City Engineer	Floodplain Management, Engineering Services, Flood Control, Drainage
Stacy Wright	Environmental Health	Director of Environmental Health	Environmental Protection
Charles Cancellare	Parks and Recreation	Parks Superintendent	Parks and Wildlife

The Hazard Mitigation Planning Team (HMPT) was established and procedures were developed to complete a Risk Assessment. The procedures were developed during the HMPT orientation meeting. The purpose for the Hazard Mitigation Plan was identified and the responsibility of each member was explained. The recommended procedures were discussed. Comments from the meeting were incorporated into the draft plan as appropriate.

Two opportunities were provided for the public to comment on the plan.

1. City of Farmers Branch/Dallas County web-based survey on Hazard Mitigation. (May-June 2013)
2. City of Farmers Branch Public Hearing on the Hazard Mitigation Plan: City of Farmers Branch September 3, 2013 Council meeting.

The Farmers Branch HMPT discussed and reviewed appropriate local studies, plans, reports and technical information. Additionally, these documents are to be reviewed at the time of future assessments of the hazard mitigation plan and included, where applicable, with future funding reviews. Some of the current and past mitigation activities are as follows:

- ✓ Adopted Ordinance No. 1670 in 1987 to regulate activities within the 100-year floodplain
- ✓ Rawhide Creek hydrologic and hydraulic study to update National Flood Insurance Program model to regulate activities along the creek and to identify residents that need to obtain flood insurance or no longer need flood insurance (2004)
- ✓ Development of City of Farmers Branch Flood Plain Development Plan
- ✓ Valwood Improvement Authority sump study to assess the amount of additional sump storage that is needed to maintain 100-year flood protection within the area protected by the Valwood Improvement Authority levees
- ✓ Adopted the 2012 International Code series
- ✓ Develops a Capital Improvement Plan for each annual budget for the city

A summary of the HMPT meeting and discussions are provided in the table below:

Date	Meeting Summary
May 1, 2013	Overview of the hazard mitigation planning process and understanding of the planning requirements. Kickoff meeting
June 6, 2013	HMPT team was convened and the mitigation process was discussed and the role each of the represented departments was determined. The team discussed sources of data, methodology of reviewing the plan, and roles that each team member was to play in the process
June 13, 2013	Review Farmers Branch Mitigation Strategy Planning. Discussed the mitigation plan in detail, going through each section as the HMPT to determine the status of various elements of the plan
June 27, 2013	Met with Valwood Improvement Authority over concerns of water flow levee systems
July 18, 2013	Planning Team Meeting: Meeting discussed pending items including capabilities and risk assessment gaps not addressed in the June 2013 meetings

By reviewing the current planning mechanisms which concern mitigation effort the HMPT was able to incorporate their data into the risk assessment and future mitigation projects. Sources data used in this process are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

Public Involvement

The committee planned a public meeting and advertised by including information about the meeting in an advertisement in the city's Branch Bulletin, and on the city's web site. The meeting was held in the Council Chambers of City Hall on September 3, 2013 at 6:30 PM. The Fire Chief/Emergency Management Coordinator presented a power point presentation explained the issues related to the plan and the reason for the public meeting. Following the presentation, those in attendance were given an opportunity to provide any input they desired.

All communities, local businesses, non-profit businesses, academia and other interested parties were allowed to participate in the public meeting.

While these opportunities were provided there were no comments or input provided. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of Farmers Branch made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 31 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Despite outreach efforts, only 31 responses were received. While these minimal responses collected from the survey were not statistically valid, an analysis of the responses is discussed below.

An average of 20.9 respondents completed the survey. Majority of these respondents identified extreme heat, winter storms, drought, and hail as the most likely to occur in the city (had an average rating of above 3.00). In terms of impact the respondents identified tornados, high winds and hail as the top hazards perceived to have the most impact with 47 percent of the respondents selecting tornados and 25.5 each for high winds and hail. Overall the City of Farmers Branch Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team and were included in the plan. To the question on what would be the best mitigation strategies that would mitigate against these hazards, majority of the respondents indicated they would like to see an expansion of the mass notification system, increase in public outreach programs (i.e. CERT), implementation of the Texas Individual Tornado Safe Room Rebate Program; and water conservations strategies as the top mitigation strategies that would best suit the City of Farmers Branch.

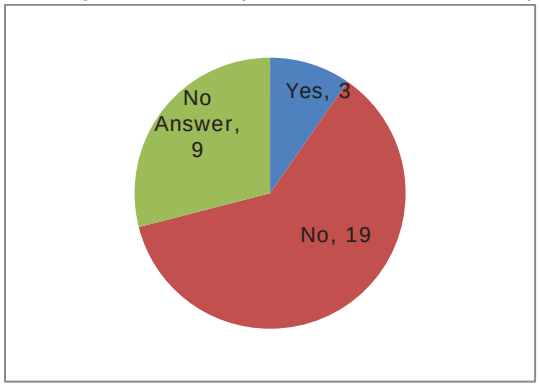
Though minimal, the results of the survey provide valuable information for the City of Farmers Branch hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

The City of Farmers Branch will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

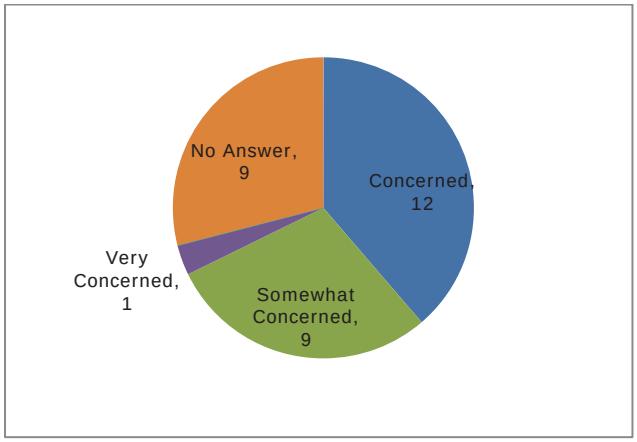
Survey results are depicted below showing the responses and the number of respondents for each answer

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Farmers Branch (31 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

- ✓ Unlikely
- ✓ Occasionally
- ✓ Likely
- ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total	Average Rating
Winter Storms	3	6	8	4	10	21	3.95
Summer Heat	0	0	1	19	11	20	3.95
Drought	0	0	5	15	10	20	3.75
Hail	0	2	6	13	10	21	3.52
Tornado	1	7	7	7	9	22	2.91
High Winds	0	2	6	13	10	21	2.62
Stream Bank Erosion	7	7	5	3	9	22	2.18
Flooding	7	6	5	2	11	20	2.10
Levee Failure	17	3	1	0	10	21	1.24
Earthquake	19	2	0	1	19	22	1.23
Dam Failure	17	2	1	0	11	20	1.20

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

- ✓ Limited
- ✓ Minor
- ✓ Major
- ✓ Substantial

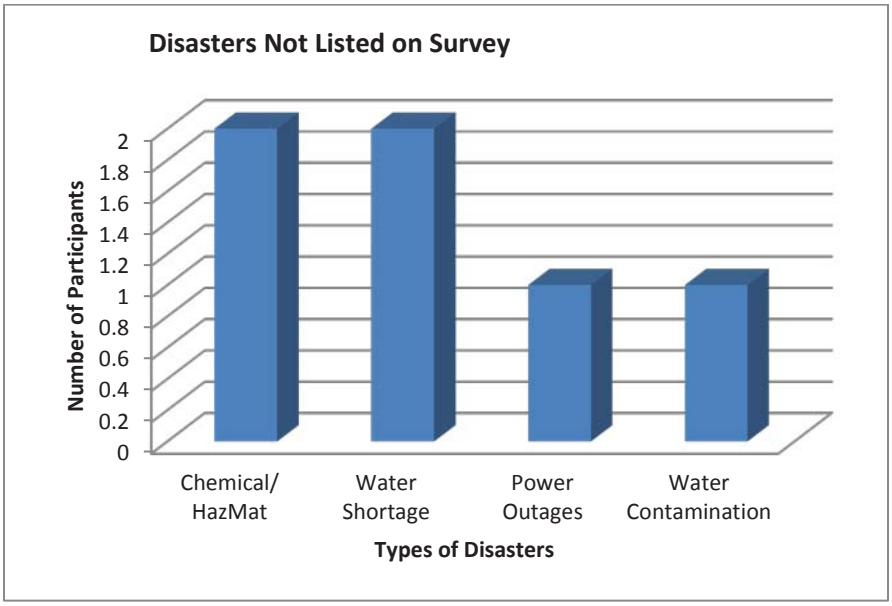
	Limited	Minor	Major	Substantial	Skipped	Total
Earthquake	13	6	1	1	10	21
Tornado	1	3	7	10	10	21
Hail	1	5	9	6	10	21
High Winds	1	4	10	6	10	21
Winter Storms	5	8	6	2	10	21
Summer Heat	1	6	9	5	10	21
Drought	1	4	10	5	10	21
Flooding	8	9	3	1	10	21
Dam Failure	16	4	1	0	10	21
Stream Bank Erosion	10	7	3	1	10	21
Levee Failure	14	5	0	0	10	21

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

Type of Hazard	Total
Power Outages	1
Chemical/ HazMat	2
Water Contamination	1
Water Shortage	2



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	19
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	16
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	14
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	14
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	9
Purchase and improve on the Weatherization Assistance Program (WAP):	9
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	8
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	7
Improve on Land Use Program:	6
Structural Retrofitting of Existing Buildings:	5
Coordinate with Dam owners to conduct inundation studies of dams:	4
Conduct an earthquake vulnerability study:	4
Total Respondents:	**22**

List any other strategies you think should be included in the plan:

- ✓ *"Water conservation"*
- ✓ *"Expand Warning System."*

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:

- ✓ *"Water Conservation"*

Public Review Period

On September 3, 2014 the City of Farmers Branch held a public meeting and presented the Farmers Branch Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. The public meeting offered the public the opportunity to provide input into the draft plan. The public were encouraged to submit comments to the Farmers Branch Fire Department for consideration and possible incorporation into this draft. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

External stakeholder invited via email to participate in the planning and review process of the Farmers Branch HMPT included the Valwood Improvement Authority Manager who was part of the team. The Valwood Improvement Authority provided input on matters related to water flow and levee system management in the City of Farmers and surrounding communities. The agency's input has been included in this plan.

Capability Assessment:

The City of Farmers Branch identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments in Hazard Mitigation

While all departments are critical for the City of Farmers Branch, the following departments were the key departments that formed the Farmers Branch Hazard Mitigation Planning Team. **Figure 2FB** depicts the city's organizational structure.

A. Farmers Branch Fire Department

The Farmers Branch Fire Department has operated continuously since the incorporation of the city in 1946. The Farmers Branch Fire Department is responsible for:

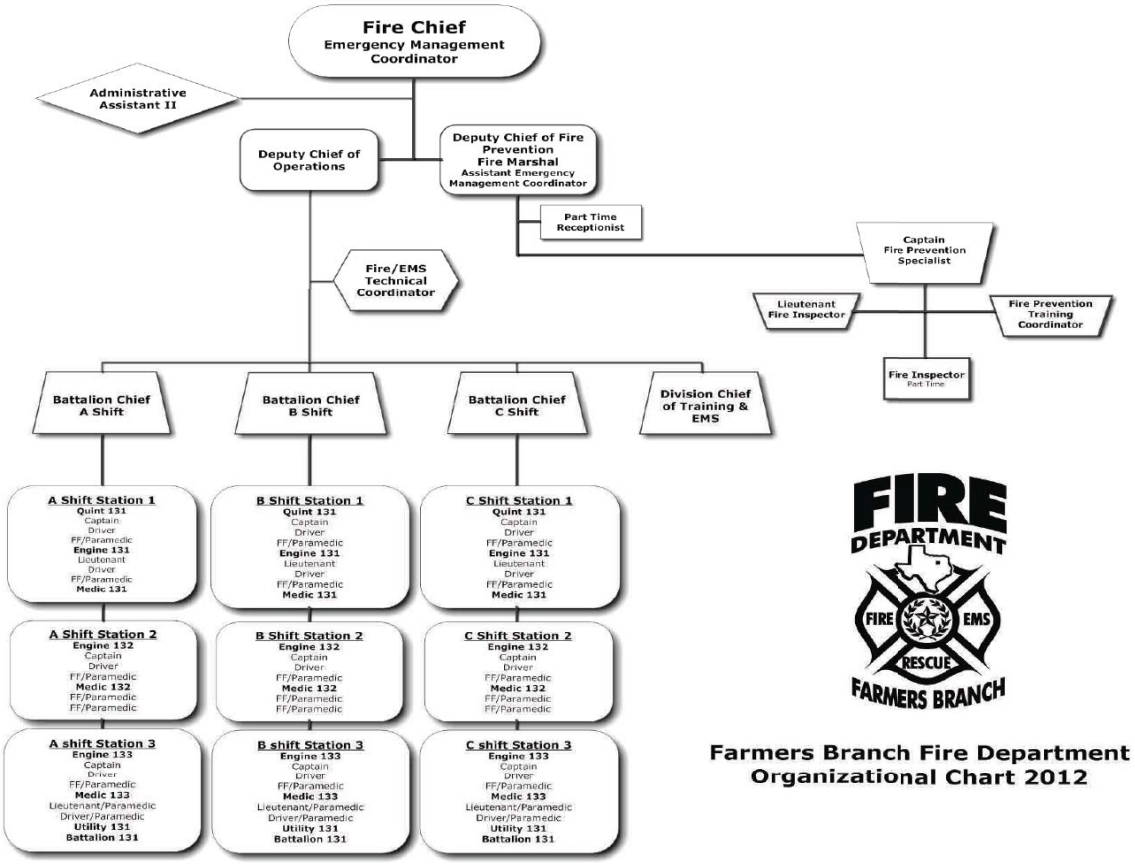
- ✓ Fire suppression
- ✓ Emergency medical services
- ✓ Rescue operations
- ✓ Emergency management
- ✓ Commercial fire safety inspections
- ✓ Fire code enforcement
- ✓ Building and site plan review
- ✓ Public fire and life safety education programs
- ✓ Fire investigations

Organization: The Farmers Branch Fire Department is made up of three divisions: Administration, Fire Operations, and Fire Prevention. **Figure FB1** provides organizational chart for the department. The Fire Department currently maintains on-duty staffing for:

- ✓ Three Paramedic Engines
- ✓ One Quint
- ✓ Two Advanced Life Support Medic Units
- ✓ One Battalion Chief Unit

Mission and Core Values: The mission of the City of Farmers Branch is to build a vibrant, dynamic community that consistently seeks to improve the quality of life for our residents. There are 10 core values used to accomplish this mission. The Farmers Branch Fire Department is guided by core value Number 1 - To provide safety and security for citizens, visitors, and businesses through progressive public safety programs.

Figure FB1: Farmers Branch Fire Department Organizational Chart



B. Public Works

Farmers Branch Public Works Department is responsible for garbage collection, recycling operations, landfill management, traffic operations, street maintenance, drainage, and water and sewer operations. The department also provides information regarding development, platting, and flood plain data. Permits may be obtained for fill, curb painting, and construction in rights-of-way and easement. Public Works Divisions include:

- ✓ Engineering: The Engineering Division provides information regarding development, platting property, permit for construction in rights-of-way and easement, flood plain information, permit for working in the flood plain (fill permit), curb painting permit, current major projects under construction and other available resources.
- ✓ Solid Waste: The Solid Waste Division manages contracts for residential garbage collection, recycling, landfill operations, landfill gas to energy development, and provides brush and bulky collection services. Currently, Waste Management provides residential garbage collection services. Contact Waste Management customer service at 972.315.5400 for questions or concerns regarding garbage collection.
- ✓ Streets: The Street Division provides service and repair for concrete and asphalt streets and sidewalks. They are also responsible for traffic signals, street sweeping, crack sealing, and storm water drainage.

- ✓ Utilities Operations: The Utilities Operations Division is in charge of pumping and maintaining quality water, plant operation, water distribution, and sewer service. They are also responsible for main repairs, service line maintenance, and repairs and improvements to the water and sewer system. Utilities Division also provides water meter reading, meter maintenance and fire hydrant repairs.

C. Community Service Department

The Farmers Branch Community Service Department is responsible for the following programs in the city:

- ✓ Animal Services: The animal services program is an environmental health program of the community services department designed to promote public health and safety through education, enforcement and legislation. The major objectives of animal services are to protect the public from diseases (such as rabies) that can be transmitted from animals to humans, to reduce the number of traffic emergencies caused by uncontrolled animals, to abate nuisances and annoyance to citizens caused by animals, to reunite pets with owners, to promote the adoption of unwanted or stray animals housed at the city's animal shelter and to operate the city's animal shelter in a humane and sanitary manner. Animal services provides the following services:
  - o Removal of stray animals
  - o Public education programs
  - o Animal bite investigations
  - o Return of pets to owners
  - o Nuisance complaints
  - o Dangerous animal complaints
  - o Quarantine animals
  - o Removal of dead animals
  - o Loan of animal traps
- ✓ Building Inspection: The building inspection division's primary responsibilities are the administration of building, zoning and property maintenance ordinances of the city. The application of building code and zoning regulations, building location, use, sign regulations, fencing, yards and open space is achieved by coordinating development activities such as site plan review, permits, inspections and by providing assistance with the development process to citizens.
- ✓ Code Enforcement: The code enforcement division has two primary components these are property maintenance and code enforcement officers. Property maintenance is an important key to a sustainable community. Well-maintained properties enhance neighborhood appearance, reduce crime, promote quality of life and improve property values. The City of Farmers Branch embraces a dynamic, proactive approach to property maintenance using property condition surveys, performance measures and leading-edge technology to promote compliance with the adopted property standards. Individuals can check a code violation online.

  Farmers Branch code enforcement officers are assigned specific residential areas of the city to inspect for compliance with city code and zoning ordinances. The

goal of the code enforcement department is to resolve violations, reduce neighborhood deterioration and ensure property values.

i. Environmental Health: The Environmental Health division implements twelve diverse programs to protect public health/safety and the environment. These programs include:
   - Animal Services
   - Mosquito and Rodent Control
   - Food Establishment Inspections
   - Air, Soil, and Water Pollution Investigations, and Abatement
   - Semi-Public and Public Swimming Pool Inspections
   - Dallas County Public Health Services Contract
   - Noise Control
   - Phase II Storm Water
   - Emergency Planning and Response in cooperation with Fire and Police
   - Industrial Wastewater Pretreatment
   - Intra-City Environmental Affairs
   - Underground Storage Tank (UST) Inspections

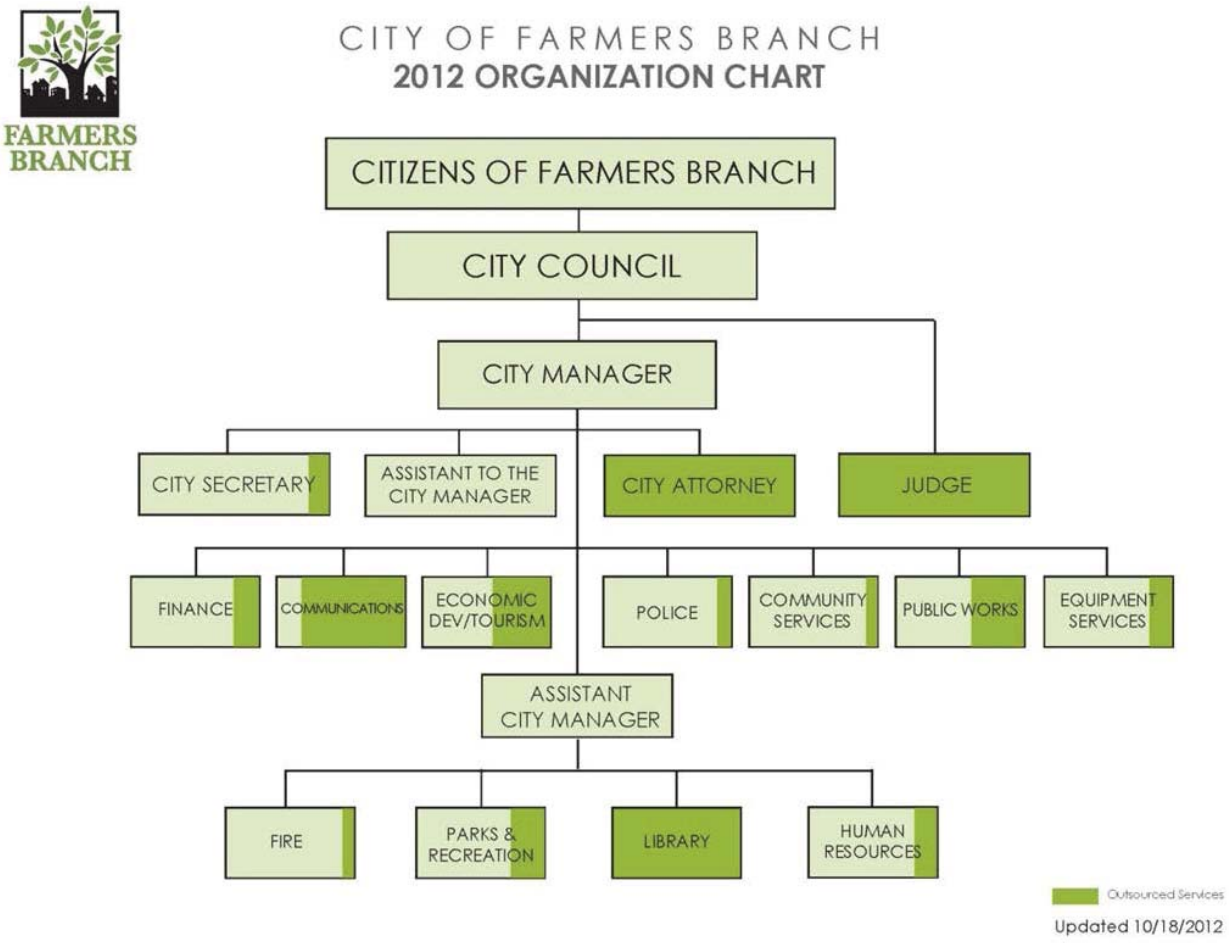
ii. Planning and Zoning: The City of Farmers Branch Planning Department plays an instrumental role in the long-term and day-to-day success of the city. The planning department does this by pursuing specific planning principles. These principles are central to all planning efforts. The planning department:
   - Manages the city's land development process relative to design review, site planning, specific use permits, and zoning
   - Prepares the city's comprehensive plan and district plans such as the recently adopted central area plan. Other district plans include the west side plan and station area plan
   - Prepares policies, programs and ordinances relating to development, conducts demographic analysis and engages in special planning studies relating to economic development, environment, urban design, transportation, and housing
   - Offers extensive e-planning, public outreach and education programs to encourage greater involvement in planning activities

D. Parks and Recreation

The City of Farmers Branch prides itself on the extensive maintenance and landscaping of its 27 award-winning parks. Farmers Branch parks offer a variety of amenities and attractions, including from world-class athletic fields, walking trails, public artwork, picnic pavilions, playgrounds and much more.



Figure 2FB: City of Farmers Branch Organizational Chart



Summary of Capabilities: The tables below identify the current capabilities in the City of Farmers Branch

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes / 2013	No. No. No.
Capital Improvements Plan	Yes	The plan addresses hazards that are inherent to operational compliance with facility permit. It can be used to implement mitigation actions
Economic Development Plan		
Local Emergency Operations Plan	Yes/2013	The City of Farmers Branch Emergency Management Plan is an "All Hazards" plan that complies to the State of Texas Emergency Management Planning standards.
Continuity of Operations Plan	No	N/A
Transportation Plan	Yes 2013	No. No. No.
Storm water Management Plan	Yes	The City has a MS4 storm water plan that contains best management practices needed to minimize anthropogenic impacts to water quality
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N/A	
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	Version/Year: 2006 International Building Code. Adopting the 2012 IBC in 2014.
Building Code Effectiveness Grading Schedule (BGEGS) Score		Score: N/A
Fire Department ISO rating	Yes	Rating: 2
Site Plan review requirements		

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	No. Yes.
Subdivision ordinance	Yes	No. Yes.
Floodplain ordinance	Yes	Yes. It requires building standards for new construction to ensure slab elevations are 3 feet above the 100 year water surface elevation
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Yes. Storm water ordinance is in effect.
Flood insurance rate maps	Yes	Yes. Yes.
Acquisition of land for open space and public	No	N/A
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding Expand on regulations and update ordinances to address effective measures of reducing hazard impact		

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	Yes	Planning & Zoning Commission reviews site plans & specific use permits that might involve hazard material storage or use.
Mitigation Planning Committee	Yes	The mitigation planning committee is made up of members from all applicable City Departments.
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Parks & Recreation and Public Works operate in a coordinated manner.
Mutual aid agreements	Yes	Dallas County Fire & EMS Mutual Aid Plan. North Central Texas Council of Governments Public Works Emergency Response Team Agreement.
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	Yes. Yes. Yes.
Floodplain Administrator	Yes/FT	Yes. Yes. Yes.
Emergency Manager	Yes/PT	Staffing should be a full-time position. Staff is trained on hazard mitigation strategies. Coordination amongst city staff is effective.
Community Planner	Yes/FT	Yes. No. Yes.
Civil Engineer	No	The position does not exist. If the need arises, a Civil Engineer position may be opened.
GIS Coordinator	Yes/FT	Yes. No. Yes.
Other	N/A	
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	City has outdoor warning sirens & robust communication system to notify residents of critical safety information. Systems have been used in the past.
Hazard data and information	Yes	State of Texas Trier II Reporting. Yes.
Grant writing	Yes	Each Department applies for Grants. Currently PW is working on securing FEMA funding to mitigate the Marsh Road low-water bridge crossing.
HAZUS analysis	No	
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
As detailed in the community survey, budget for a Reverse 911 system to improve warning capabilities in the FY 2014-15 budget		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Yes-Funds used to raise emergency generators out of flood zone at Squire pump station.
Authority to levy taxes for specific purposes	Yes	No. Yes.
Fees for water, sewer, gas or electric services	Yes	Water utilities fee, which includes water and sewer services, can be used to fund hazard mitigation for utility infrastructure.
Impact fees for new development	No	We use specific developer contracts to force developers to make needed infrastructure improvements within & surrounding the site.
Storm water utility fee	No	No fee is currently in place. However, the city is proposing a storm water fee in 2014. If enacted, the fee can be used for hazard mitigation related to storm water channels and controls within the city.
Incur debt through general obligation bonds and/or special tax bonds	Yes	No. Yes.
Incur debt through private activities	No	
Community Development Block Grant	Yes	No. Yes.
Other federal funding programs	Yes	No. Yes.
State funding programs	Yes	No. Yes
Other	Yes	Valwood Improvement District. Special flood control district to manage flood risk for 1/3 of City.
How can these capabilities be expanded and improved to reduce risk?		
Through working on adopting the storm water control plan, the city has received multiple studies outlining various projects that will reduce flooding and erosion issues tied to storm water run-off.		

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Metrocrest Social Services provides services for functional needs populations. Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	The Fire Department & the city utilizes its constantly informs the public on various safety and preparedness items.
Natural disaster or safety related school programs	No	School safety program is run by the Independent School District.
StormReady certification	Yes	Received in 2012
Firewise Communities certification	No	N/A
Public-private partnership initiatives addressing disaster-related issues	Yes	Active member of the Dallas County VOAD. Yes
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	X	
Future land use map shows floodplain areas.		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	X	
City policy does not allow vertical development in floodplain areas.		
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	X	
Much of Farmers Branch is already developed and new development is often performed on in-fill or redevelopment sites		
Transportation		
1. Does the transportation plan limit access to hazard areas?		X
No.		
2. Is transportation policy used to guide growth to safe locations?	X	
Yes.		
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?		X
No consideration has been given to disaster evacuation within thoroughfare plan		
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	X	
2. Do environmental policies maintain and restore protective ecosystems?	X	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	X	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	X	
2. Is safety explicitly included in the plan's growth and development policies?	X	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	X	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	X	
Yes.		
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	X	
City has a floodplain district.		
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	X	
Yes.		
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	X	
We do not allow development in the 100 year floodplain.		
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	X	
We require the 100 year floodway and floodplain to be shown on all plats and do not allow development within it.		
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		X
Not applicable in our City.		
3. Do the regulations allow density transfers where hazard areas exist?		X
Not applicable in our City.		

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		X
This question is not applicable to Farmers Branch because the majority of the floodplain property in Farmers Branch is privately owned and developed.		
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	X	
Currently floodplain policy limits development in floodplain areas by the floodplain ordinance.		
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		X
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	X	
We do not allow development in the 100 year floodplain.		
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	X	
The building code has provisions for mitigating damage during disasters		
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	X	
We do not allow development in the 100 year floodplain.		
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	X	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: The City Council for the City of Farmers Branch, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to data provided by the Texas Water Development Board there are 165 Policies in the City as of March 2015. The total premiums paid in the City are $197,038
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	According to data provided by the Texas Water Development Board a total of 62 claims have been made, 52 closed, 10 closed without pay. A total of $774,353 was paid out on the closed claims
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	725
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Any areas within the 100 & 500 year floodplain maps along Farmers Branch Creek, Rawhide Creek and Cooks Creek.
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit review, development review committee, construction inspection, GIS.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		Has not had a CAV
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	April 12, 1974
Are the FIRMs digital or paper?	Community FPA	Both
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Meets development regulations.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Application is filed through the Community Services department. CSD distributes plans and engineering documents to appropriate staff, including the Floodplain Administrator for review for compliance with City policies and plans (including the floodplain ordinance).
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No-The Public Works will begin investigating how to participate in this rating system.
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The Hazard Mitigation Planning Team (HMPT) for the City of Farmers Branch focused on the natural hazards identified in Section 5 of this update. This was done after reviewing the 2009 HazMAP, the State of Texas Hazard Mitigation Plan, as well as other sources such as federal and state agencies. The hazards identified are provided in the City of Farmers Branch's Hazard Identification and Risk Assessment (HIRA) and Risk Priority Ranking (RPR) as provided in Appendix FB-1 of this annex.

The table and scales below is a summary of the hazard and risks assessment for the City of Farmers Branch. The summary was derived from the current HazMAP that was adopted by the city in 2009 and have been updated for this plan.

	Occurrence	Impact	Extent
Earthquake	Unlikely	Limited	N/A*
Tornado	Likely	Substantial	Medium
Hail	Likely	Limited	Medium
High Winds	Occasional	Minor	Medium
Lightning	Highly Likely	Minor	Medium
Winter Storms	Occasional	Limited	Low
Extreme Heat	Likely	Limited	Medium
Drought	Likely	Limited	Medium
Flooding	Occasional	Limited	Low
Stream Bank Erosion	Highly Likely	Limited	Medium
Dam Failure	Unlikely	Major	N/A*
Levee Failure	Unlikely	Major	N/A*

Occurrence Scale (Probability of Future Events)	
Highly likely	Event probable in next year
Likely	Event probable in next 3 years
Occasional	Event possible in next 5 years
Unlikely	Event possible in next 10 years

Extent Scale (The Known Severity)	
High	Major extent is the potential maximum or near the top category for the Hazard e.g. EF5 Tornado
Medium	Medium extent is between major and minor extents e.g. EF2-EF3 Tornado
Low	Minor extent is the lower end category for the hazards e.g. EF0 Tornado

Using the above assessment tools the City of Farmers Branch HMPT the classified the risk of each hazard into four categories, High Risk; Moderate Risk; Low Risk and No Risk. The categories for City of Farmers Branch are as follows:

High Risk (over 65% on HIRA)	Tornado
Moderate Risk (41%- 65% on HIRA)	Hail Flooding
Low Risk (12 %-40% on HIRA)	Dam/Levee Failure Drought Earthquakes Extreme Heat High winds Lightning Winter Storms Wildfire Stream Bank Erosion

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Farmers Branch. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards. What follows is the hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Farmers Branch.

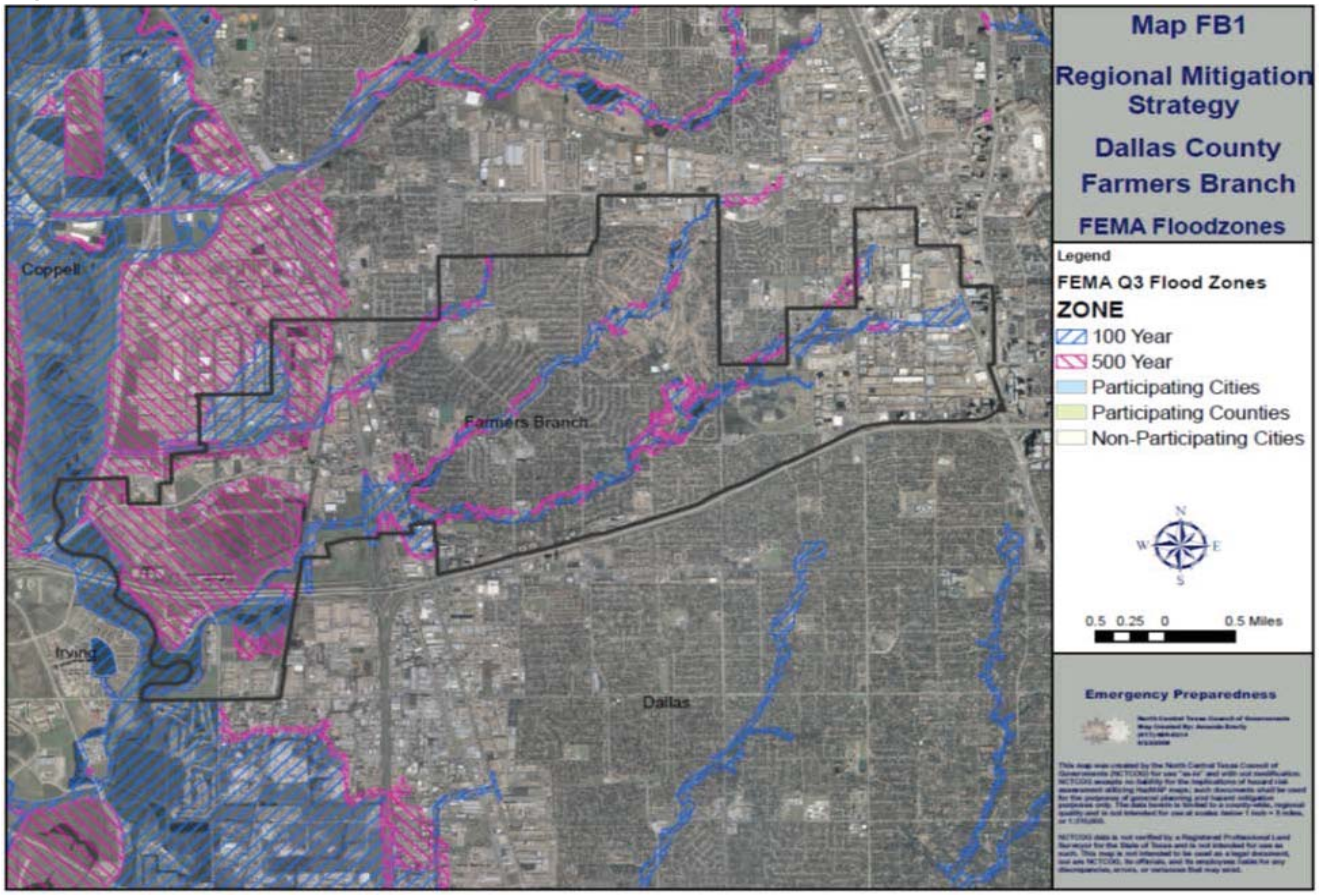
1. Flood: Most of the flooding issues identified in the adopted 2009 HazMAP for the City of Farmers Branch have not changed. The three creeks that run through the city flowing towards the Elm Fork of the Trinity River - Cooks Creek, Rawhide Creek, and Farmers Branch Creek are the major drainage channels for the entire city and for some portions of neighboring cities. During heavy rains, these creeks frequently rise rapidly.

Locations: On occasion flood waters have flowed over low bridge crossing and entered some homes. This is has occurred along the Cooks Creek at Bee Street, Rawhide Creek at Brookhaven Drive, and along Farmers Branch Creek between Marsh Lane and Valley View Lane. The elevation of water has never been a life-safety issue at the residences, but has resulted in inside water damage for approximately 3 homes. There have been occurrences of vehicles being washed off the roads at the low water crossings on Marsh Lane and Bee Street. There has been no occurrence of flooding near the Elm Fork of the Trinity River at the City's western boarder since levees were constructed by the Valwood Improvement Authority in the late 1970s. **Map FB1** depicts the vulnerable areas of the city in relation to the 100 and 500 year flood zones.

As indicated in the capabilities section of the city's annex, the City of Farmers Branch participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. According to the Texas Water Development Board there are 8 properties that are considered repetitive loss or severely repetitive loss properties in the City of Farmers Branch. A summary is provided below:

Farmers Branch	Years	Properties	Number of losses	Payments
Single Family	1982,1984, 1985, 1986, 1989, 1990, 1991, 1994, 1996, 2002, 2003, 2007, 2009, 2010, 2011	8	45	$713,092.13
Other Residential	-	-	-	-
Non Residential	-	-	-	-
Total		**8**	**45**	**$713,092.13**

Map FB1: Farmers Branch Flood Zone Map

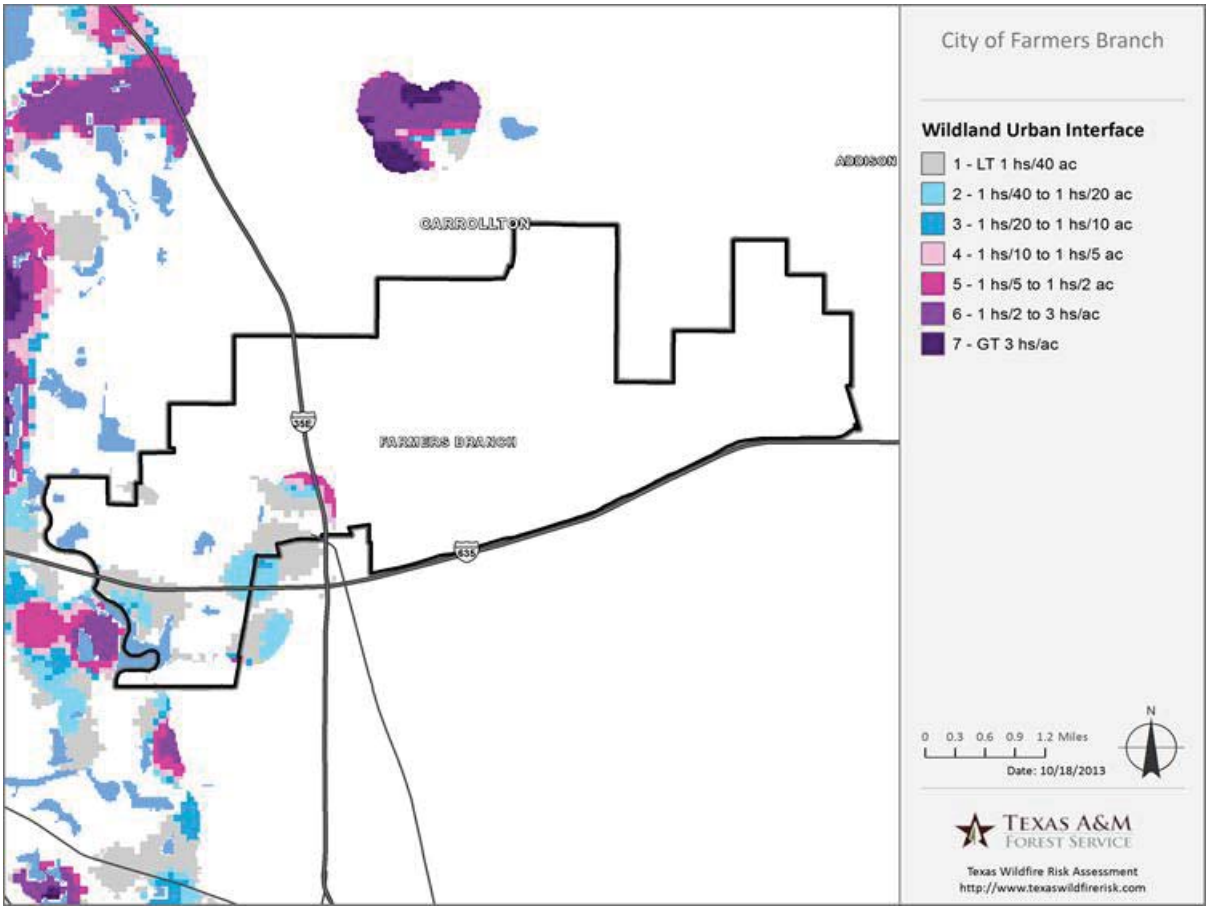


Source: North Central Texas Council of Government, DalMAS 2008

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas Forest Services (TFS), it is estimated that **20** people or **0 percent** of the City of Farmers Branch population 29,539 live within the WUI. The Wildland Urban Interface (WUI) Map below reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. **Map FB2** depicts the WUI areas for the City of Farmers Branch.

Map FB2: Wildland Urban Interface (WUI)



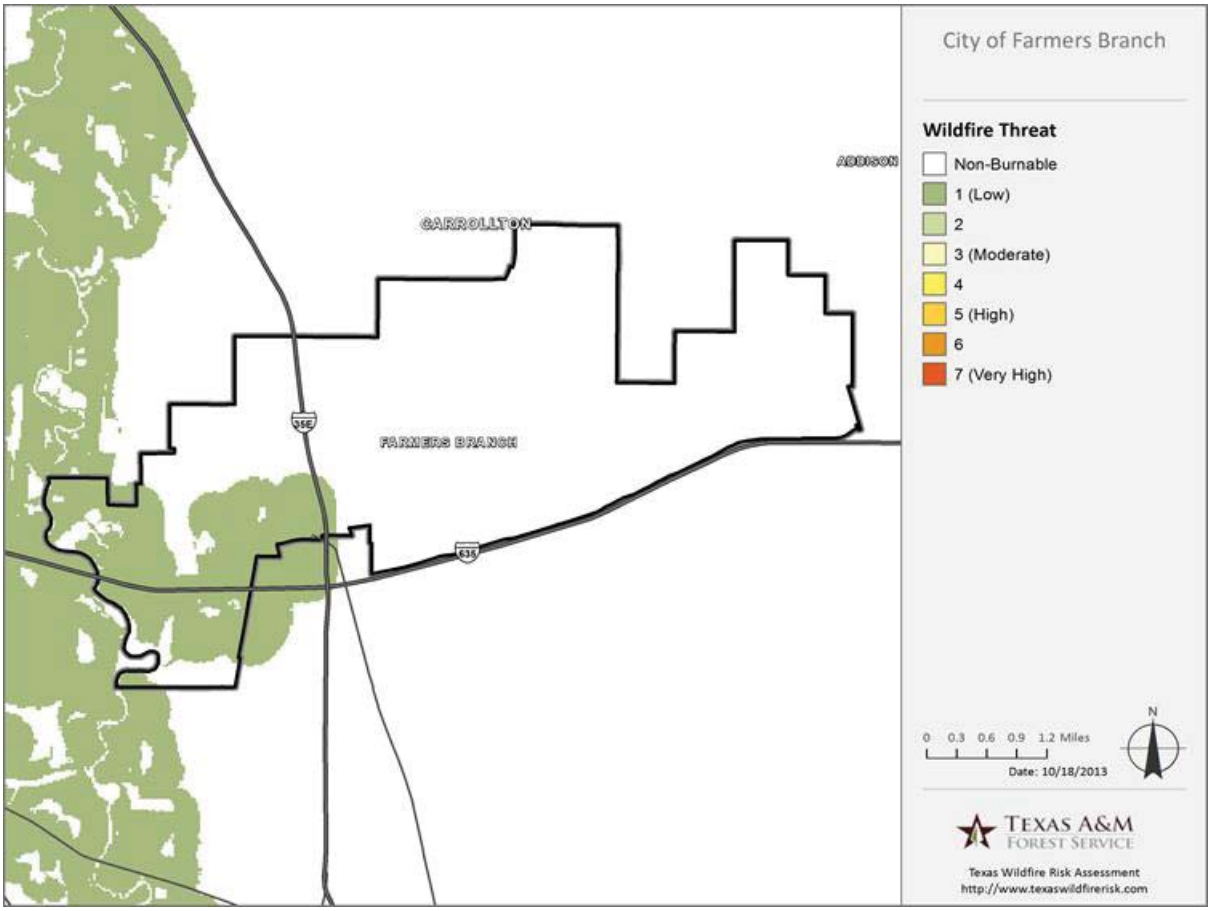
The Wildfire Threat for the City of Farmers Branch is ranges from Non-Burnable to Low. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas. **Map FB3** depicts the Wildfire Threat for the City of Farmers Branch.

Map FB3: Wildfire Threat



To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning. Historically, there have been no wildfires reported in the City of Farmers Branch.

C. Dam and Levee Failure: There are no dams or levees within the City of Farmers Branch. The city is assumed to be in the inundation area of Lewisville Lake Dam. Lewisville Lake Dam is located in Denton County and borders Dallas County to the northwest. Lewisville Lake Dam was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1955. USACAE operates and maintains the dam and it is used for flood damage reduction, water supply, recreation and non-federal hydropower.

The main components of the dam include an earthen embankment section, which serves as the main water barrier composed of compacted earth; a concreter spillway, a segment of the structure used to provide additional release of water from the dam during major flood events; and an outlet works used to release water from the dam. The earthen dam is 32,888 feet in length, 125 feet in height and the top of dam is 20 feet wide.

The design elevation of the top of the embankment is 560 feet (*Mean Sea Level (MSL) is the same as North American Vertical Datum 19880 or NAVD88)*. The foundation is made up of homogeneous fill constructed of impervious clays and shale. The concrete spillway is located on the left abutment section, and is 560 feet wide. The spillway has an elevation of 532 feet. The spillway can pass up to 1.8 million gallons per second approximately two and a half times the volume of an Olympic size swimming pool each second.

Dams reduce risk but they do not eliminate risk. Large amounts of water that could cause flooding downstream might have to be released when a flood exceeds the reservoir's storage capacity such as during a flood or storm event. Such a release could be damaging. In the event of a overtopping or breach of the dam an inundation risk has to be managed and to this end the USACE has programs in place to inspect and monitor the dam and implements short and long term actions on a prioritized basis when unacceptable risks are found.

For Lewisville Lake Dam, the primary areas impacted should the dam breach due to a full reservoir during a rare flood event; or major spillway/outlet works flows would include areas that are in the flood plain of the Elm Fork, a tributary of the Trinity River, that flows Southwest through Dallas County. The City of Farmers Branch is one of the jurisdictions that can be affected. The potential for loss of life is highest within a couple of miles of the dam with loss concerns decreasing substantially beyond 60 miles downstream of the dam.

The extent of Lewisville Lake Dam failure to the City of Farmers Branch has not been determined as a result of a lack of data regarding inundation levels. While there is information on Lewisville Lake Dam, this information is owned and maintained by the USACE. The City of Farmers Branch identifies the need to work more closely with the USACE and conduct additional studies to determine the extent of damage to the City of Farmers Branch in the event of a breach.

In addition, the Valwood Improvement Authority that was established by state law as a conservation and reclamation district for the Farmers Branch-Carrollton Flood Control District. One of the agency's projects is to provide protection from external and internal flood waters.

D. Earthquake: There are no known active geological faults within Farmers Branch. Neither is there historical data of earthquakes in the city. Earthquakes in Farmers Branch are considered as a low risk threat. Increased earthquakes activity has recently been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. As a result a data deficiency has been identified due to the lack of data and further research and studies are needed to obtain data to determine the most appropriate mitigation activities for earthquakes in the county.

E. Stream Bank Erosion: The City of Farmers Branch has several creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The City of Farmers Branch is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the City of Farmers Branch. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

F. Vector Borne Diseases: A Vector-borne disease is a term commonly used to describe an illness caused by an infectious microbe that is transmitted to people by blood-sucking arthropods. The arthropods (insects or arachnids) that most commonly serve as vectors include: 1.) blood sucking insects such as mosquitoes, fleas, lice, biting flies and bugs, and 2.) blood sucking arachnids such as mites and ticks. The term “vector” refers to any arthropod that transmits a disease through feeding activity.

West Nile Virus, spread through the bite of an infected mosquito, and can infect people, horses, many types of birds and some other animals. Most people who become infected with West Nile Virus will have either no symptoms or only mild symptoms. However, on rare occasions, West Nile Virus can result in severe and sometimes fatal illnesses.



The Environmental Health Division of Dallas County Health and Human Services began conducting mosquito-borne surveillance in 1966, as a response to an outbreak of St. Louis Encephalitis. However, in 2004 additional staff and resources significantly increased the efficiency of this program, thus enabling the program to better serve the citizens of

unincorporated Dallas County and other local municipalities. The occurrence of West Nile virus (WNV) in Texas resulted in many human cases that caused several human deaths in 2002 and 2003.

To address this growing public concern, Dallas County Health and Human Services (DCHHS) implemented a WNV and Vector-borne disease program. This program enabled local agencies in Dallas County to respond to vector-borne disease threats within their jurisdiction and it allowed them to take the necessary actions deem appropriate. With this infrastructure in place, DCHHS worked to increase communication and share resources to improve this practice.

Location and Extent: All persons living in the City of Farmers Branch are potentially exposed to the threat of vector-borne diseases. Vector-borne diseases typically pose little or no threat to structures; however, an estimate cannot be placed on the loss of life.

2005-2012 Human Cases								
	2005	2006	2007	2008	2009	2010	2011	2012
Neuroinvasive	24	67	11	8	13	0	2	173
Deaths	1	4	0	0	1	0	0	20
West Nile Fever	20	37	12	1	3	0	0	225
Total Cases	44	104	23	9	16	0	2	398

From the Dallas County Department of Health and Human Services

Probability of Future Occurrence: Future Occurrence of WNV is high in the City of Farmers Branch. According to the Texas Department of Health Services, up to 80 percent of people infected with West Nile virus will have no symptoms and will recover on their own, however, some cases can cause serious illness or death. People over 50 and those with weakened immune systems are at a higher risk of becoming ill if they become infected with the virus.

In the past, vector-borne diseases have caused severe epidemic events in Dallas County. Concerns about vector-borne diseases, especially West Nile virus, are increasing. While no threat to structures in the county, the entire population is at risk, which threatens the economy. Public health education efforts in Dallas County and in the City of Famers Branch need to be encouraged and supported.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Farmers Branch. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population in the City is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Farmers Branch. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in city
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in city
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Farmers Branch.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population in the City is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Farmers Branch due to winter storm events. All property, new, improved and existing property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Farmers Branch are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Farmers Branch are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Farmers Branch are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Farmers Branch is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Farmers Branch. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in City of Farmers Branch are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in City of Farmers Branch are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in City of Farmers Branch are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Farmers Branch have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage have been reported as a result of lightning in the City of Farmers Branch. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Farmers Branch are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Farmers Branch are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Farmers Branch are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Farmers Branch. All the population of City of Farmers Branch is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Farmers Branch. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Farmers Branch are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Farmers Branch are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Farmers Branch are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population in the City is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $55,000 of property damage was reported for City of Farmers Branch. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Farmers Branch indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Farmers Branch are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Farmers Branch are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Farmers Branch are exposed to this hazard.

Wildfire	
Population	Based on geographical data, approximately 5% of Farmers Branch is vulnerable to wildfires. Approximately 30,000 people live in the WUI area.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved property in the WUI areas are exposed to this hazard.
Emergency Facilities	Based on geographic information there are zero fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are four bridges, zero dams, zero wastewater treatment facility, and zero water treatment facility at risk from wildfire events.

Flooding	
Population	Flooding produces an expected annualized count of zero fatalities and injuries per year. Approximately 0% of the population of Farmers Branch is located within the 100-year floodplain.
Improved Property	A loss of $20,000 per year can be expected in property loss due to flooding, and 0.5 % of the total assessed value of improvements in Farmers Branch is at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are 6 critical facilities located within the 100-year storm event.
Critical Infrastructure	10% of railways/highways and bridges, 0% of dams, 0% of water treatment works, and 0% waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain due to unavoidable circumstances. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Changes in Population and Development

The City of Farmers Branch was a participant in the last Dallas County Hazard Mitigation Action Plan. The table 3.1 shows that the estimated growth in population for the City of Farmers Branch was from 28,616 to 29,660, an increase of 3.65%. The City of Famers Branch added 112 new single family homes and 1550 new multi-family units between 2008 and 2014. There were 19 new structural and economic development permits issued during the same period. These developments included mixed commercial use facilities, office, storage, restaurants, shopping and warehouse facilities. None of these new developments were built in floodplains.

To help mitigate the impacts of the hazards identified, the city identified broad mitigation strategies to lower the vulnerability due to the changes in population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stormwater ordinances, stricter code regulations such as the 2012

International Building and Fire Code Standards and expand education and awareness programs.

Essential Infrastructure Summary Report

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	✓ Village Oaks Assisted Living, 13505 Webb Chapel ✓ Dallas Medical Center, 7 Medical Parkway	2
Schools	✓ The Harrington School, 13341 Goodland St ✓ First Baptist Day School, 13017 William Dodson Parkway ✓ Vivian Field Middle School, 13551 Dennis Lane ✓ Arbor Creek Montessori School, 2713 Cookscreek Place ✓ Dallas Christian College, 2700 Christian Parkway ✓ Farmers Branch Elementary, 13521 Tom Field Road ✓ Hamilton Academy, 2725 Valley View ✓ Mary Immaculate, 14032 Dennis Lane ✓ Windsong Montessori School, 2825 Valley View ✓ Blair Intermediate School, 14055 Heartside Place ✓ Janie Stark Elementary, 12400 Josey Lane ✓ Carrollton/Farmers Branch Can Academy, 2720 Hollandale ✓ Christ United Methodist Child Development, 2807 Valwood ✓ Parkway Nancy Strickland Elementary, 3030 Fyke Road ✓ McLaughlin Elementary School, 1500 Webb Chapel Road ✓ YMCA-Johnson Outpost, 3325 Valley View Lane ✓ William Cabell Elementary School, 12701 Templeton Trail ✓ Brookhaven Country Club Child Care, 3331 Golfing Green Drive ✓ Brookhaven College, 3939 Valley View ✓ Parish Episcopal School, 4101 Sigma Road ✓ Vanguard Prep School, 4240 Sigma Road ✓ Westwood School, 14340 Proton Road ✓ Westwood High School, 14240 Midway 200	23
Police Stations / Detention Center	✓ 3723 Valley View Lane, Farmers Branch, TX 75234	1
Fire Stations	✓ 13601 Webb Chapel, Farmers Branch, TX 75234 ✓ 3940 Spring Valley Road, Farmers Branch, TX 75234 ✓ 13333 Hutton Drive, Farmers Branch, TX 75234	3
Emergency Operations Facilities	✓ 3723 Valley View Lane, Farmers Branch, TX 75234	1
Hazardous Materials Sites	✓ Stanley Tools, 12828 Valley Branch Drive ✓ Chromalloy, 14042 Distribution Way ✓ Colgate Pharmaceuticals, 14335 Gillis Road ✓ Maxim Industries, 4350 South Beltwood Parkway, Building ✓ A Garret Callahan, 13721 Welch Road ✓ RMAX, 13524 Welch Road ✓ Chemical Logistics, 13812 Dex Road ✓ City of Farmers Branch Service Center, 13333 Senlac Drive	8

Essential / Critical Facilities	Locations (GIS Coordinates)	Count
Water Pumping / Lift Stations	✓ Valley View Water Tower- 3725 Valley View ✓ Marsh Water Tower-14927 Marsh Lane ✓ Gillis Water Tower- 14337 Gillis ✓ Templeton Pump Station- 3407 Valley View ✓ Westside Water Tower- 13333 Davis Dr. ✓ Marsh Pump Station – 14927 Marsh ✓ Wicker Pump Stations- 2417& 2712 Wicker ✓ Hutton Lift Station – 1922 Diplomat ✓ FBOP Lift Station- 4821 LBJ ✓ Luna Road Lift Station- 11994 Luna ✓ Valwood Lift Station- SE Comer 135 & Valwood	11

Structure / Property and Flood Vulnerability *(confirm this with your GIS)*

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone (100 or 500)	Flood Overlay Zone Within / Outside
Residential	N/A	N/A	N/A
Commercial	$622,515,800	Yes	N/A
Industrial	0	N/A	N/A
Government / Public	0	N/A	N/A

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	-	N/A	No	Low
Commercial	$ 410,996,320.00	N/A	Yes	Low
Industrial	-	N/A	No	Low
Government / Public	-	N/A	No	Low

Mitigation Strategies

Based on the results of the risk and capability assessments, the Farmers Branch Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group, but were adjusted to accommodate the participating jurisdictions needs.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas that are prone to particular hazards and implement mitigation strategies to address
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation and recovery efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation and recovery efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Farmers Branch

- ✓ ***Objective 5-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*****:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Farmers Branch Action Item	Conduct studies to develop dam inundation maps for all dams that affect the City of Farmers Branch. These studies will be done in coordination with the owners and operators of the dams. Data obtained from the studies will assist the city in developing the most appropriate mitigation actions to save lives and property.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levee.
Discussion	As noted in this annex a data deficiency was identified for North Lake Dam, and Lake Lewisville Dam. Such a study can include procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

Farmers Branch Action Item	Implement the Texas Safe Room Rebate Program for residents of the City of Farmers Branch
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	3-A
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs.
Potential Matching Sources	Business donations.
Lead Department	Emergency Management
Implementation Schedule	Within one year of funds being approved.
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather.
Effect on New Buildings	Provides safe shelter in new building during severe weather.
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

Farmers Branch Action Item	Tree trimming program to minimize debris and protect power lines and infrastructure
Hazard(s) Addressed	High winds, winter storms, lightning and wildfire
Goal/Objective	2-A, 3-A, 1-A
Priority	High
Estimated Cost	$100,000
Potential Funding Sources	City of Farmers Branch
Lead Department	City of Farmers Branch Parks Department
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than having to deal with the effects that debris can cause following a sever event
Discussion	The regular maintenance and upkeep of utilities can help prevent wind damage. Possible strategies include establishing standards for all utilities regarding tree pruning around lines and incorporating inspection and management of hazardous trees into the drainage system maintenance process

City of Farmers Branch	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion, dam/levee failure
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Farmers Branch Fire Department
Implementation Schedule	2 Years
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Farmers Branch	Improve the drainage infrastructure at confluence of Farmers Branch and Rawhide Creeks. This may involve increasing the capacity of storm water drainage as well as increasing dimensions of drainage culverts
Hazard(s) Addressed	Flooding, dam/levee failure
Goal/Objective	2-B
Priority	High
Estimated Cost	$2,000,000.00
Potential Funding Sources	Hazard Mitigation Grant Program
Potential Matching Sources	Budget
Lead Department	Public Works
Implementation Schedule	2 Year after Grant approval
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Improving the storm water drainage system capacity will prevent any damage to Interstate 35 and the frontage roads near and under the Interstate.

Farmers Branch Action Item	Retrofit Public Buildings and Critical Facilities
Hazard(s) Addressed	High winds, winter storms, lightning, hail, extreme heat, tornados, wildfires, flooding
Goal/Objective	2-B
Priority	Low
Estimated Cost	$500,000
Potential Funding Sources	HMGP, PDM, state and federal grants, city budget
Lead Department	City of Farmers Branch Facilities & Fleet Division
Implementation Schedule	2 years after the receipt of funding
Effect on Old Buildings	Old building that house critical facilities and equipment will be retrofitted to higher standards
Effect on New Buildings	New city facilities will be built to FEMA 361 standards
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Public buildings and critical facilities can be retrofitted to reduce future severe weather events with action that can include improving roof coverings, anchoring roof-mounted heating, ventilation, and air conditioning units, retrofitting buildings with load-path connectors to strengthen the structural frames, retrofitting or constructing the emergency operations center to FEMA 361 standards, avoiding placing flag poles or antennas near buildings, implement lightning protection systems to prevent roof cover damage, requiring upgrading of reused buildings that will house critical facilities, protecting traffic lights and other traffic controls from high winds and winter weather

Farmers Branch Action Item	Lightning protection/alarms: These systems protect citizens and employees who utilize outdoor recreation and sports facilities during weather events that produce cloud to ground lightning
Hazard(s) Addressed	Lightning
Goal/Objective	2-C
Priority	Medium
Estimated Cost	$6,000/each
Potential Funding Sources	City Budget & Hazard Mitigation Grants
Lead Department	Parks & Recreation Department
Implementation Schedule	Within one year of funding.
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Installing such systems will help warn staff and other users of city outdoor facilities to seek shelter

City of Farmers Branch Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	3-D
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	General fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	City of Farmers Branch Fleet & Facilities Division in collaboration with Dallas County Health & Human Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Farmers Branch Action Item	Initiate a targeted fuel load reduction campaign to reduce the potential of a WUI fire event
Hazard(s) Addressed	3-A
Goal/Objective	Low
Priority	Wildfire
Estimated Cost	Unknown - To be determined
Potential Funding Sources	State, federal and local funding. Private and donor funding will also be explored
Lead Department	City of Farmers Branch Community Services and Fire Departments
Implementation Schedule	Funding Dependent
Effect on Old Buildings	Creating a defensible space around structures will reduce risk
Effect on New Buildings	Creating a defensible space around structures will reduce risk
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches, replacing flammable vegetation with less flammable species, creating defensible zones around power lines, oil and gas lines and other infrastructure systems

Farmers Branch Action Item	Install an automatic barrier at the low-water bridge on southbound Marsh Lane over Farmers Branch
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$75,000
Potential Funding Sources	City of Farmers Branch Capital Improvement Fund or Federal grants.
Lead Agency/Department Responsible	City of Farmers Branch Engineering Department
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of installing this automatic barriers will save lives
Discussion	Mitigation will be implemented by protecting bridge using stabilizing and armoring techniques to prevent the vulnerable areas of the bridge. In addition the barriers will also prevent bridge users from accessing the bridge during flood events

Farmers Branch Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings.
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

City of Farmers Branch Action Item	Implement water-wise program for the City of Farmers Branch. This program will include purchasing water saving equipment and fixtures, such as low flow fixtures, in all city facilities
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$200,000
Potential Funding Sources	General Budget
Lead Department Responsible	Permits and Inspection Department
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

Farmers Branch Action Item	Initiate a targeted fuel load reduction campaign to reduce the potential of a WUI fire event
Hazard(s) Addressed	3-A
Goal/Objective	Low
Priority	Wildfire
Estimated Cost	Unknown - To be determined
Potential Funding Sources	State, federal and local funding. Private and donor funding will also be explored
Lead Department	City of Farmers Branch Community Services and Fire Departments
Implementation Schedule	Funding Dependent
Effect on Old Buildings	Creating a defensible space around structures will reduce risk
Effect on New Buildings	Creating a defensible space around structures will reduce risk
Cost Effectiveness	The cost of implementing this program is much less than the benefits
Discussion	Creating buffers around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches, replacing flammable vegetation with less flammable species, creating defensible zones around power lines, oil and gas lines and other infrastructure systems

City of Farmers Branch Action Item	Form Partnerships with the USACE on how to expand resources and improve coordination by forming a regional planning and coordination council or committee to assist in comprehensive analysis, planning, decision-making and cooperation
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Dam/Levee Failure
Priority (High, Medium, Low):	Low
Estimated Cost	No cost – Staff Time
Potential Funding Sources	General Budget
Lead Department Responsible	City of Farmers Branch Engineering Department
Implementation Schedule	Within 24 months of approval of City Council
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost of implementation this program is low compared to the benefits
Discussion	Partnerships between local, state, and regional entities help expand resources and improve coordination

City of Farmers Branch	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Farmers Branch

Plan Maintenance

This section sets the intention for the City of Farmers Branch to monitor, evaluate, and update this plan on a regular basis. The Emergency Management Specialist will be responsible for leading the monitoring, evaluation and update efforts of the plan. The activities involved in the process are provided in the table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Farmers Branch	Emergency Management Specialist	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will call the Farmers Branch Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Farmers Branch Fire Department will report the outcomes of the HMPT meetings to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Farmers Branch City Council. The Farmers Branch Hazard Mitigation Team will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Farmers Branch or its communities, legal changes, and other events may trigger a meeting of the Farmers Branch Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Farmers Branch is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Farmers Branch will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Farmers Branch will engage stakeholders in community emergency planning.

Plan Integration

The City of Farmers Branch will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Farmers Branch	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

FB - A1. City of Farmer's Branch HIRA

FB - B1. Texas Standard

FB - B2. Supporting and Meeting Documentation

FB - C1. Survey Results

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Farmers Branch
Hazard Identification and Risk Assessment (HIRA)
Date: September 5, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	2	2	2	2	2	6	33%
Hail	4	4	3	3	2	3	2	7	42%
Lightning	4	4	2	2	3	2	1	6	33%
Winter Storms	3	3	3	3	3	2	3	8	37%
Tornado	4	1	2	8	3	3	3	9	88%
Flooding	2	1	1	2	1	1	2	4	50%
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat	2	2	2	2	3	1	1	5	40%
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire	1	1	1	1	1	1	1	3	33%
Utility Failure									
Energy/Fuel Shortage	1	1	1	1	1	1	1	3	33%
Terrorist Attack	1	1	1	1	3	3	2	8	12%
Urban Fire	1	1	2	2	1	1	1	3	66%
Earthquake	1	1	1	1	1	2	1	4	25%
Levee/Dam Failure	1	1	1	1	2	3	3	8	12%
Drought	4	4	3	3	2	3	3	8	37%
Aircraft Accident	3	1	3	1	3	3	3	9	11%
Stream Bank Erosion	4	4	3	3	2	3	3	8	37%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

NB: This City of Farmers Branch HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix FB B-1: Texas Standards For The City of Farmers Branch

This section is an update of Chapter 6 of the 2008 Dallas County Hazard Mitigation Action Plan (HazMAP) for the City of Farmers Branch

Element 1

1.1 Hazard Mitigation Grant Program: The City of Farmers Branch is applying for this program.

1.2 Pre-Disaster Mitigation Grant Program: The City of Farmers Branch is not participating in this program.

1.3 Project Impact: The City of Farmers Branch is not participating in this program.

1.4 Hurricane-Property Protection Mitigation: The City of Farmers Branch is not participating in this program.

1.5 Flood Mitigation Assistance: The City of Farmers Branch is not participating in this program.

1.6 406 Mitigation (Through the Public Assistance Program): The City of Farmers Branch is not participating in this program.

Element 2

2.1 Date and type of building code: The City of Farmers Branch has adopted the 2012 edition of the International Building Code, Residential Code, Plumbing Code, Mechanical Code, Energy Conservation Code, and the 2011 National Electrical Code.

2.2 How is it being enforced?: The building inspection staff includes a Building Official, Plans Examiner and 2 Inspectors. Building Inspection Staff carries multiple certifications and licenses in the trade they inspect. The 2 inspectors performed over 8300 inspections in the 12 months review period on construction value exceeding 98 million dollars for approximately 2600 permits issued for new construction and remodeling of residential and commercial buildings.

Element 3

3.1 Date and type of fire code: The City of Farmers Branch has adopted the 2012 edition of the International Fire Code.

3.2 How is being enforced?: The Fire Prevention Division consists of a Fire Marshal, Fire Prevention Specialist, Lt. Fire Inspector and a Public Education Coordinator. Approximately 1300 fire inspections are made each year and all new commercial property construction is reviewed for fire compliance.

Element 4

4.1 Any other codes, sub-division regulations, etc., that are in effect: The City of Farmers Branch does not have any other codes.

4.2 How are they being enforced? : N/A

Element 5

5.1 Ordinance/Order Date: The City of Farmers Branch adopted Ordinance No. 1670 in 1987 to regulate activities within the 100-year floodplain.

5.2 Is there a Floodplain Administrator: The City Engineer serves as the Floodplain Administrator

5.3 Is the Floodplain Administrator certified (CFM)? Yes

5.4 Date of current floodplain maps: August 23, 2001

5.5 Any codes, regulations, etc. that prohibit development in the floodway and/or floodplain?: Ordinance No. 1670

Element 6

Findings/Results of Building Code Effectiveness Grading Report (BCEGS). Including the date and score: The City of Farmers Branch has not participated in this report.

Element 7

7.1 Capitol Improvement Plans: The City of Farmers Branch develops a Capital Improvement Plan during the annual budget process.

7.2 Comprehensive Plans: The City of Farmers Branch developed Comprehensive Planning guidelines in 1989

7.3 Storm Water Management Plans: The City of Farmers Branch does have a Phase 1 Storm Water Management Plan.

7.4 Master Drainage Plans: The City of Farmers Branch does have a Master Drainage Plan.

7.5 Corps of Engineers: As a result of the Upper Trinity River Environment Impact Statement (1990), the City of Farmers Branch participated with the North Central Texas Council of Governments, three counties, and eight other cities to establish the “Common Vision for the Trinity River” that includes common permitting standards, review, and tracking of development along the Elm Fork of the Trinity River, West Fork of the Trinity River, and main channel of the Trinity River through Dallas. The result of the cooperative effort is that the risk of flooding along the Elm Fork of the Trinity River as it flows through the City of Farmers Branch has been stabilized. By stabilizing the risk of flooding, flood damage has been minimized.

7.6 Flood Mitigation Plan: No

7.7 Any other plans, studies, etc. that may have been done in your jurisdiction:

- ✓ The Farmers Branch Creek Erosion and Sedimentation Study – 1999
- ✓ The Farmers Branch Creek Study – 1987
- ✓ The Cookscreek Creek Study – 1989
- ✓ The Rawhide Creek Study – 1988

Appendix FB B-2: Supporting Documentation

LOCAL MITIGATION STRATEGY PUBLIC MEETING SIGN-IN SHEET

Jurisdiction:	Farmers Branch	**Meeting Date:**	8-2-13
Facilitator:	Steve Parker	**Place/Room:**	FIRE Admin

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
Tim Dedear	Deputy Chief/Fire Marshal	FBFD	972-919-2656	tim.dedear@farmersbranchtx.gov
Steve Parker	Fire Chief /EMC	FBFD	972 919 2640	steve.parker@farmersbranchtx.gov
Charles Dibrell	City EJ/FB	FB	972 919 2593	Charles.dibrell@ " "

LOCAL MITIGATION STRATEGY PLANNING TEAM MEETING SIGN-IN SHEET

Jurisdiction:	FARMERS BRANCH	**Meeting Date:**	6-6-13
Facilitator:	ROSS	**Place/Room:**	FARMERS BRANCH F.D. (TRAINING)

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
DON ROSS	FIRE INSPECTOR	FARMERS BRANCH F.D.	972-919-2684	DON.ROSS@FARMERSBRANCH.INFO
TIM DEDEAR	ASST EMC/FIRE MARSHAL	FBFD	972 919 2652	tim.dedear@farmersbranchtx.gov
Robin Edwards	Park Maint Supervisor	PARD	972-919-2623	Robin.edwards@farmersbranchtx.gov
Maria Minter	Athletic Coord	PARD	972.919.2598	Maria.minter@farmersbranchtx.gov
Jim Ouk	Dir. Comm Srvs	CFS	972-919-2533	
Beena Jacob	Eng. Specilist	CFB	972-919-2592	beena.jacob@farmersbranch.info
Stacy Wright	Dir. Env. Health	CFB	2539	stacy.wright@farmersbranchtx.gov
Steve Parker	E.M.C.	FBFD	972-919-2684	STEVE.PARKER@FARMERSBRANCH.INFO
Michael Gaciri	Hazard Mitigation Specialist	Dallas County	972 653 6962	michael.gaciri@dallascounty.org

LOCAL MITIGATION STRATEGY PLANNING TEAM MEETING SIGN-IN SHEET

Jurisdiction:		Meeting Date:	6-26-13
Facilitator:	DON ROSS	Place/Room:	FARMERS BRANCH OFFICE

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
DON ROSS	ARSON INVESTIGATOR	FARMERS BRANCH	972-919-2644	DON.ROSS@FARMERSBRANCH.INFO
Beena Jacob	Eng. Specialist	Farmers Branch	972-919-2592	beena.jacob@farmersbranchtx.gov
Charles Cancellor	Park Superintendent	Farmers Branch	972 919 2628	charles.cancellor@farmersbranch.info
Stacy Corish	Dir. Env. Health	City of FB	972-919-2539	stacy.corish@farmersbranch.info

LOCAL MITIGATION STRATEGY PLANNING TEAM MEETING SIGN-IN SHEET

Jurisdiction:	Farmers Branch	Meeting Date:	7-25-13
Facilitator:		Place/Room:	FARMERS BRANCH F.D.

ATTENDEE SIGN IN

Name	Title	Company	Phone	E-Mail
DON ROSS	FIRE INSPECTOR	F.B. F.D.	972-919-2644	DONALDPROSS@VERIZON.NET
Tim Dedear	FIRE MARSHAL	FBFD	972 919 2656	tim.dedear@farmersbranch.info
Elliott Reep	EMC	Carrollton	972-466-4739	elliott.reep@cityofcarrollton.com
Steve Parker	EMC	FBFD	972-919-2684	STEVE.PARKER@FARMERSBRANCHTX.GOV

City of Farmers Branch

City Hall
13000 Wm. Dodson Pkwy.
Farmers Branch, TX 75234

FARMERS BRANCH

Meeting Agenda - Final

Tuesday, September 3, 2013

6:30 PM

Council Chambers

City Council

Study Session Meeting to be held at 4:00 PM in Study Session Room

Hard copies of the full City Council agenda packet are accessible prior to every regularly scheduled Tuesday Council meeting according to the following locations and schedule:

1) Manske Library on the Saturday prior to the meeting
2) Justice Center on the Friday evening prior to the meeting
3) City Hall on the day of the meeting

Additionally, the agenda packet is available for download from the City's web site at www.farmersbranch.info after 10 a.m. on the day of every regularly scheduled City Council meeting. This download may be accessed from any computer with Internet access, including computers at the Manske Library and in the lobby of City Hall.

As authorized by Section 551.071(2) of the Texas Government Code, this meeting may be convened into closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any agenda item listed herein.

Any individual who wishes to speak on an agenda item should fill out a Registration Form for Appearance before City Council (white card located in the back of the Council Chambers) and submit the completed card to the City Secretary or City staff member prior to the start of the City Council meeting. Those individuals will be recognized during the meeting at the time the agenda item is presented.

Any individual who wishes to place an item on a future City Council agenda should fill out a Request for Future City Council Agenda Item (blue card also located in the back of the Council Chambers). Completed cards should be submitted to the City Secretary.

A. STUDY SESSION

A.1 **Discuss regular City Council meeting agenda items.**

Sponsors: Angela Kelly and City Secretary

A.2 TMP-0229 **Discuss the City Manager's balanced budget and organizational funding requests related to the adoption of the Farmers Branch 2013-14 fiscal year budget.**

Sponsors: Charles Cox and Managing Director - Administration

Attachments: Budget Presentation

A.3 TMP-0268 **Receive an overview of June 13, 2013 Town Hall Meeting survey results.**

Sponsors: Angela Kelly, City Secretary, Andy Gillies, Director of Planning, Alexis Jackson and Senior Planner

Attachments: Town Hall Survey Results

A.4 TMP-0269 **Discussion regarding Senate Bill 1297 Online Message Boards.**

Sponsors: Angela Kelly, City Secretary, Charles Cox and Managing Director - Administration

Attachments: Senate Bill 1297

TML - SB 1297 Online Message Board Discussions

B. INVOCATION & PLEDGE OF ALLEGIANCE

C. CEREMONIAL ITEMS

C.1 TMP-0262 **Presentation of the Fire Department's Award for Exemplary Action to Farmers Branch resident Carolyn Halliburton.**

Sponsors: Steve Parker and Fire Chief

Attachments: Award of Exemplary Action to Carolyn Halliburton

C.2 TMP-0284 **Proclamation recognizing September as Library Card Sign-up Month.**

Sponsors: Rachael Johnson, Assistant to the City Manager, Belinda Jacks and Library

Attachments: Proclamation

C.3 TMP-0290 **Proclamation recognizing September 3, 2013 as Fred Ferguson Day in Farmers Branch.**

Sponsors: Angela Kelly and City Secretary

Attachments: Proclamation

D. REPORT ON STUDY SESSION ITEMS

E. ITEMS OF COMMUNITY INTEREST

Pursuant to Section 551.0415 of the Texas Government Code the City Council may report on the following items: 1) expression of thanks, congratulations or condolences, 2) information about holiday schedules, 3) recognition of individuals, 4) reminders about upcoming city events, 5) information about community events and 6) announcements involving an imminent threat to public health and safety.

F. CITIZEN COMMENTS

The City Council invites citizens to speak to the City Council on any subject not listed on the City Council agenda. Any person who desires to address the City Council on such item shall complete and submit a Citizen Comments Registration Card to the City Secretary or City staff member prior to the start of the City Council meeting. Those individuals will be recognized by the Mayor during the meeting at the time Citizen Comments Section is reached. When your name is called please approach the speaker's podium in the center of the Council Chambers, state your name and address for the record, and discuss the specific subject or topic of interest. Please direct your comments to the Mayor. Each speaker will be limited to three (3) minutes. Speaker time may not be shared with, or reserved for, other speakers.

The City Council may not take specific action on any subject raised by a speaker during Citizen Comments. The City Council may: have the item placed on a future agenda for action; refer the item to the City Manager and/or staff for further study or action; briefly state existing City policy; or provide a brief statement of factual information in response to the inquiry.

G. CONSENT AGENDA

G.1 TMP-0288 **Consider approval of minutes of the City Council meeting held on August 20, 2013 and take appropriate action.**

Sponsors: Angela Kelly and City Secretary

Attachments: City Council meeting minutes of August 20, 2013

G.2 TMP-0291 **Consider approving Resolution No. 2013-054 allowing a "Temporary Carnival" per Ordinance No. 1770 for the Mary Immaculate Catholic Church Annual Parish Fall Festival, located at 2800 Valwood Parkway, to be held on October 4, 2013 and October 5, 2013, and take appropriate action.**

Sponsors: Angela Kelly and City Secretary

Attachments: Resolution No 2013-054

Request from Mary Immaculate Catholic Church

H. PUBLIC HEARINGS

H.1 TMP-0226 **Conduct a public hearing and consider adopting a 57.31-cent property tax rate and take appropriate action.**

Sponsors: Charles Cox and Managing Director - Administration

H.2 13-SU-05 **Conduct a public hearing and consider adopting Ordinance No. 3242 approving a Specific Use Permit allowing a detached accessory building greater than 120 square feet in area, located at 3320 Rockmartin Drive, and within the One Family Residential District 1 (R-1) and take appropriate action.**

Sponsors: Andy Gillies and Director of Planning

Attachments: Location Map
Aerial Map
Staff Report
Ordinance No 3242
Accessory building Floor Plan
Primary Residence Elevations
Proposed Rear Yard Pool Design
Site Photographs

Legislative History

8/26/13 Planning and Zoning Commission recommended for approval

Andy Gillies gave a brief presentation regarding the request. He stated the new property owners were in the process of renovations to the clubhouse area, an approximate 136 square foot addition, that required a specific use permit.

Terry Moore, 14860 Montfort, Dallas, representing the applicant, was available for questions.

Mr. Gillies stated that 12 notices were mailed to surrounding property owners. City staff received one response in favor.

Chairman Patterson opened the public hearing and asked if anyone wanted to speak regarding the request. There being none, the public hearing was closed.

H.3 TMP-0222 **Conduct a public hearing and receive a presentation of the 2013 City of Farmers Branch/Dallas County Hazard Mitigation Action Plan (HazMAP) Update.**

Sponsors: Steve Parker and Fire Chief

Attachments: Identified Mitigation Goals
Hazard Identification & risk Assessment
Hazard Mitigation Plan Presentation

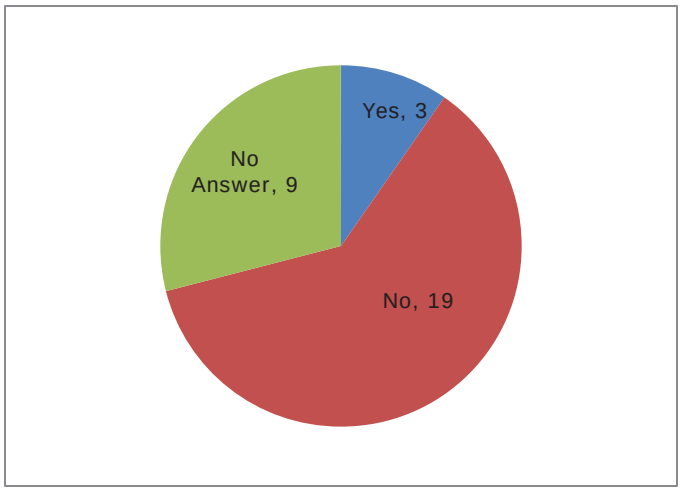
I. REGULAR AGENDA ITEMS

Appendix FB C-1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

   ✓ City of Farmers Branch (31 responses)

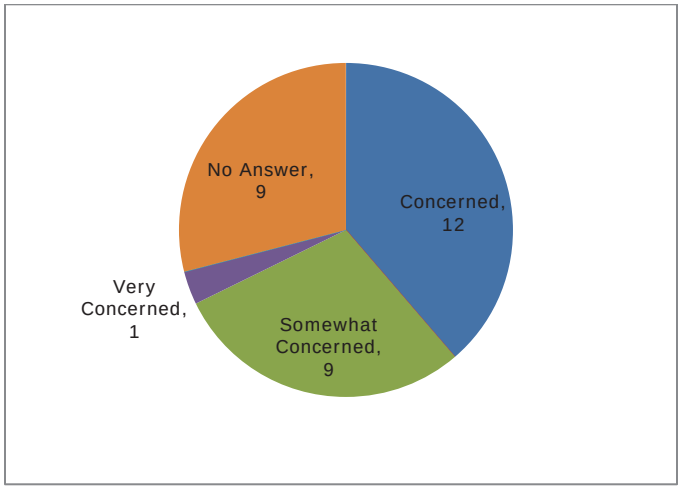
2. Have you ever experienced or been impacted by a disaster?



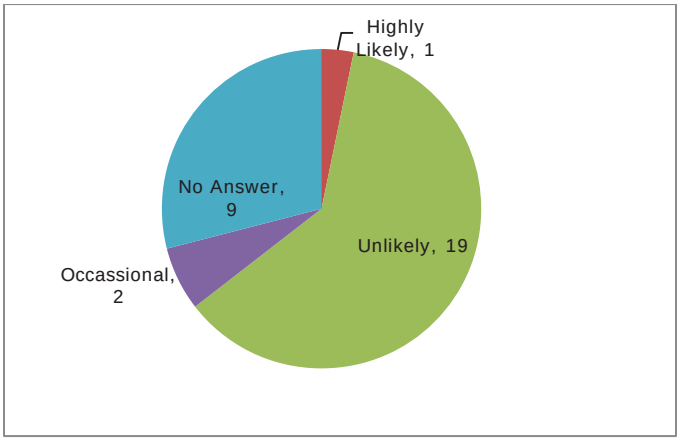
If "Yes", please indicate what hazard you have endured and where it occurred?

✓ "Hurricane Roxanne in Cozumel, MX 1995"
✓ "Hurricane Carla 1961 or so. Houston. Loss of power and tree damage."
✓ "Tornado, 1972"

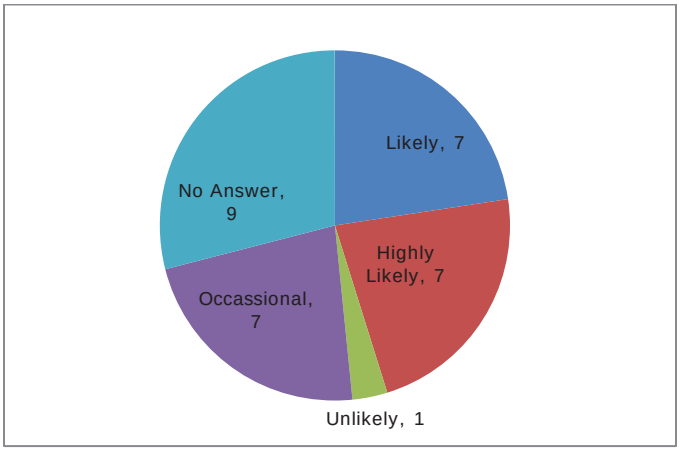
3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



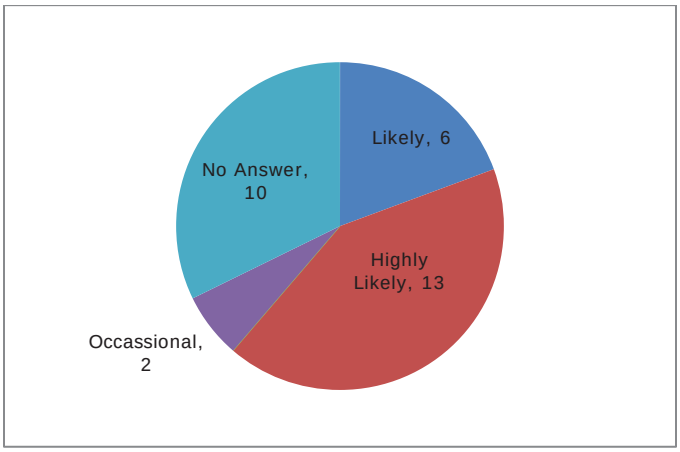
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact
   a. Earthquake



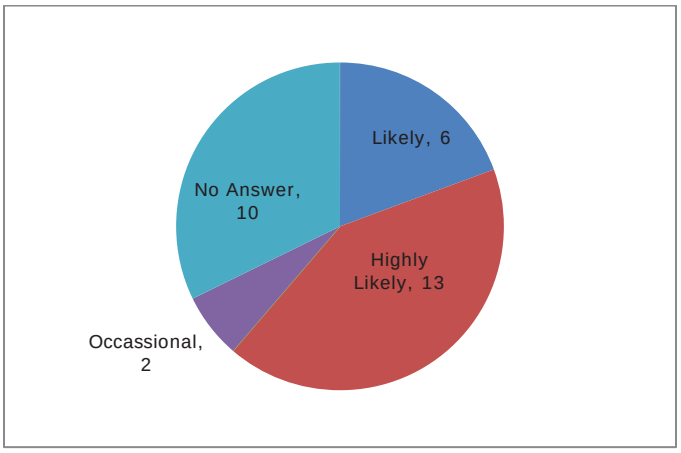
   b. Tornado



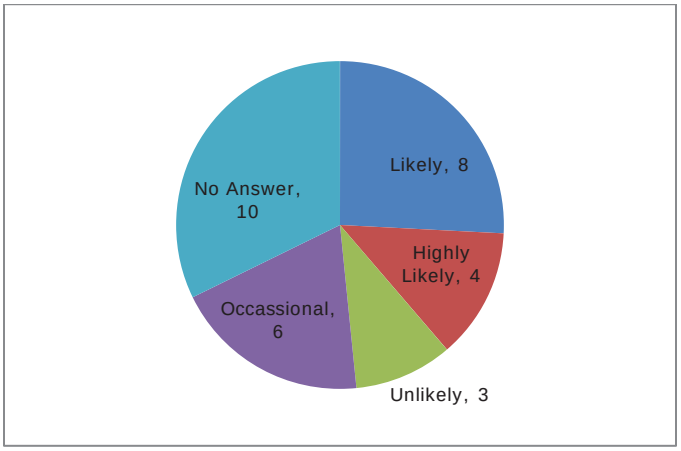
   c. Hail



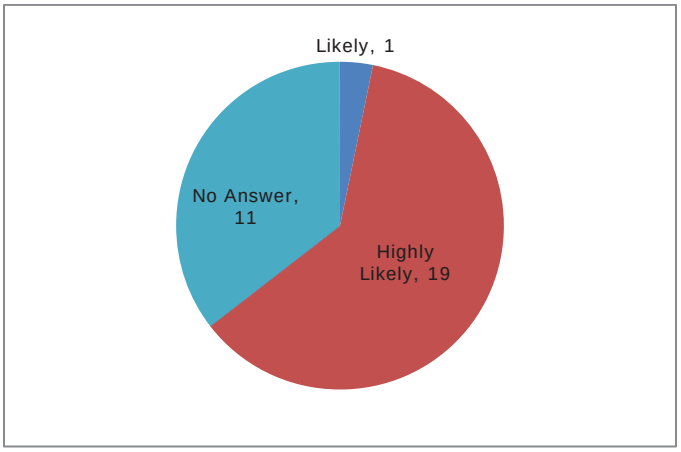
d. High Winds



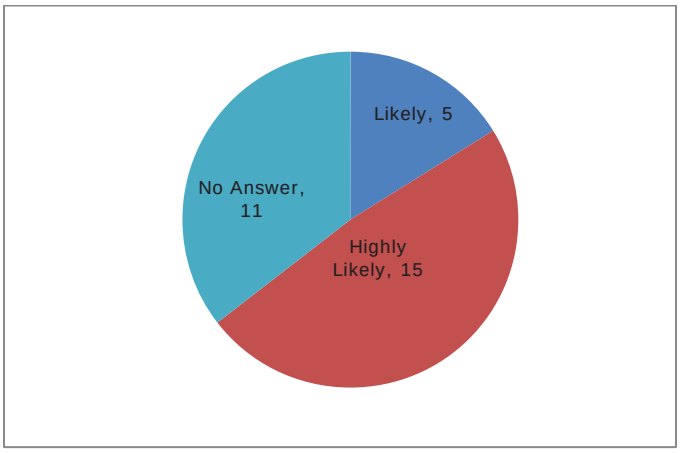
e. Winter Storms



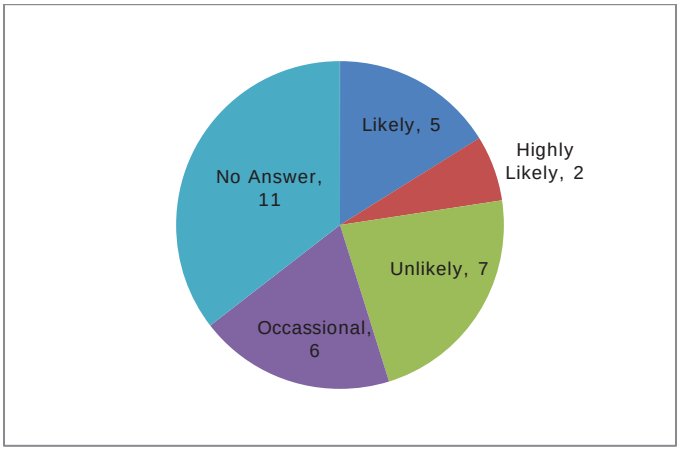
f. Extreme Heat



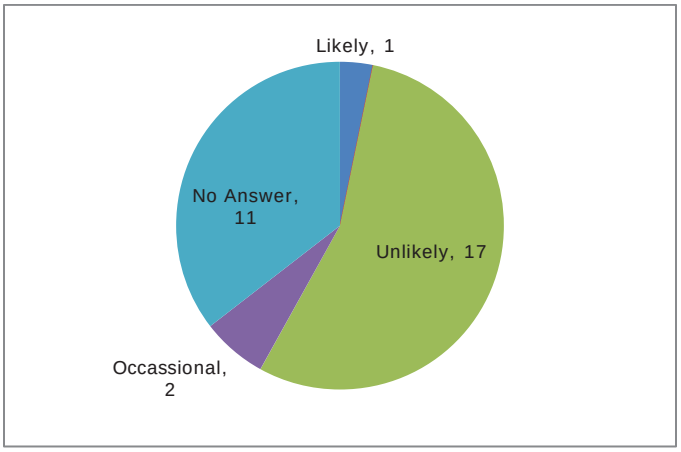
g. Drought



h. Flooding



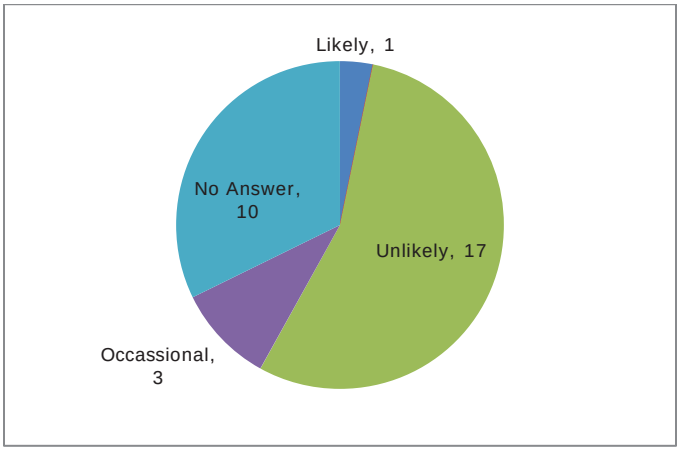
i. Dam Failure



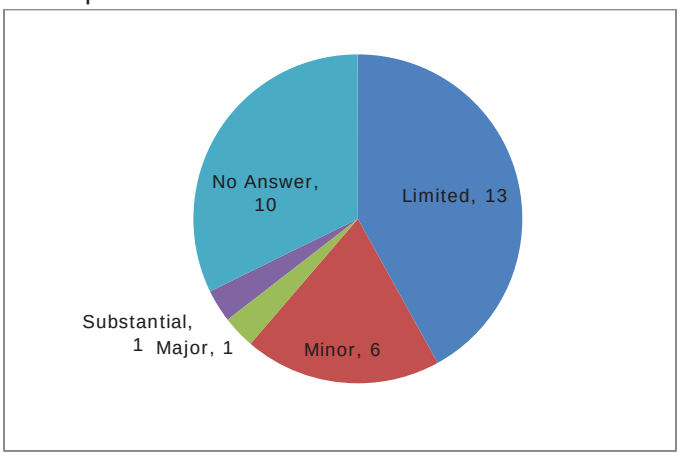
j. Stream Bank Erosion



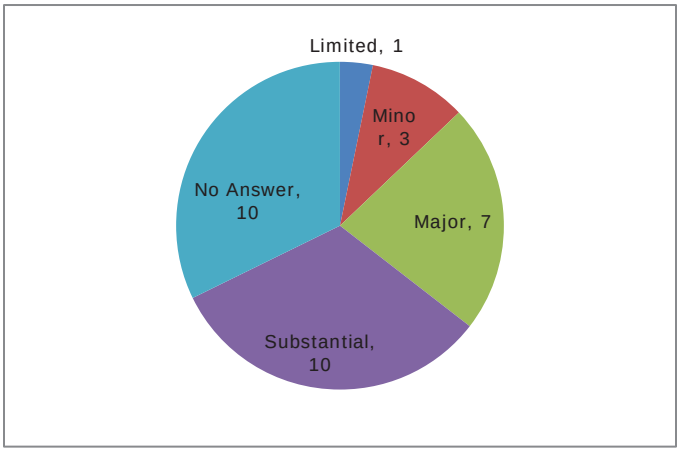
k. Levee Failure



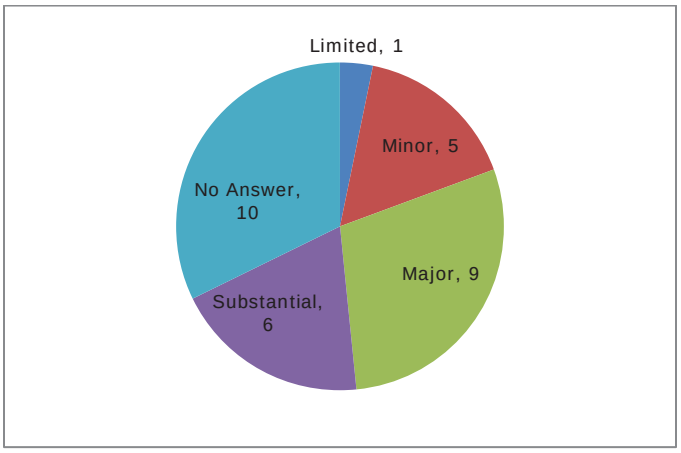
5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.
   a. Earthquakes



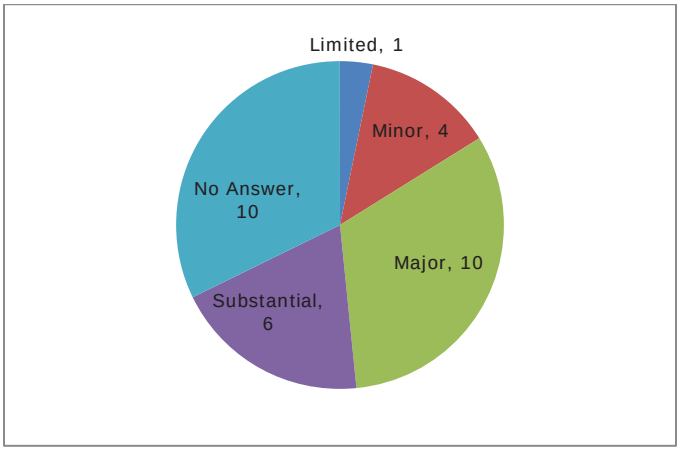
   b. Tornado



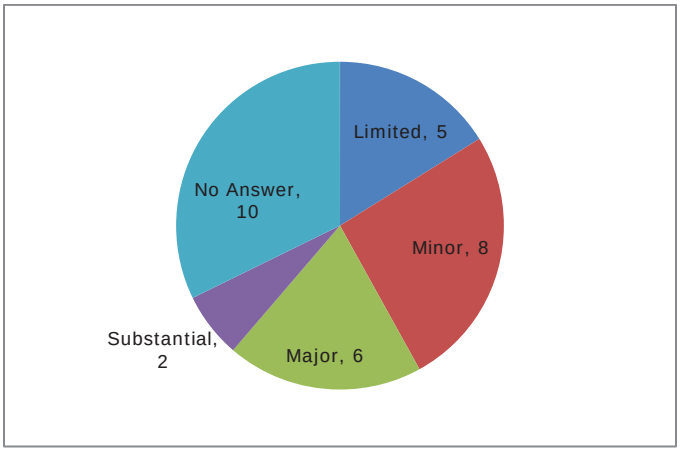
c. Hail



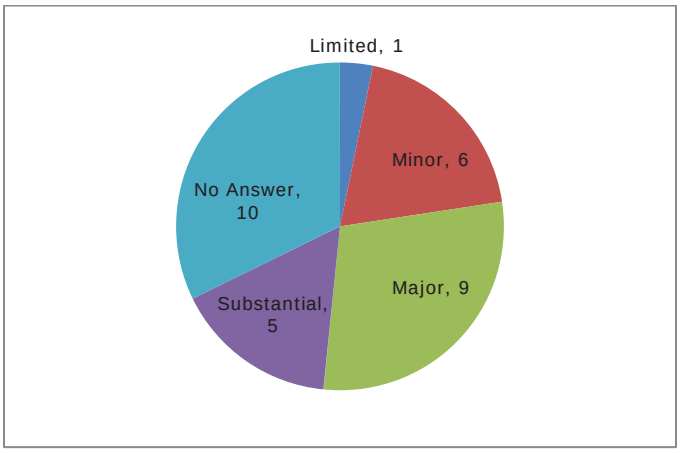
d. High Winds



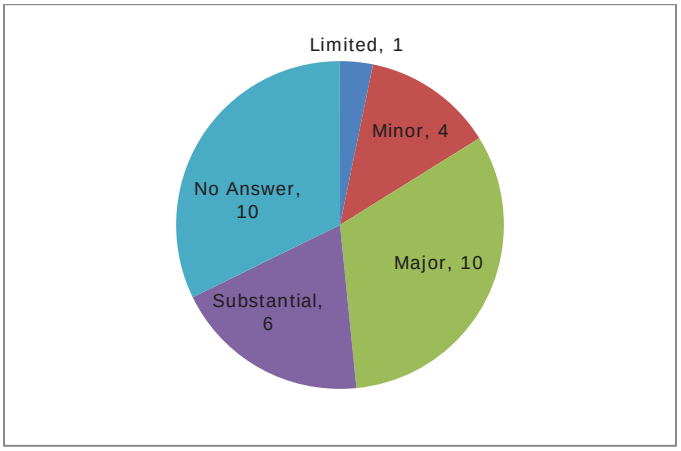
e. Winter Storms



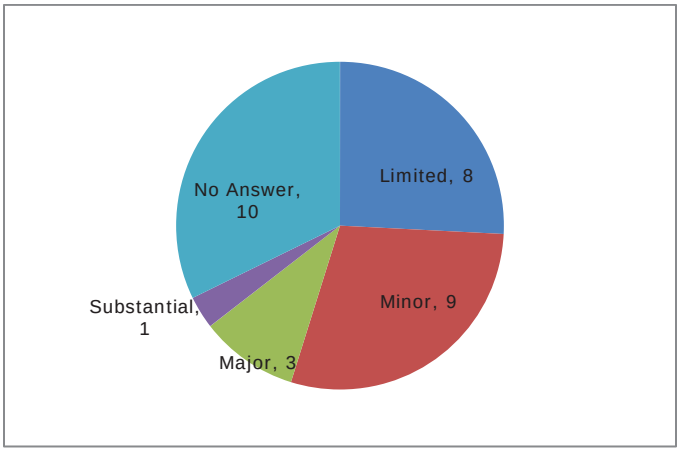
f. Extreme Heat



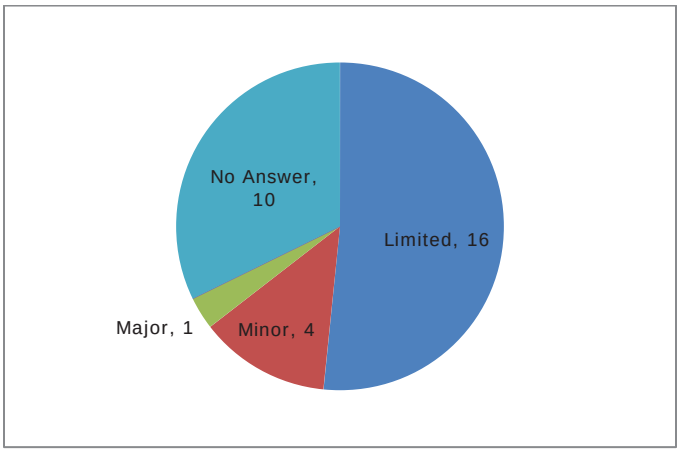
g. Drought



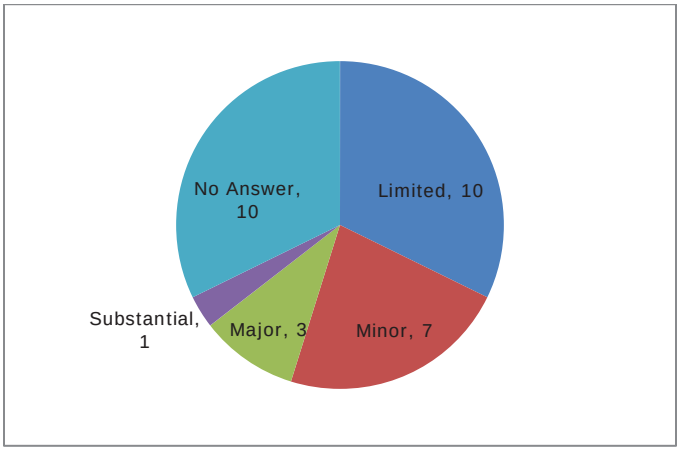
h. Flooding



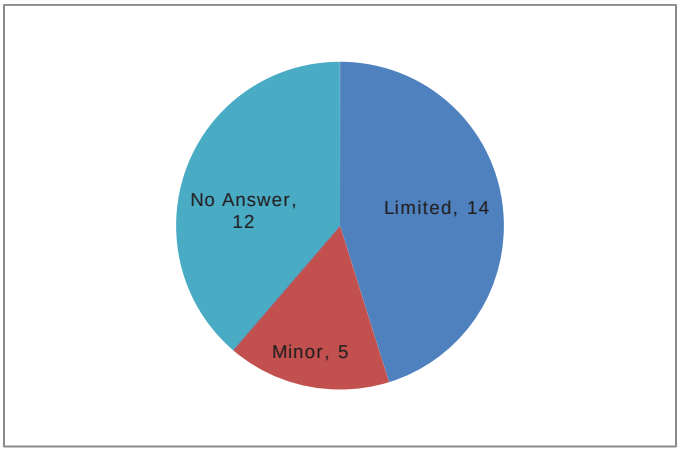
i. Dam Failure



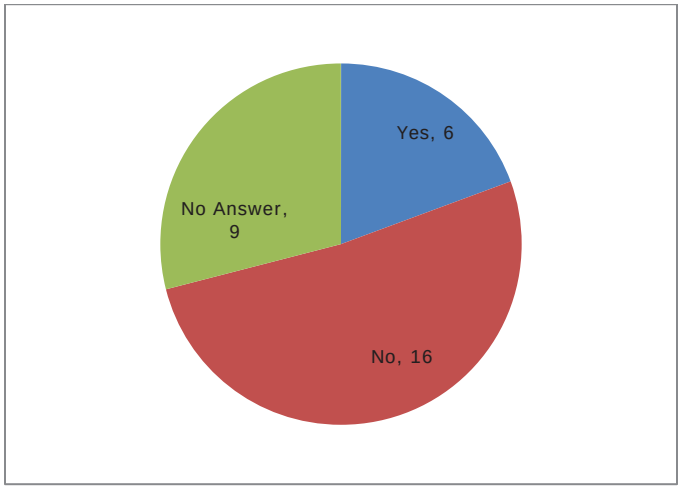
j. Stream Bank Erosion



k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ *"The likelihood that my jurisdiction and, for that matter, the entire State of Texas and/or the vast majority of the US Southwest is most likely going to run out of clean, drinking water before the end of my life - within another 20 years, easily. In my neighborhood - in fact all over this north central part of Texas - people do not know the meaning of conservation...and, frankly, the municipalities are the most wasteful water users, but everyone in this area wastes millions of gallons of water every year. I can show you where if you're interested. The impact, in my opinion, will be catastrophic."*
- ✓ *"Water supply and quality High impact Occurrence is likely Extent could be high"*
- ✓ *"Hazardous chemical problems with all the highways around us"*
- ✓ *"Chemical spill from an over-turned semi on I-35 or 635. It's Unlikely with Medium impact (depending on the amount of spill and wind direction and content) with Unknown Extent."*
- ✓ *"Drought related fire – High"*
- ✓ *"Failure of Electrical Grid - depending on the season, Catastrophic"*

Type of Hazard	Total
Power Outages	1
Chemical/ HazMat	2
Water Contamination	1
Water Shortage	2

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	6
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	9
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	16
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	8
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	19
Coordinate with Dam owners to conduct inundation studies of dams:	4
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	14
Purchase and improve on the Weatherization Assistance Program (WAP):	9
Conduct an earthquake vulnerability study:	4
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	14
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	7
Structural Retrofitting of Existing Buildings:	5
Total Respondents:	**22**

List any other strategies you think should be included in the plan:

- ✓ *"Water conservation ought to be #1. By that I mean, educating the residents - all homeowners, business owners, apartment dwellers, everyone - on actually close we are to not having enough water to maintain a healthy standard of living. My neighbor, for instance, uses his water hose to "wash the concrete" around his house - I asked him about it and he said, "It makes it look nice, doesn't it?" Hundreds of gallons of drinking water go down his*

driveway so that his sidewalk, parking area and driveway can "look nice!" This is just one of scores of incidences that I personally see each week."

- ✓ *"Expand the weather Sirens along the 635 corridor. Currently the sirens are virtually inaudible around Webb Chapel/635 and Valley View/Webb Chapel due to the road noise and other sound obstructions. Even at the Hospital (The old RHD) you can barely hear the sirens when they are activated."*

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:

    - ✓ *"HAZmat's gonna be paying dearly when the water runs out."*

This page intentionally left blank

City of Glenn Heights Annex



This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Glenn Heights participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of Glenn Heights.

This annex together with the countywide hazards and strategies discussed in the previous section, serves as a complete hazard mitigation planning tool for the City of Glenn Heights. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Glenn Heights is located at 32.3254 N and 96.515 W. It is directly south of DeSoto and north of Red Oak. It is at the southern point of Dallas County.

Development of Glenn Heights began in the late 1960s. N.L. 'Moe' Craddock, a Dallas firefighter, opened a 30-acre mobile home park in the area. He helped push for the incorporation of Glenn Heights to prevent his business from being annexed by the city of DeSoto (Joe Simnaker, Dallas Morning News 2008). The city became officially incorporated on September 16, 1969.

According to the 2010 U.S. Census, Glenn Heights has a population of approximately 11,278. The racial and ethnic composition of the population was 25.2% non-Hispanic white, 49.6% non-Hispanic black, 0.6% Native American, 0.6% Asian, 0.1% non-Hispanic reporting some other race, 2.7% from two or more races, and 22.2% Hispanic or Latino. The city has a total area of 7.2 square miles with all of it being land. There are approximately 3,819 housing units in the city consisting of single-family, multi-family and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats and RVs) units.

The City of Glenn Heights operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

Glenn Heights' economic development is attributed to its close proximity to surrounding cities and businesses. Most residents commute to the larger cities around them. Interstate 35 runs right along the city's eastern border.

Internal Planning Process:

The table below lists members of the City of Glenn Heights Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Glenn Heights.

Name	Title / Department or Agency	Role
Larry Pennington	Utility Superintendent	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Phillip Prasifka	Police Chief	HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Jason Cates	Fire Fighter	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Chad Moore	Fire Lieutenant	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Steve Chutchian	Director of Public Works	Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment
Terri Miller	Assistant to the Chief of Police	Assistant to the HMPT Coordinator; Hazard & Plan development, assisted in risk assessment and conducting capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal and the local city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
09/17/2013	Stakeholder's meeting; Overview of the Planning Process and Review HIRA as discussed at the Dallas County Hazard Mitigation Working Group. Reviewed survey questions and developed Strategy for promoting survey
09/24/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for City of Glenn Heights in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA Matrix
11/11/2013	Identified hazards and estimated potential losses from future hazard events. Capabilities Assessment
11/15/2013	Identified hazards and estimated potential losses from future hazard events. Goals and Strategies and Review of Action Items
11/20/2013	Identified hazards and estimated potential losses from future hazard events. Conducted Capabilities Assessment
11/21/2013	Identified hazards and estimated potential losses from future hazard events. Capabilities Assessment. Provided GIS capabilities and parcel data information.
11/22/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment
20/07/2014	Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Glenn Heights notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in the citizens utility bills as well on the notice boards at City Hall and the public library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of Glenn Heights made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation

Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

Despite outreach efforts, no responses were received from the City of Glenn Heights. As a result, this information could not be incorporated into this annex.

Public Review Period

On January 3, 2014 the City of Glenn Heights announced the availability of the City of Glenn Heights Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through the city's website and invited the public to provide input into the draft plan. The announcement provided a for a 7 day public review and comment period.

The public were encouraged to submit comments prior to January 10, for consideration and possible incorporation into this draft. Below is a screen shot of the public announcement that was posted on the City of Glenn Heights website.

The public comments were directed to the Terri Miller Assistant to the Police Chief and Emergency Management Coordinator with the City of Glenn Heights. Michael Gaciri the Hazard Mitigation Specialist with Dallas County HSEM was also provided as an alternate contact. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

External stakeholders invited via email to participate in the planning and review process of the Dallas County Hazard Mitigation Plan:

Representing	Position / Department	Role
City of Red Oak	Emergency Management Coordinator	Review Plan
University of Texas at Dallas	Emergency Specialist, Office of Emergency Management	Review Plan
Dallas County Community College District	Director of Risk Management, Office of Risk Management	Review Plan
Ellis County	Emergency Management Coordinator , Office of Emergency Management	Review Plan

No comments or survey reports were provided from the public or external stakeholders during the public review period for the City of Glenn Heights

Capability Assessment:

The City of Glenn Heights identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Glenn Heights, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments

The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the town. The members of the city's Hazard Mitigation Planning Team as listed above identifies the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan.

Glenn Heights Fire Department: Glenn Heights Fire Department was established in 1978 as an all-volunteer department. It is now a combination paid and volunteer staffed department.



Glenn Heights Police Department: The Glenn Heights Police Department is comprised of dedicated professional police officers and civilians. The mission of the Police Department is to provide services with integrity and dedication, to preserve life, to enforce the law, and to work in partnership with the community to enhance the quality of life in the city. The Core Values of the Glenn Heights Police Department:

- ✓ We respect the life
- ✓ We revere the truth
- ✓ We enforce the law
- ✓ We seek community partnership
- ✓ We honor our police powers
- ✓ We conduct ourselves with dignity

Building Permit and Inspections: The Glenn Heights Building Permit and Inspections department works with owner or authorized agents who intend to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by International Building Code, or to cause any such work to be done, shall first make application to the permit division and obtain the required permit.

The types of permits issue include:

- ✓ New Home
- ✓ Addition/Remodel
- ✓ Repairs
- ✓ Irrigation
- ✓ Swimming Pool
- ✓ Roofing
- ✓ Flatwork-Driveways/Sidewalks
- ✓ House Moving
- ✓ Patios
- ✓ Carport
- ✓ Fencing
- ✓ Accessory Building
- ✓ Any structural construction: moving walls, braces, change in electrical or plumbing

Public Works Department: The Public Works Department is responsible for streets, parks, water and sewer, storm water, and drainage. There are five divisions in Public Works Department:



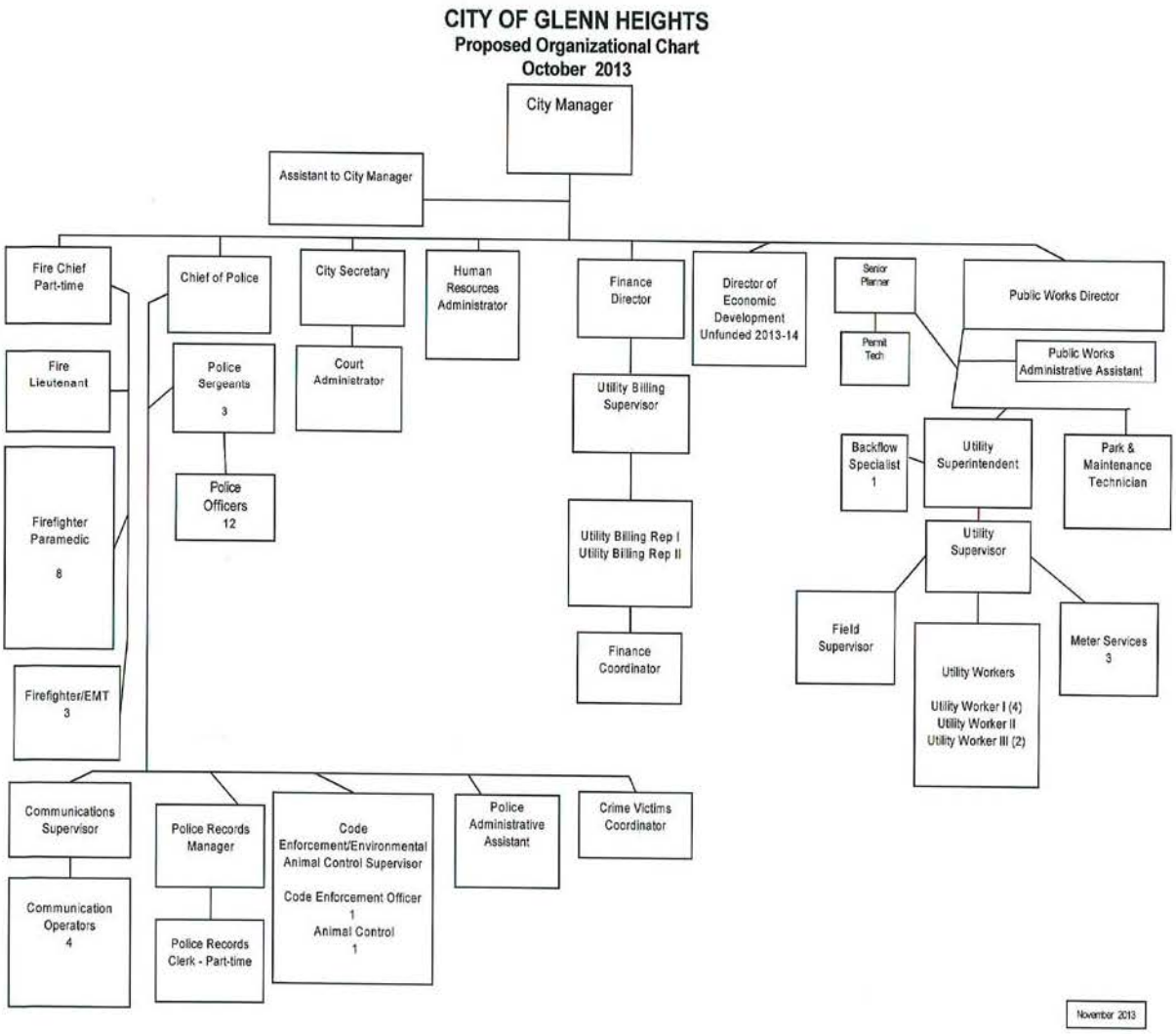
- ✓ Streets Division: The streets division is charged with the responsibility of maintenance and repair of streets. It is currently in the process of implementing a 5-year plan to improve maintenance and street repair.
- ✓ Parks Division: The city strives to maintain and improve park usability, provide family oriented facilities, keep the parks clean to provide for a safe environment. The city has 8 soccer fields, 2 baseball fields, a concession stand, a basketball court and a pavilion as well as picnic tables and walking paths.
- ✓ Water Division: The Water Division works to help ensure that the city has clean potable water. Most to the city's water is purchased from the Dallas Water Utility.
- ✓ Wastewater Division: The Wastewater Division takes care of the sewer lines to remove the wastes from homes and businesses. The division labors to improve and conserve natural environment resources. Trinity River Authority currently treats the wastewater that is produced in the City of Glenn Heights.



- ✓ Drainage Division: The purpose of this division to help provide an avenue to move rain water away from homes and businesses in a safe and efficient manner. Public Works department maintain the storm drains as well the drainage easements.

Planning and Zoning: Planning department engages citizens in an ongoing dialogue about Glenn Heights's future and plays a central role in guiding the long-term development of the built and natural environment. Planning implements City Council's land use policy, monitors and updates the City's Comprehensive Plan, ensures compliance of the Zoning and Development related codes, and develops sub-area plans and urban design standard. The department's staff guide and support the work of the Glenn Heights Planning and Zoning Commission and the Glenn Heights Zoning Board of Adjustments.

Code Enforcement: The Code enforcement Division for the City of Glenn Heights purpose is to promote community awareness, encourage compliance regarding City Municipal Codes, and enhance the quality of life within the city.


CITY OF GLENN HEIGHTS
Proposed Organizational Chart
October 2013
City Manager
Assistant to City Manager
Fire Chief Part-time
Fire Lieutenant
Firefighter Paramedic 8
Firefighter/EMT 3
Chief of Police
Police Sergeants 3
Police Officers 12
City Secretary
Court Administrator
Human Resources Administrator
Finance Director
Utility Billing Supervisor
Utility Billing Rep I
Utility Billing Rep II
Finance Coordinator
Director of Economic Development Unfunded 2013-14
Senior Planner
Permit Tech
Public Works Director
Public Works Administrative Assistant
Backflow Specialist 1
Utility Superintendent
Park & Maintenance Technician
Utility Supervisor
Field Supervisor
Utility Workers
Utility Worker I (4)
Utility Worker II
Utility Worker III (2)
Meter Services 3
Communications Supervisor
Communication Operators 4
Police Records Manager
Police Records Clerk - Part-time
Code Enforcement/Environmental Animal Control Supervisor
Code Enforcement Officer 1
Animal Control 1
Police Administrative Assistant
Crime Victims Coordinator
November 2013

Summary of Capabilities

The tables below identify the current capabilities in the City of Glenn Heights.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2011	**1.** No **2.** No
Capital Improvements Plan	Yes	**1.** No **2.** No **3.** No
Economic Development Plan	No	
Local Emergency Operations Plan	Yes 2009	**1.** Yes **2.** Yes **3.** Yes
Continuity of Operations Plan	Yes 2010	**1.** No **2.** No **3.** No
Transportation Plan	Yes 2003	**1.** No **2.** No **3.** No
Storm water Management Plan	Yes 2008	**1.** Yes **2.** No **3.** No
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** IBC 2009
Building Code Effectiveness Grading Schedule (BGEGS) Score	N/A	**Score:** Unknown
Fire Department ISO rating	Yes	**Rating:** 5
Site Plan review requirements	Yes	All plans are reviewed before construction begins

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	Yes	Needs further investigation
Subdivision ordinance	Yes	Needs further investigation
Floodplain ordinance	Yes	Needs further investigation
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Needs further investigation, 2008
Flood insurance rate maps		Needs further investigation
Acquisition of land for open space and public recreation uses	Yes	Needs further investigation
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding Intergrade Mitigation into other planning mechanism including the Capital Improvement Plan, Transportation Plan and the Continue of Operations Plan (COOP)		

Administrative and Technical

Administration	**Yes/No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Yes, it is effective
Mitigation Planning Committee	Yes	This process is in its early stages
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Works to ensure creeks, drainage and tree-trimming is completed to reduce the risks
Mutual aid agreements	Yes	For Emergency responses. Yes, the coordination is effective
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes	Outsourced through Bureau Veritas
Floodplain Administrator	Yes - FT	Steve Chutchian
Emergency Manager	Yes - FT	Chief Phillip Mark Prasifka
Community Planner	Yes - FT	Sharon Hurd
Civil Engineer	Yes - FT	Steve Chutchian
GIS Coordinator	Yes - FT	Sharon Hurd
Other	N/A	
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Early warning sirens and revers 9-1-1
Hazard data and information	No	Currently working to acquire an email, text, and phone notification system
Grant writing	Yes	No writing grants for Hazardous Mitigation
HAZUS analysis	No	
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding		Needs further investigation
Authority to levy taxes for specific purposes		Needs further investigation
Fees for water, sewer, gas or electric services	Yes	Needs further investigation
Impact fees for new development	Yes	Needs further investigation
Storm water utility fee	No	
Incur debt through general obligation bonds and/or special tax bonds		Needs further investigation
Incur debt through private activities		Needs further investigation
Community Development Block Grant	Yes	Light Improvements
Other federal funding programs	No	
State funding programs	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

The Administration is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Keep Glenn Heights Beautiful and Bi-Annual City-wide Clean-up
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Through the city storm-water management plan
Natural disaster or safety related school programs	Yes	Fire Department fire prevention events
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Comprehensive Plan	Yes	No
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
Comprehensive plan was developed in 2003. However, the Emergency Management Plan was implemented in July 2009.		
2. Is safety explicitly included in the plan's growth and development policies?		✓
3. Does the monitoring and implementation section of the plan cover safe growth objectives?		✓
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		
Unknown - To be determined		
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?		
Unknown - To be determined		
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		
Unknown - To be determined		
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
We utilize the International Building Code Version 2009		
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		
Unknown - To be determined		
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	
Shelter and mass care, through the Emergency Management Plan		

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to the Texas Water Board Information there are 30 NFIP policies in the City of Glenn Heights. The total premiums paid out was $16,665
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	3 claims have made in the community and the total amount of $18,617. No substantial damage was related
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	Approximately two structures.
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Small structures located within the area subject to 1% chance of flooding.
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	NO
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit review and engineering evaluation.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	A municipality this small is rural and has very few opportunities to develop an adequate program.
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		Unknown - To be determined
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	11/19/1976
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	No
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Development must submit proper hydraulic information of the area described and proof that all construction will be performed outside the 100 year flood plain boundary.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Glenn Heights HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Glenn Heights are as follows:

High Risk (over 65% on HIRA)	Extreme Heat
Moderate Risk (41%- 65% on HIRA)	Wildfire
Low Risk (12 %-40% on HIRA)	Drought Flooding High Winds Tornado Hail Lightning Winter Storms Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	Dam/Levee Failure

Only three hazards of the natural hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure.

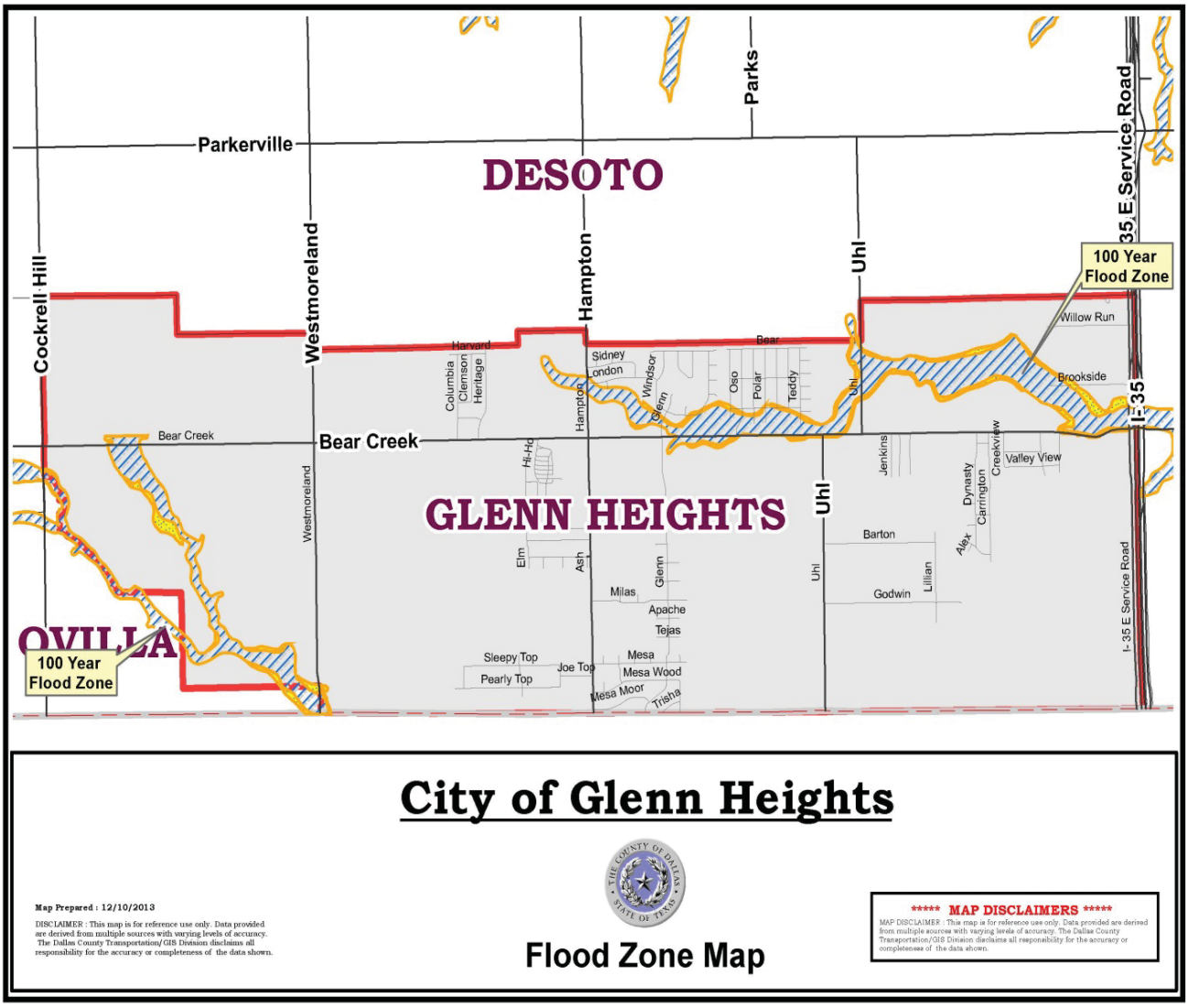
Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Glenn Heights. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Glenn Heights**.**

A. Flooding: Map GH.1 depicts the flood zones for the City of Glenn Heights. There are several areas that are prone to flooding along Bear Creek Road. Other roads that are within the floodplain that all intersect with Bear Creek Road include:

- ✓ Uhl Road
- ✓ Teddy Road
- ✓ Polar Road
- ✓ Oso Road
- ✓ Glenn Road
- ✓ Intersection of London and Hampton Road

Map GH.1: Flood Zone Map City of Glenn Heights



National Flood Insurance Program (NFIP) Compliance

The City of Glenn Heights does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis. The City does not have any structures that have been repetitively flooded over the years, and thus repetitive flooding is not an issue for the city.

Jurisdiction Compliance

Once the community applies for the NFIP, FEMA arranges for a study of the community to determine base flood elevations and flood risk zones. Consultation with the community occurs at the start of and during the study, and those communities with minimal flood risk are converted to the Regular Program without a study.

FEMA provides the studied community with a Flood Insurance Rate Map delineating base flood elevations and flood risk zones. The community is then given 6 months to adopt base flood elevations in its local zoning and building code ordinances. Once the community adopts more stringent ordinances, FEMA converts the community to the NFIP's Regular Program. FEMA then authorizes the sale of additional flood insurance in the community up to the Regular Program limits. The community must implement and enforce the adopted floodplain management measures. FEMA provides periodic community assistance visits with local officials to provide technical assistance regarding complying with NFIP floodplain management requirements.

The purchase of flood insurance is mandatory as a condition of receipt of federal or federally-related financial assistance for acquisition and/or construction of buildings in SFHAs of any participating community. Those communities notified as flood-prone which do not apply for participation in the NFIP within 1 year of notification are ineligible for federal or federally-related financial assistance for acquisition, construction, or reconstruction of insurable buildings in the SFHA.

Jurisdiction Activities

In order to maintain eligibility with NFIP, jurisdictions are required to maintain their list of properties that hold a policy with NFIP, along with up-to-date maps of the floodplains in the jurisdictions. Each jurisdiction participating in the Hazard Mitigation Action Plan completes this basic requirement and has the information on file with the jurisdiction's designated floodplain manager. Using this plan, participating jurisdictions will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding in their respective jurisdictions.

The Community Rating System (CRS)

The Community Rating System (CRS) is a voluntary program for NFIP-participating communities. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. All CRS communities must maintain completed FEMA elevation and flood proofing certificates for all new and substantially improved construction in the Special Flood Hazard Area after the date of application for CRS classification.

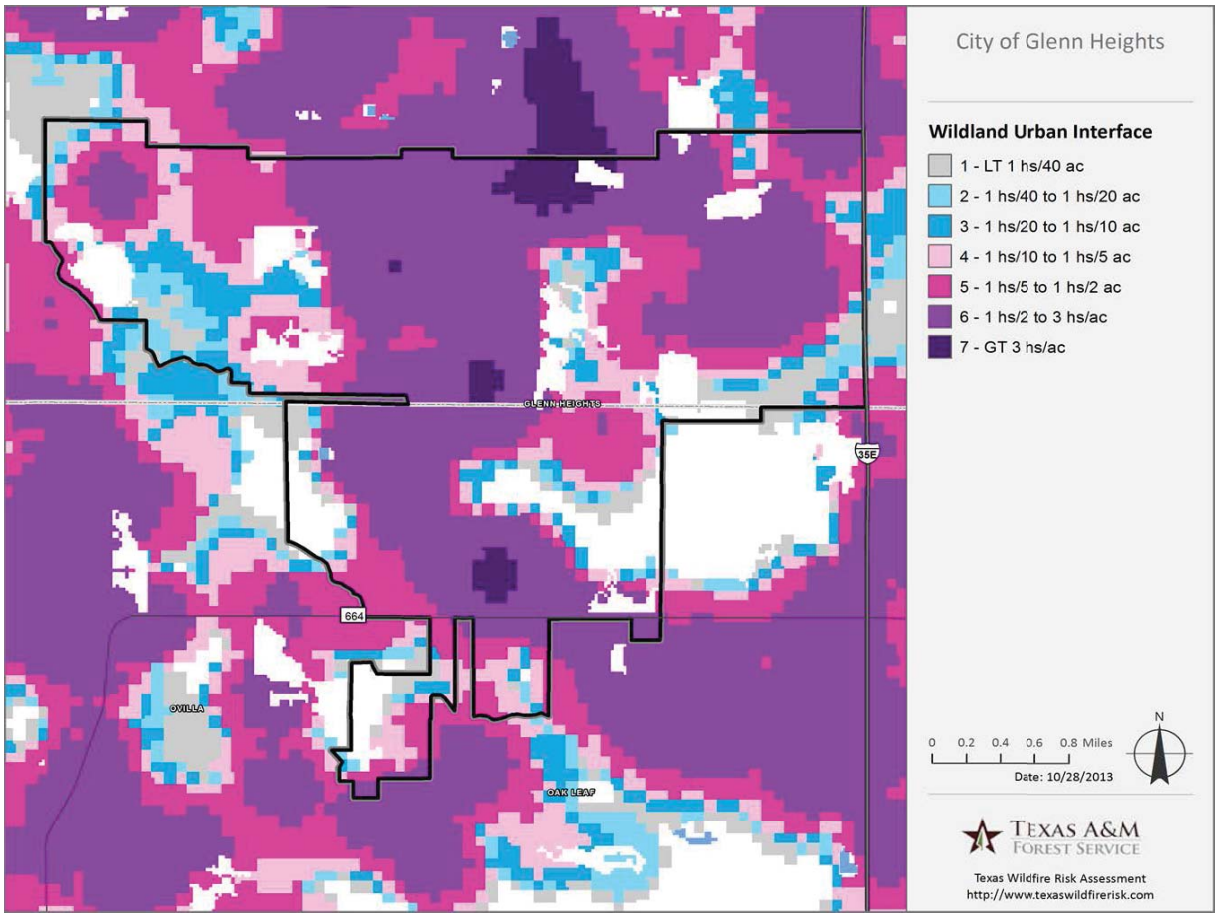
The City of Glenn Heights Hazard Mitigation Action Plan will apply for and participate in the CRS program to provide discounted insurance premium incentives for communities to go beyond the minimum floodplain management requirements and to analyze and manage future development.

Jurisdiction	Community Floodplain Administrator	NFIP Activity	Activity Description	Enforcement
City of Glenn Heights	Floodplain Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the Department of Public Works. City of Glenn Heights requires-2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and elevation certificate document non-residential structures requires 2 feet of free board above the Base Flood Elevation or Flood Proof Certificate Document that will be built on properties created or platted after the effective date of the Flood Damage Prevention Ordinance.	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with county requirements may be fined in accordance with the Texas Water Code for each violation per day.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Take action to minimize the effects of flooding on people, property, and building.	County Road Operations department installs signs at low water crossings that indicate "When flooded turn around don't drown".	

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 9,128 people or 98 percent of the total population for the City of Glenn Heights live within the WUI. Map GH.2 depicts the WUI for the City of Glenn Heights.

Map GH.2: The City of Glenn Heights Wildland Urban Interface (WUI)



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the Wildfire Threat for the City of Glenn Heights ranges from Non-Burnable to High. **Map GH.3** depicts the wildfire threat for the city.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

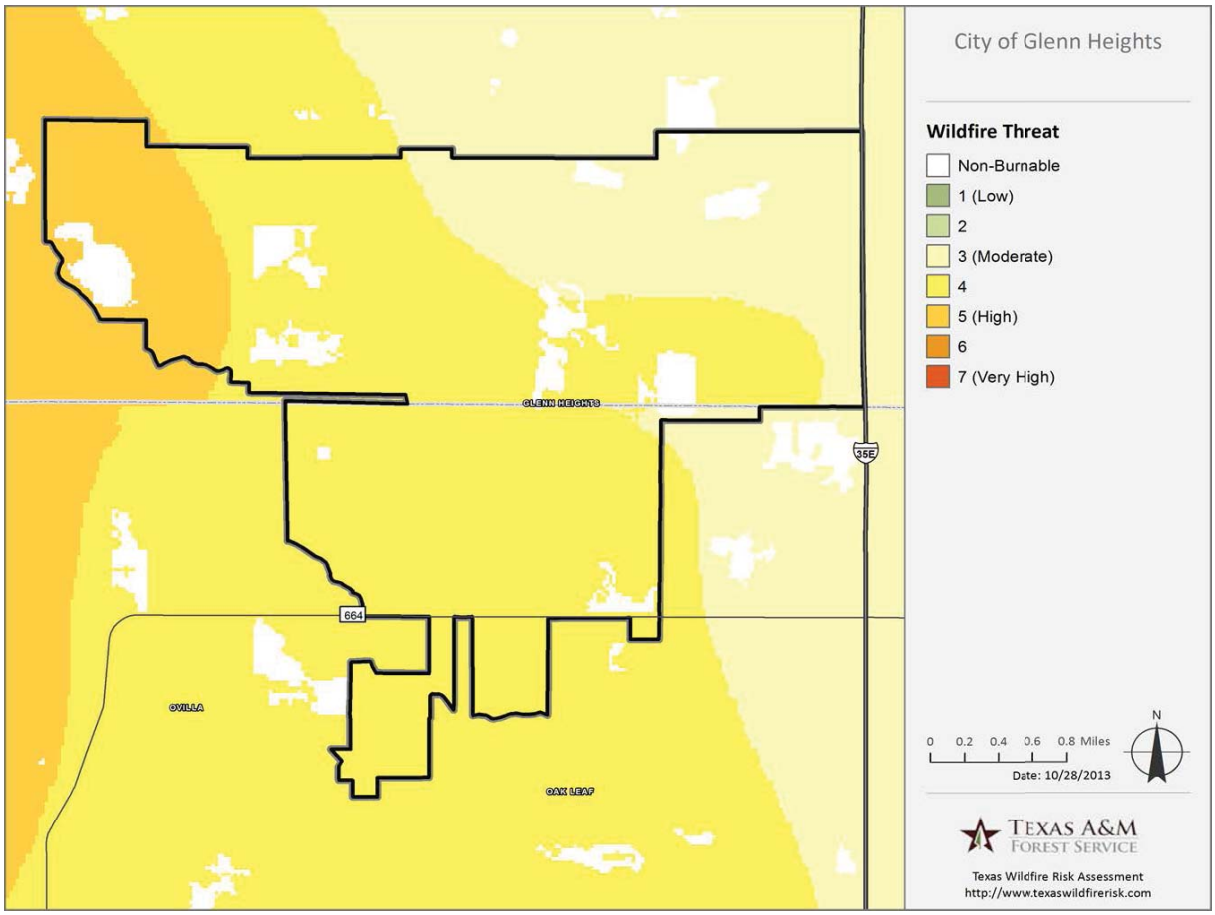
The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and

ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map GH.3: Wildfire Threat for the City of Glenn Heights.



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Glenn Heights as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Stream Bank Erosion: The City of Glenn Heights has several miles of creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The City of Glenn Heights is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to

implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the City of Glenn Heights. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

E. Earthquake: There are no known active geological faults and no historical data of earthquakes in the City of Glenn Heights. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Glenn Heights. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. All the population of City of Glenn Heights is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Glenn Heights. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Glenn Heights.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Glenn Heights.

Extreme Heat	
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Glenn Heights.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of City of Glenn Heights is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Glenn Heights due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Glenn Heights are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Glenn Heights are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Glenn Heights are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Glenn Heights is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Glenn Heights. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Glenn Heights are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Glenn Heights are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Glenn Heights are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Glenn Heights have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Glenn Heights. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Glenn Heights are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Glenn Heights are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Glenn Heights are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Glenn Heights. All the population of City of Glenn Heights is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Glenn Height. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Glenn Heights are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Glenn Heights are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Glenn Heights are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Glenn Heights is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Glenn Heights. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Glenn Heights indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Glenn Heights are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Glenn Heights are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Glenn Heights are exposed to this hazard.

Wildfire	
Population	Based on geographical data 98% of the population in City of Glenn Heights who live in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved properties in the WUI area are exposed to this hazard.
Emergency Facilities	Based on geographic information the no fire stations and city administration facilities have a moderate threat of wildfire.
Critical Facilities	Based on geographic information there no schools are at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges or dams are at risk from wildfire events. However the wastewater treatment/water treatment facility has a moderate threat of wildfire

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the City of Glenn Heights area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Glenn Heights, as well as some vulnerable structures/properties.

Essential Infrastructure Summary Report for the City of Glenn Heights

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals		None
Schools	Shield's Elementary 223 W. Ovilla Rd. (32.5319018, -96.8587579) Red Oak Intermediate 109 W Red Oak Rd. (32.518079, -96.86078599999996) McCowan Middle School 1500 Majestic Meadows Dr (32.5634749, -96.88172700000001) Moates Elementary 1500 Heritage Blvd (32.563904, -96.86216200000001) Community Christian Academy 1810 S. Hampton Rd. (32.5566348, -96.85673079999998)	5
Police Stations	550 E. Bear Creek Rd. (32.560487, -96.844321)	1
Fire Stations	1938 S. Hampton Rd. (32.552549, -96.856359)	1
Emergency Operations Facilities	550 E. Bear Creek Rd. (32.560487, -96.844321)	1
Water Treatment Facility	600 W. Bear Creek (Dallas Pump Station) (32.5607402, -96.87174590000001)	1
Elevated Water Storage Tank]	2118 S. Uhl Road	1

Essential / Critical Facilities	Locations (GIS Coordinates)	Count
	(32.5473015, -96.84176000000002)	
Water Wells	550 E. Bear Creek Road (32.560487, -96.844321)	2
Water Well	300 block of East Bear Creek Rd. (32.5600499, -96.85096899999996)	1

Structure / Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	$1,800,000	100	OUTSIDE
Commercial	-0-	-0-	-0-
Industrial	-0-	-0-	-0-
Government / Public	-0-	-0-	-0-

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	Est.$81million	OUTSIDE	OUTSIDE	MODERATE
Commercial	Est. $10 million	OUTSIDE	OUTSIDE	LOW
Industrial	-0-	OUTSIDE	OUTSIDE	LOW
Government / Public	Est. $3 million	OUTSIDE	OUTSIDE	MODERATE

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Glenn Heights

- ✓ ***Objective 5-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*****:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Glenn Heights Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

City of Glenn Heights Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Glenn Heights Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Glenn Heights Action Item	Increase the ability of residents to receive early warning from the National Weather Service. This would be accomplished by purchasing and distributing NOAA All Hazard Radios to each household in the city.
Hazard(s) Addressed	Tornado, High Winds, Hail, flooding, lightning, wildfire, winter storms, extreme heat, drought
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	$100,00
Potential Funding Sources	City Budget, Grant Funds, HMPG, PDM, Partial payment by receiving party,
Potential Matching Sources	Business donations, local funds, in-kind, donations, citizen cost-share
Lead Department	City of Glenn Heights Fire Department & Administration Office
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Advanced warning saves lives, which outweighs the cost of the radios.
Discussion	

City of Glenn Heights Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms for the residents of the City of Glenn Heights
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Glenn Heights Fire Department, Department of Building and Code in conjunction with North Central Texas Council of Governments
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Glenn Heights	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Glenn Heights Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Glenn Heights	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Glenn Heights

City of Glenn Heights Action Item	Develop and Implement Community Wildfire Protection Program
Hazard(s) Addressed	Wildland Fire, Extreme Heat, Drought, Lightning
Goal/Objective	1-A, 1-B, 2-A, 2-B, 2-C, 2-D, 3-A, 3-C, 4-A, 4-B
Priority	High
Estimated Cost	$1,000,000.00
Potential Funding Sources	Texas Forest Service
Potential Matching Sources	Hazard Mitigation Grants
Lead Department	Fire Department
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	Provide for Wildland fire protection to old buildings through a buffer zone.
Effect on New Buildings	Provide for Wildland fire protection to new buildings through a buffer zone.
Cost Effectiveness	Loss of life and damage to property without this program are high.
Discussion	Develop plans and community projects to mitigate against natural and man-made wildfires that could immediately impact residents and businesses in high fire danger areas around the Wildland Urban Interface. Project may include prescribed burning, reducing wildfire load, and providing green spaces around structures to reduce threat of wildfire. In extreme cases developing infrastructure to support extended operations such as hydrants, firefighter apparatus, personal protective equipment, and tools needed.

City of Glenn Heights Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter storms
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Plan Maintenance

The City of Glenn Heights Police Department will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator/Police Chief or his/her designee will be the point of contact for leading, the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Glenn Heights	Emergency Management Coordinator/ Police Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

Glenn Heights The Emergency Management Coordinator will call the Glenn Heights Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Emergency Management Coordinator will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Glenn Heights City Council. Emergency Operations Center will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Glenn Heights or its communities, legal changes, and other events may trigger a meeting of the Glenn Heights Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Glenn Heights is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City will also integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Glenn Heights will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Glenn Heights	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Manager	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

c. Survey Results

Appendix CGH A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Glenn Heights
Hazard Identification and Risk Assessment (HIRA)
Date: September 17, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	3	3.0	1	4	3	8	38%
Hail	4	4	3	3	1	4	4	9	34%
Lightning	4	4	2	2	1	3	1	5	40%
Winter Storms	2	4	2	1	2	1	1	4	25%
Tornado	3	3	3	3	4	4	4	12	25%
Flooding	2	3	3	2.01	1	3	3	7	29%
Pandemic/Public Health Emergency	1	1	4	4	4	1	1	6	67%
Extreme Temperatures/Heat	4	4	3	3	2	1	1	4	75%
Hazardous Materials Incidents Nuclear /Radiological	2	3	3	2.01	23	2	2	6	34%
Wildfire	2	2	3	3	1	3	3	7	43%
Utility Failure									
Energy/Fuel Shortage	1	1	1	1	4	2	1	7	15%
Terrorist Attack	1	1	4	4	4	4	3	11	37%
Urban Fire	1	4	2	.50	2	3	1	6	9%
Earthquake	1	1	1	1	2	3	3	8	13%
Levee/Dam Failure	1	1	2	2.00	1	1	3	5	10%
Drought	4	3	2	2.68	2	4	4	10	27%
Aircraft Accident	1	1	2	2.0	3	3	3	9	23%
Stream Bank Erosion	1	1	1	1	1	1	3	5	20%
Civil Disorder	2	2	3	3	2	2	2	6	54%

NB: The City of Glenn Heights only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

B. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

2.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

7.) Severity:

Low	1	Very few injuries, if at all none
Medium/Moderate	2	Minor Injuries
High	3	Multiple deaths/injuries
Catastrophic	4	High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

8.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

9.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

10.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix CGH B-1: Meeting & Public Outreach Documentation

DALLAS COUNTY HAZMAP WORKING GROUP MEETING SIGN-IN SHEET

Jurisdiction:	DALLAS COUNTY/Glenn Heights	**Meeting Date:**	Wednesday, September 18, 2013
Facilitator:	Terri L. Miller/ Chair Glenn Heights	**Place/Room:**	550 E. Bear Creek Rd. Glenn Heights, Texas 75154

ATTENDEE SIGN IN

Name	Title	Jurisdiction/Company	Phone	E-Mail
Kerry Pennington	Utility Superintendent	City of Glenn Heights	972-274-5100	Water.supervisor@glennheights.com
Phillip Pasiftka	POLICE CHIEF	CITY OF GLENN HEIGHTS PD	972-223-3478	Chiefofpolice@glennheights.com
Jason Cates	Fire Fighter	City of Glenn Heights	972-223-1658	jcates@glennheights.com
Chad Moore	FIRE Lieutenant	City of Glenn Heights	972 223-1660	Cmoore@glennheights.com
Steve Christian	DIRECTOR OF PUBLIC WORKS	CITY OF GLENN HEIGHTS	972 274 5100	PUBLIC WORKS DIRECTOR@GLENNHEIGHTS.COM
Terri Miller	PD Admin. Asst.	Chief of Glenn Heights	972 223-2107	Policeadmin@glennheights.com


www.glennheights.com
City of Glenn Heights, Texas
[Home] [Government] [Agendas] [City Services] [Contact Us] [Community]
NEW...
Search our Site
Notify Me
Online Payment
Agendas & Minutes
Employment
CITIZEN ACTION CENTER
ONE BLOCK OVER, A CHILD IS GOING HUNGRY EVERY DAY AFTER SCHOOL.
Mission Statement
Glenn Heights Community News
Spring Festival Planning Meeting
4th Annual Mayor's Essay Contest
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan Update
Convenience Station
Trash & Recycle Schedule
Notices & Events
Citizens Action Center
Popular Links
Dallas County Property Tax
Check Email


[Home] [Government] [Agendas] [City Services] [Contact Us] [Community]
NEW...
Search our Site
Notify Me
Online Payment
Agendas & Minutes
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan Update 1/03/14
Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 7 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP). Action Plan and Public Comment Form. City of Glenn Heights Annex Plan.
Notices & Events
2011-2012 Annual Budget
Strategic Plan 2009-2014
Charter Amended 2012

Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.

This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

Click the link below to access the draft plan –

http://www.dallascounty.org/department/osem/media/Base_HazMAP_12232013.pdf

This comment period will give the public the opportunity to review the draft and make comments regarding the draft plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft plan.

The plan will be available for public comment until **January 10, 2014.** All comments received by this date will be reviewed and considered.

Public Comment Form ***is attached below.***

Once you have completed the form with your comments or suggestions, the form can be emailed to (Michael Gaciri at OSEMPlanning@dallascounty.org or Terri Miller @publicadmin@glennheights.com) or mailed to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202

Dallas County Hazard Mitigation Action Plan Update 2013

Public Comment Form

Thank you for your interest in the Dallas County Multi-jurisdictional Hazard Mitigation Action Plan Update. This plan update provides strategies to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage in the next disaster event for jurisdictions listed below. This plan encompasses the following jurisdictions in Dallas County:

- Dallas County Unincorporated
- Town of Addison
- City of Balch Springs
- City of Carrollton
- City of Cedar Hill
- City of Cockrell Hill
- City of Combine
- City of Coppell
- City of Dallas
- City of DeSoto
- City of Duncanville
- City of Farmers Branch
- City of Glenn Heights
- Town of Highland Park
- City of Irving
- City of Lancaster
- City of Richardson
- City of Rowlett
- City of Sachse
- City of Seagoville
- City of Sunnyvale
- City of University Park
- City of Wilmer

If you have comments regarding this plan, please fill them in below. All comments will be reviewed and considered, but will not be individually addressed to the individual commenter. Thank you for your assistance and your interest in helping make Dallas County more disaster-resistant.

The plan will be available for public comment until **January 10, 2014.**. All comments received by this date will be reviewed and considered.

Date: _____

Name (optional):

_____

Jurisdiction: **City of Glenn Heights**

Comments:

_____

_____

_____

_____

_____

_____

***Once you have completed the form with* your comments or suggestions,** the form can be emailed to (Michael Gaciri at OSEMPlanning@dallascounty.org or Terri Miller @publicadmin@glennheights.com) **or**

Mail to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202

This page intentionally left blank.

Town of Highland Park Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The Town of Highland Park participated in the Countywide Dallas County HazMAP Working Group.



This is a new hazard mitigation plan and the first to be submitted to FEMA for the Town of Highland Park. In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the Town of Highland Park. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

The Town of Highland Park is located at 32.4949 N and 96.484 W. Highland Park is surrounded by the City of Dallas just north of its center.

Highland Park was bought by a group of investors from Philadelphia, PA, known as the Philadelphia Place Land Association. Henry Exall, an agent, intended to develop the land along Turtle Creek as Philadelphia Place, an exclusive housing community. In 1906, John S. Armstrong invested his money in a portion of the former Philadelphia Place land, to develop it under the name of Highland Park. He chose this name as it was located on high land that overlooked downtown Dallas. Landscape designers from Beverly Hills, CA were brought in to design the layout of the land.



According to the 2010 U.S. Census, the population of Highland Park is approximately 8,564. The racial makeup of the town was 94.4% White, 0.5% African American, 0.3% Native American, 2.8% Asian, 0.13% from other races, and 1.1% from two or more races. Hispanic or Latino of any race was 4% of the population. The town has a total area of 2.2 square miles with all of it being land. There are approximately 3,717 housing units in the town consisting of single-family and multi-family units.

Highland Park operates under the Council-Manager form of local government. The Town Administrator is appointed by the Town Council and serves as the Chief Executive Officer. Responsibilities include the day-to-day management of town activities including staff organizational management, personnel appointment and removal, preparation and execution of the Town budget, as well as administration of Town Ordinances and policies adopted by the Town Council. The Council sets policy for the Town, adopts the annual

budget, appoints committee members, and addresses requests from the community. The Town Administrator then administers the ordinances and resolutions approved by the Town Council.



Internal Planning Process

Below is a list of members of the Town of Highland Park Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the town's critical facilities, review relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the Town of Highland Park.

Name	Department	Position	Role
Bill Lindley	Administration	Town Administrator	Direction & Control
Chris Vinson	Public Safety	Director	EM Oversight
Rick Pyle	Public Safety	Fire Marshal/EM	HMPT Coordinator
Steve Alexander	Finance	Director of Administrative Services	Finance Planning
Meran Dadgostar	Engineering	Lead Engineer	Dam Report Submission/Flood Plain Submission
Ronnie Brown	Parks/Streets	Director of Town Services	Damage Assessment/Debris Management
Lance Koppa	Public Safety	PIO	Public Information Officer

The Hazard Mitigation Planning Team (HMPT) met on a regular basis during the planning process to access data needs and to organize data collection. Following is a table outlining planning sessions in which the HMPT met. This list is not inclusive of all meetings that were required to assemble all relevant data, but is representative of the meetings in which the majority of the HMPT members came together to work through plan details.

Date	Meeting Summary
September 3, 2013	HMPT members met to discuss participation in the Dallas County HazMap plan. Reviewed public input, and items due to Dallas.
September 13, 2013	HMPT members met to discuss additional data/research needs.
September 25, 2013	Risk and Vulnerability Assessment Discussion
September 30, 2013	Review of Highland Park HIRA
May 13, 2013	IT meeting for public notification of plan
October 3, 2013	Capability Assessment
October 16, 2013	MOU review with neighboring agencies
October 16, 2013	Review Mitigation Goals, Objectives, and actions
October 30, 2013	Review what has been completed on Draft Plan
December 30, 2013	Review of Draft Plan
January 3, 2014	Posting of Proposed Draft Plan on Website

Pertinent data was retrieved from a variety of locations to include the following:

Source	Data	Purpose
Texas Hazard Mitigation Package	Flood Plain Information	Flood Plan mapping
Dallas County Appraisal District	Demographics and populations	Counts and land use
Dallas County Mitigation Strategy 2009	Hazard occurrences	Hazard mapping
Locally Maintained Records	Relevant Town data	Assistance in planning

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The Town of Highland Park notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their Town's website, public notices in their utilities bill as well on the notice boards at Town Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of the Town's outreach materials are included in Appendix Section.

Despite outreach efforts by The Town of Highland Park, only one response was received. The recommendations from that single survey were some of the same concerns held by the HMPT, thus in a round-about-way, the concerns of the respondent were considered when creating this plan.

The Town of Highland Park has an interactive website, "HP4U". This website allows residents to voice concerns, complaints, desires or commendations about any and all Town services or programs. The Town will consider any recommendations received, via "HP4U" or any other manner, regarding how the local government can help residents be prepared for an event, throughout the duration of this plan and prioritize those recommendations that can be implemented efficiently and effectively. An external stakeholder invited to participate in the to the planning and review process of the City of University Park Annex was Southern Methodist University (SMU), Director in the Office of Risk Management, Emergency Management and Business Continuity.

The Town of Highland Park's MOUs and Auto-Assist agreements with University Park and Dallas Fire-Rescue were reviewed and updated. Contracts with a variety of public- works businesses were reviewed and confirmed that the contracts were up to date and renewed on an annual basis. These businesses are contracted to provide assistance if the Town's resources are inadequate to handle a post-incident clean-up.

Representing	Position/Department	Role
Dallas Fire-Rescue	Assistant Chief/Operations	Plan/MOU Review
University Park Fire	Assistant Chief/Operations	Plan/Auto-Assist Review
Moore Disposal	Parks/Labor/Roll-offs	Annual Contract/Plan Review

Representing	Position / Department	Role
Republic Service	Debris Removal/Labor/Heavy Equipment	Annual Contract Review
Southern Botanical	Parks/Tree Trimming	Annual Contract Review
Lawns of Dallas	Parks/Debris	Annual Contract Review

Survey Results

The Town of Highland Park made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the Town's website and public outreach program was implemented to solicit public input.

A total of one (1) survey response was collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the town to identify any potential actions or problem areas.

Survey results are depicted below showing the number or responses for each answer.

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ Town of Highland Park (1 response)

2. Have you ever experienced or been impacted by a disaster?
   - ☐ Yes
   - ☒ No

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned
☐ 1	☒ **2**	☐ 3	☐ 4	☐ 5

4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Earthquake Unlikely	☐Earthquake Occasional	☐Earthquake Likely	☐Earthquake Highly Likely
Tornado	☐Tornado Unlikely	☐Tornado Occasional	☒Tornado Likely	☐Tornado Highly Likely
Hail	☐Hail Unlikely	☐Hail Occasional	☒Hail Likely	☐Hail Highly Likely

High Winds	☐High Winds Unlikely	☐High Winds Occasional	☒High Winds Likely	☐High Winds Highly Likely
Winter Storms	☐Winter Storms Unlikely	☒Winter Storms Occasional	☐Winter Storms Likely	☐Winter Storms Highly Likely
Summer Heat	☐Summer Heat Unlikely	☐Summer Heat Occasional	☒Summer Heat Likely	☐Summer Heat Highly Likely
Drought	☐Drought Unlikely	☐Drought Occasional	☒Drought Likely	☐ Drought Highly Likely
Flooding	☒Flooding Unlikely	☐Flooding Occasional	☐ Flooding Likely	☐ Flooding Highly Likely
Dam Failure	☒Dam Failure Unlikely	☐ Dam Failure Occasional	☐ Dam Failure Likely	☐ Dam Failure Highly Likely
Stream Bank Erosion	☐Stream Bank Erosion Unlikely	☒Stream Bank Erosion Occasional	☐Stream Bank Erosion Likely	☐Stream Bank Erosion Highly Likely
Levee Failure	☒ Levee Failure Unlikely	☐ Levee Failure Occasional	☐ Levee Failure Likely	☐ Levee Failure Highly Likely

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

Earthquakes	☒ Limited	☐ Minor	☐ Major	☐ Substantial
Tornado	☐ Limited	☒ Minor	☐ Major	☐ Substantial
Hail	☐ Limited	☒ Minor	☐ Major	☐ Substantial
High Winds	☐ Limited	☒ Minor	☐ Major	☐ Substantial
Winter Storms	☐ Limited	☒ Minor	☐ Major	☐ Substantial
Summer Heat	☐ Limited	☐ Minor	☒ Major	☐ Substantial
Drought	☐ Limited	☐ Minor	☒ Major	☐ Substantial
Flooding	☒ Limited	☐ Minor	☐ Major	☐ Substantial
Dam Failure	☒ Limited	☐ Minor	☐ Major	☐ Substantial
Stream Bank Erosion	☐ Limited	☒ Minor	☐ Major	☐ Substantial
Levee Failure	☒ Limited	☐ Minor	☐ Major	☐ Substantial

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ☐ Yes
   - ☒ No
7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

   ☒ Improve on Land Use Program:

   ☐ Identify undeveloped land within the flood plain and assess special use for conversation and recreation.

   ☐ Limit floodplain development

   ☐ Buy-out of property in the floodplain (flood-prone property acquisition)

   ☒ Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control)

   ☒ Improve, adopt and enforce building codes

   ☒ Implement the Texas Individual Tornado Safe Room Rebate Program

   ☒ Expand and improve the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs such as:

   ☒ National Flood Insurance Program (NFIP) and Community Rating System (CRS) program

   ☐ What to do the event of a flood, tornado, need for a weather radio

   ☒ Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events

   ☒ Coordinate with Dam owners to conduct inundation studies of dams to include:

   ☒ Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners

   ☒ Purchase and improve on the Weatherization Assistance Program (WAP)

   ☒ Conduct an earthquake vulnerability study

   ☒ Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure

   ☒ Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing

   ☒ Structural Retrofitting of Existing Buildings

Public Review Period

On January 3, 2014 the Town of Highland Park announced the availability of the Highland Park Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through Town website and Blue Zone News that invited the public to provide input into both the Dallas County Base Plan and the Town of Highland Park Annex Draft Plan.

The announcement provided a 14 day public review and comment period. Highland Park also distributed an email notification to all relevant stakeholders and interested community members of the Draft for public comments and review. The public were encouraged to submit comments prior to January 17, 2014 for consideration and possible incorporation into this draft.

The public comments were directed to the Michael Gaciri with Dallas County Emergency Management.

Any comments received after the review process will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Capability Assessment

The Town of Highland Park identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capabilities section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning. The Town of Highland Park is dedicated to serving its citizenry to the upmost of its ability in every aspect of public safety and services provided. Employees from all departments receive continued education and are encouraged to attend any and all training that may expand their knowledge and keep them abreast of current trends within their respective areas of expertise. Policies, procedures and ordinances are consistently reviewed and developed to provide the safest environment possible.

The Town council of Highland Park, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments involved in Mitigation Activities in the Town of Highland Park

1. Department of Public Safety



The Highland Park Department of Public Safety is a unique organization. The blending of law enforcement, firefighting, and emergency medicine into one department is not a common practice. It is even more unusual that these disciplines are carried out on a daily basis by each person assigned to the operations division.

The divisions of the Departments of Public Safety include:

- ✓ Fire/Emergency Medical Services: Highland Park DPS partners with University Park Fire Department and Dallas Fire/Rescue on Automatic Assistance and Mutual Aid calls. These agencies support one another on incidents that require additional resources, firefighters, and equipment. The Fire/EMS apparatus include:
- ✓ Police: The Town of Highland Park is made up of two patrol "districts," and these districts are broken down further into geographic "beats." Patrol vehicles are well equipped with all the necessary items to fulfill the law enforcement function. In addition, patrol vehicles contain items specific to the Fire/EMS function:
  - o Self-Contained Breathing Apparatus (SCBA)
  - o Commercial size fire extinguisher
  - o Fit-5 handheld fire suppression device
  - o First Aid supplies



The requirements of a Highland Park Public Safety Officer require personnel to be ready at any moment to transition from the law enforcement role directly into the Fire/EMS function. For this reason,

every officer carries their bunker gear with them while on patrol.

- ✓ 911 Communications Services: The Communications Division of the Department of Public Safety is the first point of contact for emergency service requests for police, fire, and EMS. The highly trained 9-member crew answers 911 calls as well as handling requests for non-emergency services, often at the same time.
- ✓ Animal Control: Animal Control works to enforce all town ordinances pertaining to the care of animals within the town limits.

Nationally accredited by the Commission for Accreditation for Law Enforcement Agencies since 1988, the 54 Public Safety officers of the Town of Highland Park are dedicated to providing our citizens with the best and most professional service possible.

2. Engineering

The Town's Engineering Department is responsible for the planning, design, construction, and inspection of capital projects and improvements for the Town, by performing such functions directly, or by contract.

Capital projects include improvements to:

- ✓ Storm drainage system
- ✓ Water distribution system
- ✓ Sanitary sewer collection system
- ✓ Roads and bridges
- ✓ Traffic signal system

Other responsibilities include the storm water management program, floodplain management and subdivision regulations.

3. Building Inspections

The Building Inspection Department, under the supervision of the Director of Town Services, provides for the health, safety and general welfare of the Town by development, implementation and enforcement of:

- ✓ Building Code
- ✓ Plumbing Code
- ✓ Electrical Code
- ✓ Fire Code
- ✓ Fuel Gas Code
- ✓ Mechanical Code
- ✓ Residential Code
- ✓ Energy Conservation Code
- ✓ Zoning Ordinance
- ✓ Town Ordinance

The Department also interprets and enforces specific provisions of certain state statutes including:

- ✓ Texas Plumbing License Law
- ✓ Texas Engineering Practice Act
- ✓ Texas Architectural Licensing Act
- ✓ Texas Dept. of Licensing & Regulation
- ✓ Texas Commission on Environmental Quality
- ✓ Texas Dept. of State Health Services

Permits

Permits are required for all:

- ✓ New Construction
- ✓ Remodeling
- ✓ Repairs
- ✓ Signs
- ✓ Fences
- ✓ Underground Lawn Sprinklers

- ✓ Additions
- ✓ Demolition
- ✓ Plumbing
- ✓ Mechanical Work
- ✓ Electrical Work
- ✓ Swimming Pools
- ✓ Patio Covers
- ✓ Canopies
- ✓ Accessory Structures
- ✓ Painting

Permits provide for examination of the plan prior to construction to assure conformance to building and zoning requirements. Once construction has begun, inspections must be obtained before concealing work. Permits and accompanying inspections help assure safe construction with sound materials. Permits are required prior to beginning construction.

Permit Application

Although the individual performing the work is required to make application for a permit, the property owner is responsible for making sure that a permit is obtained. The Town's ordinances require that the general contracting, electrical, plumbing, mechanical, and irrigation work be done by individuals that are registered with the Town of Highland Park and licensed with the State of Texas.

Zoning Ordinances

The Building Inspection Department also enforces the Zoning Ordinance that contains vital information when additions or new construction is desired. The zoning ordinance prohibits an accessory building from containing kitchen facilities, being rented, or being used for commercial purposes.

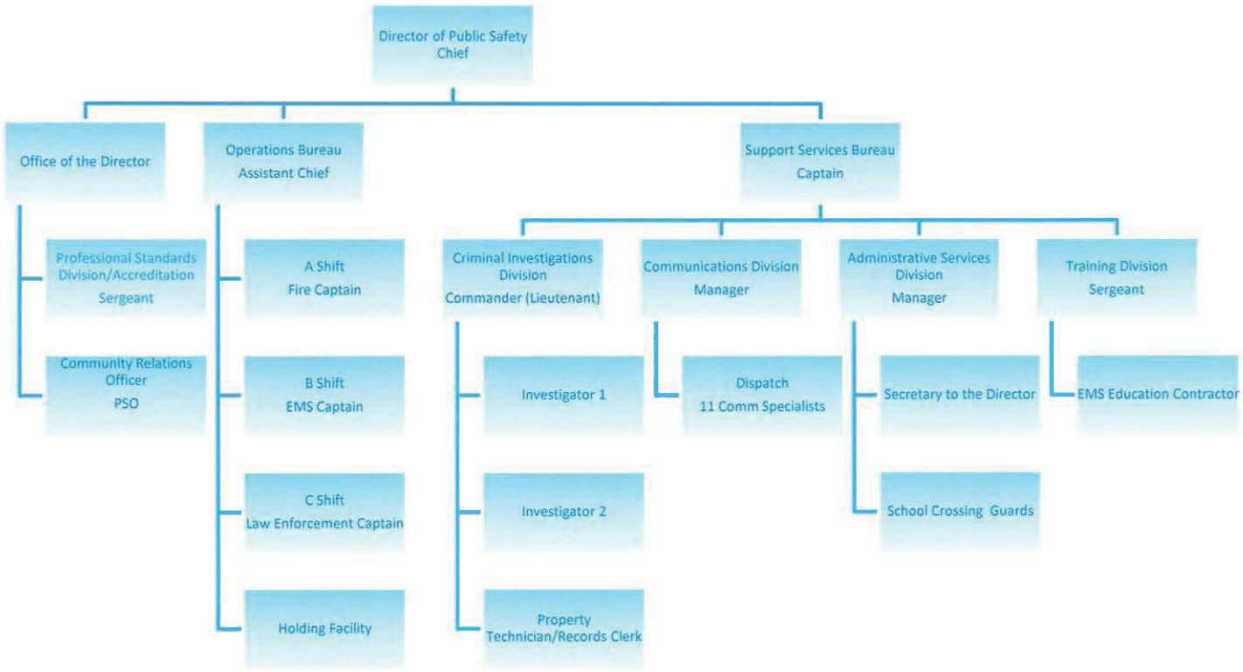
Remodeling

The building or remodeling of a home is an exciting time for a homeowner. Conversely, this construction can become burdensome and disruptive to the adjoining residents living each day with the project lasting often in excess of 12 months.

Adding to these impacts is a paramount need for the Town of Highland Park to effectively manage the streets for safe passage of emergency vehicles and of the residents. Through its nearly 100 years of existence, the Town has enjoyed the amicable and cooperative efforts between its residents, both current and new residents alike. The Department of Building Inspection works closely with the community to help ensure that the community traits are maintained.

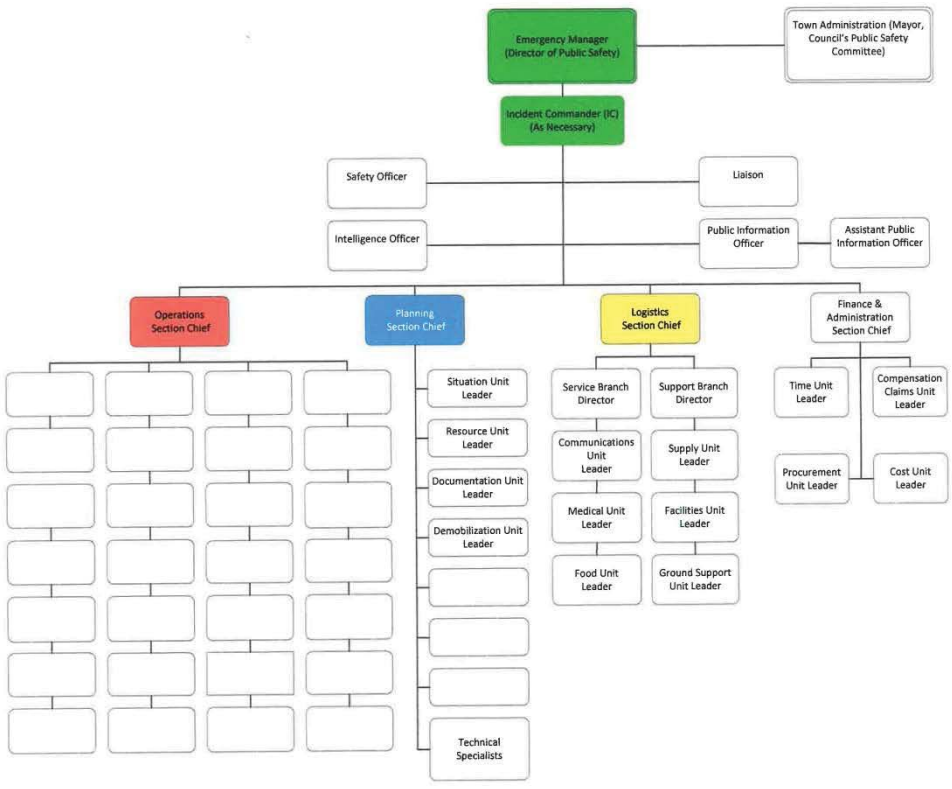
The Town has an ordinance in place which requires all new construction, regardless of classification, over 300 sq. feet and all remodels over 50% of the structure be fully sprinkled. This ordinance has been in place since 2007.

Highland Park Department of Public Safety Proposed Organizational Chart



Source: Department of Public Safety Highland Park

Highland Park Proposed (EOC) Organizational Chart October 2013



Source: Department of Public Safety Highland Park

Summary of Capabilities

The tables below identify the current capabilities in the Town of Highland Park.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	**Yes, 2009**	**Yes, Yes, Yes**
Capital Improvements Plan	**Yes, Ongoing**	**Yes, Yes, Yes**
Economic Development Plan	**No**	
Local Emergency Operations Plan	**Yes**	**Yes**
Continuity of Operations Plan	**Yes**	**Yes**
Transportation Plan	**Yes**	**Within EOP**
Stormwater Management Plan	**Yes**	**Yes, Ongoing**
Community Wildfire Protection Plan	**No**	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	**No**	

Building Code, Permitting, and Inspections	Yes/No	
Building Code	Yes	2009 International Codes/ 2011 N.E.C.
Building Code Effectiveness Grading Schedule (BGEGS) Score	No	
Fire Department ISO rating	Yes	Rating: 2
Site Plan review requirements	Yes	Yes
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Yes
Subdivision ordinance	Yes	Yes
Floodplain ordinance	Yes	Ord. # 1099
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	
Flood insurance rate maps	Yes	FEMA, Panels 330 & 335 of 725. August 23, 2001
Acquisition of land for open space and public recreation uses	Yes	Landlocked – No open space available
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Administrative and Technical

Administration	Yes/No	Describe capability Is coordination effective?
Planning Commission	Yes	P&Z appointed by Town Council to serve staggered 2-year terms
Mitigation Planning Committee	Yes	All departments work well to better and meet on a bi-weekly basis
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Ongoing
Mutual aid agreements	Yes	With DFR and University Park Fire
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	Paul Vermeer
Floodplain Administrator	Yes/FT	Meran Dadgostar, Town Engineer
Emergency Manager	Yes/FT	Chris Vinson: Yes, Yes, Yes
Community Planner	No	N/A
Civil Engineer	Yes/FT	Meran Dadgostar/Heath Hasseloff
GIS Coordinator	Yes/FT	David Fergeson
Other	NA	
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Outdoor warning siren 4200 Drexer, Black-board Connect
Hazard data and information	Yes	Projects based on evaluation
Grant writing	No	
Hazardous analysis	Yes	Some projects based on evaluations
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1.Town-wide capital/infrastructure improvements as identified 2.Yes
Authority to levy taxes for specific purposes	Yes	1.Not Since 1973 2.Yes – Either by obtaining approved issue (GO Bonds, or CO's)
Fees for water, sewer, gas or electric services	Yes	1.Water and sewer services and infrastructure 2.No
Impact fees for new development	No	
Storm water utility fee	Yes	1.Yes – annual inspection of Dams, surface drainage infrastructures 2.Yes
Incur debt through general obligation bonds and/or special tax bonds	No	
Incur debt through private activities	No	
Community Development Block Grant	No	
Other federal funding programs	No	
State funding programs	No	
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

The Administration is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Certifications
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Safety Programs/Certifications
Natural disaster or safety related school programs	Yes	Fire Safety Programs
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		✓
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?		✓
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?		✓
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?		✓
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		✓
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?		✓
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	Number of policies – 66 Total Premiums - $36,137.00
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	Number of claims closed and paid – 16 Closed paid losses - $351,685.00
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	One structure in floodplain
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	None
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	FPA
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit, review, GIS, education, inspection, engineering
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
Is a CAV or CAC scheduled or needed?		NA

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	7/16/1979
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Yes – New Constructions above 100-year floodplain by one foot
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No

Hazard Assessment and Risk Assessment

Major hazards that are a threat to the Town of Highland Park includes the natural hazards discussed in Section 5 of the Dallas County HazMAP Update. These hazards affect the Dallas County and can occur anywhere in the county. These include severe storms (high winds, hail, winter storms and lightning), tornado, earthquake, drought and extreme heat. This sub-section of the plan discusses specific or geographic hazards such as flooding, stream-bank erosion, Wildland Urban Interface (WUI) and Dam and Levee Failure.

Other hazards that are included in the Dallas County Hazard Identification and Risk Assessment (HIRA) include technological (human caused) hazards, including hazardous materials incidents, utility system (gas, water, sewer, power, or communications) interruptions or failures, aircraft crashes, civil disturbance / unrest, active shooter incidents, CBRNE attacks and other terrorist attacks. Though these hazards were part of the Dallas County HIRA, it was agreed that this plan would confine itself to address the Natural Hazards and Dam and Levee failure as the most critical. This is not to be construed that the Town of Highland Park is not susceptible to technological or man-made hazards. The completed risk assessment conducted is provided in the appendix section of this annex that highlights the rating and ranking of the hazards identified.

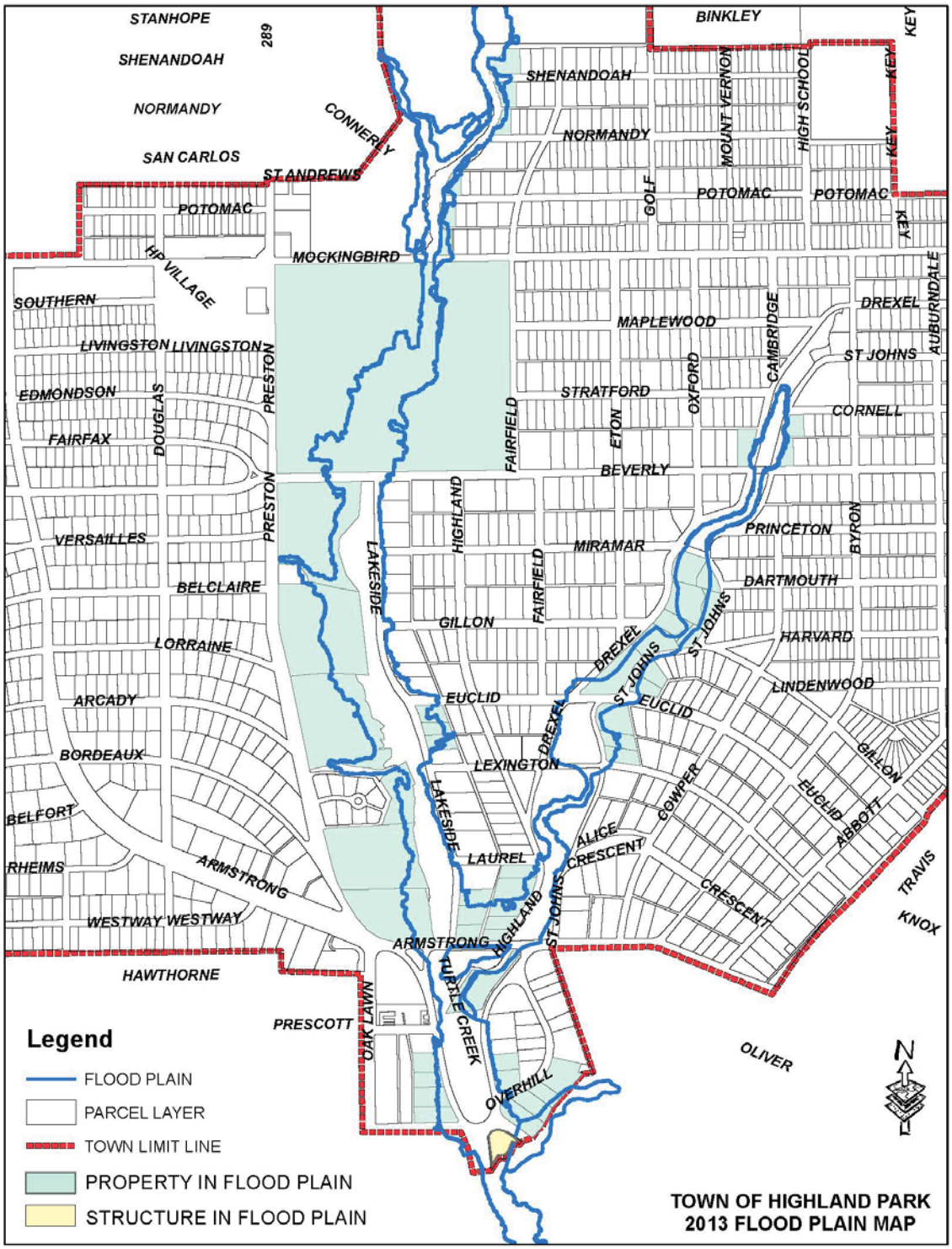
While a disaster or emergency may occur at any time and at any place in the town, all departments of the town must be prepared to respond with little or no warning. For slowly developing emergency situations such as flooding or drought, it may be possible to reduce threats to lives and property by dissemination of timely warning and implementation of preventive measures, while rapid dissemination of warnings in the face of rapidly developing threats such as severe weather or active shooter incidents often can save lives and reduce injuries. Similarly, dissemination of specific credible warnings of or intelligence on terrorist or other intentional threats may aid officials in preventing, or at least blunting, the effect of these acts.

A. Flooding: The Town of Highland Park has several properties that are designated to be in the flood plain. The town is initially joined the Federal Management Agency (FEMA) National Insurance Flood Program in July 1979 and have instituted regulations that exceed the minimum state and federal requirements for development. The head Town Engineer is the designated floodplain manager. **Map HP1** depicts properties and structures within the Town of Highland Park that are within the floodplain.

Locations: There are two main water ways which flow within the Town of Highland Park. Hackberry Creek, a wet-water creek, originates at approximately St. Johns Drive and flows south until it intersects with Turtle Creek. A recent $250,000 capital improvement project completed in August 2013, removed a bend in Hackberry Creek which had historically caused flooding into Town Hall and adjacent residential properties. Because of the project 7 of the 15 original properties which were considered to lie within the flood plain surrounding Hackberry Creek have been removed from the flood plain.

Turtle Creek is the main water way in Highland Park. Turtle Creek flows from the northern to southern boundary of town paralleling Preston Road. Besides the normal potential for flooding along a waterway, Turtle Creek has two dams within Highland Park.

Map HP1: Town of Highland Park Flood Plain Map



The Town of Highland Park does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis. According to the Texas Water Development Board the Town of Highland Park has 1 repetitive loss property. See table below:

Highland Park	Years	Properties	Number of losses	Payments
Single Family	1981, 1988, 1989, 1990, 1991, 1995	1	6	$35,290.56
Other Residential	-	-	-	-
Non Residential	-	-	-	-
Total		**1**	**6**	**$35,290.56**

The City continues to be in compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding**.**

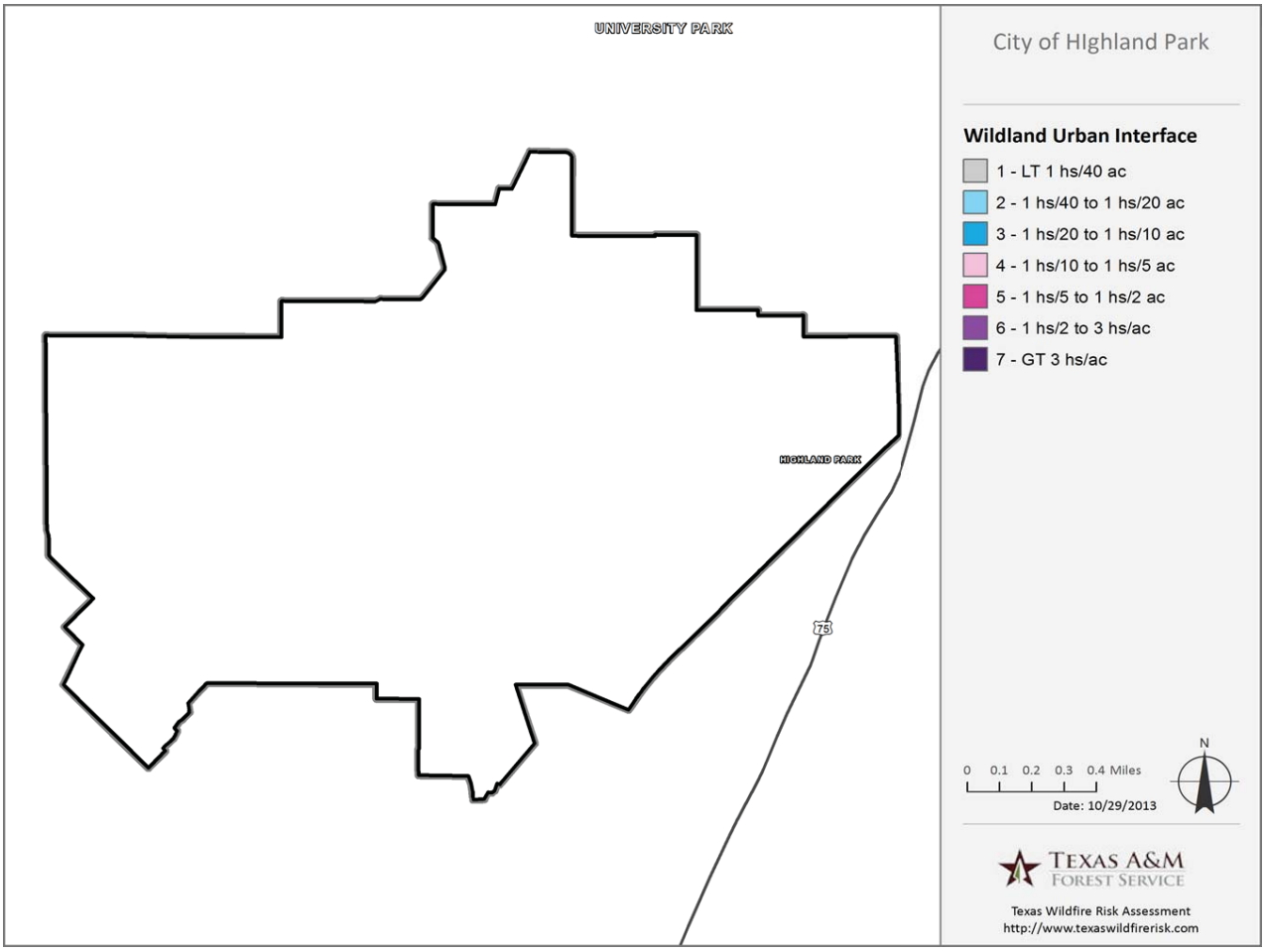
B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas Forestry Services, none of the town's population live within the WUI. The Wildland Urban Interface (WUI) Map below reflects housing density depicting where humans and their structures meet or intermix with wildland fuels.

A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the Wildfire Threat for the Town of Highland Park is low.
Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

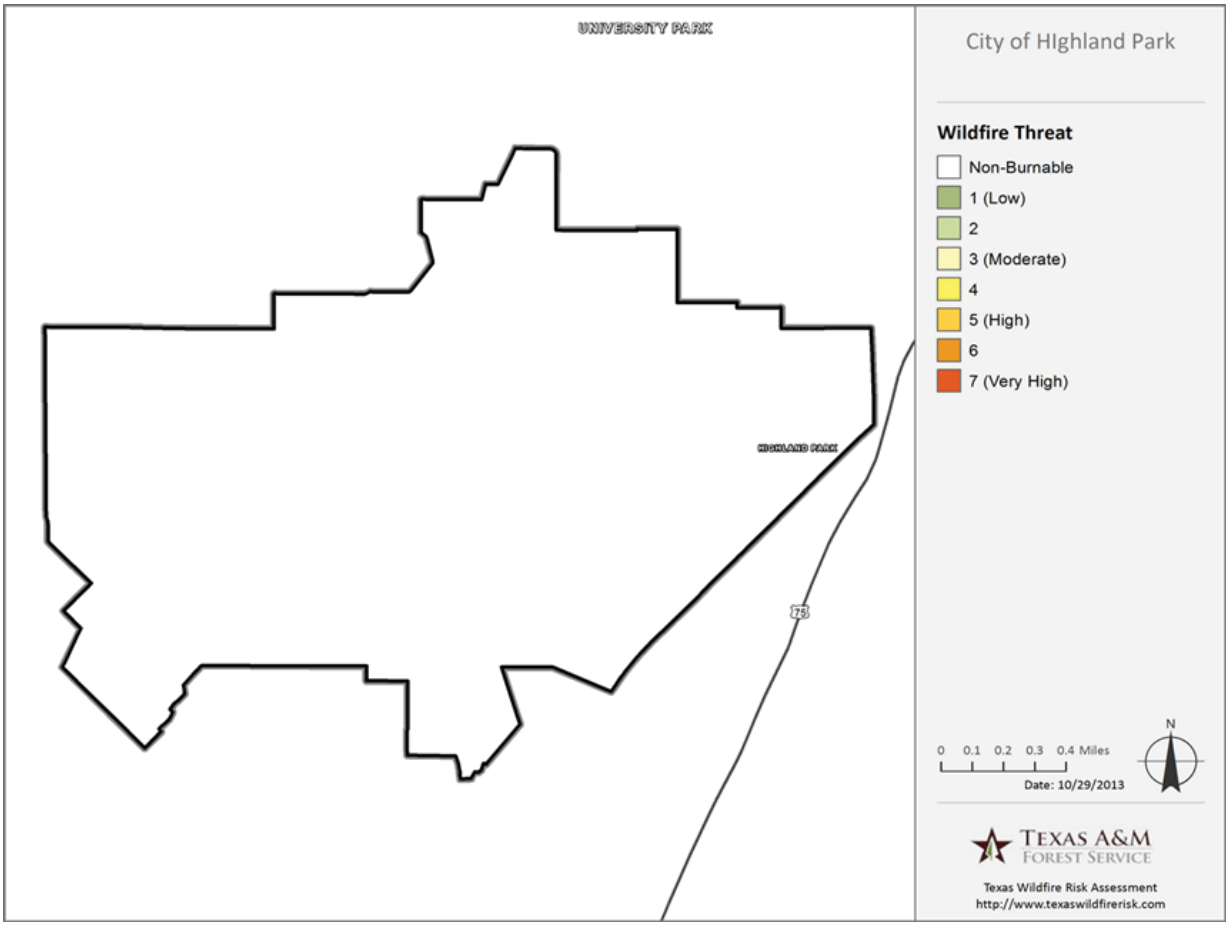
Map HP3: Wildland Urban Interface (WUI)



To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from low to very high threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning. Historically, there have been no wildfires reported in the Town of Highland Park.

Map HP3: Wildfire Threat for the Town of Highland Park



C. Dam and Levee Failure: As mentioned earlier Turtle Creek the main water way in the Highland Park has two dams within the town, Exall Lake and Wycliffe Avenue. Exall Lake Dam was constructed in 1890 and had significant rehabilitation done in the 1940s. Wycliffe Avenue Dam appears to have been constructed at approximately the same time with 2 additional culvert pipes added in the 1940s. The Town of Highland Park commissioned studies of both structures in January 2011. The studies were done by O'Brian Engineering. Design Flood Breach Inundation Maps and Emergency Action Plans exist for each dam. Map HP6 provides an estimated inundation area for the Exall and Wycliff Lake dams. On-going inspections of each structure are performed by town staff.

Exall Lake Dam

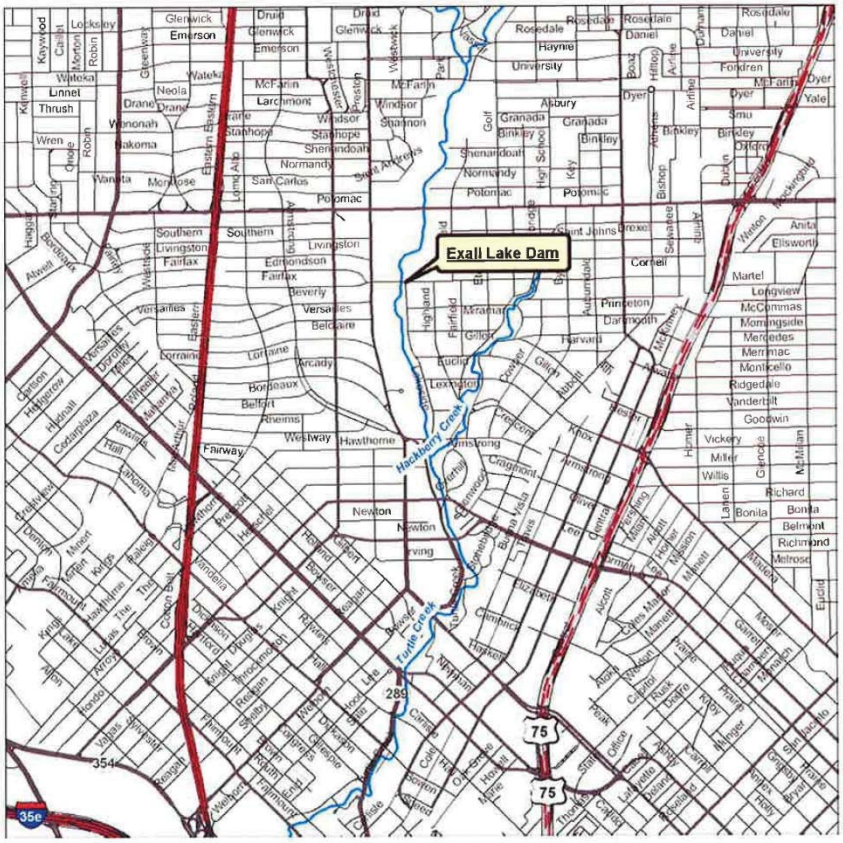
Available data indicates that Exall Lake Dam was constructed in 1890 with significant rehabilitation done completed in the 1940s. The dam appears to be a 33-foot tall gravity dam with a concrete core and grouted masonry faces, constructed in a portion of Turtle Creek with near-vertical walls on the downstream channel. The top of the dam consists of three concrete lined ogee spillway sections separated by concrete piers. The piers and abutments support a steel and wood pedestrian bridge. There is an approximately six-inch deep notch in the center spillway section that appears to generally handle the base flow. The upstream abutments are composed of vertical concrete retaining walls. Downstream, the abutments are incorporated into concrete side-channels that direct overflow from the

two outside spillways into the main channel. Further downstream, retaining walls and sidewalks line the eastern channel banks and walls and fences are located intermittently along the western bank.

The concrete lined ogee spillway sections make up the service spillway as well as the top of the dam. There are no defined secondary or emergency spillways, with water being able to go around the dam on the east and west sides, either through private property, the park, or down Lakeside Drive. The report "Dam Safety Evaluation of Exall Lake and Wycliff Avenue Dams on Turtle Creek", further describes the dam and its condition as well as the hydrologic and hydraulic modeling. All of those responsible for operations and maintenance of Exall Lake Dam should be familiar with that report.

The extent of inundation depth for susceptible areas due to a failure or breach can ranges between 0 feet to 3 feet.

Map HP4: Vicinity Map of Exall Lake Dam



VITAL DAM INFORMATION

Official Dam Name:	Exall Lake Dam
TCEQ Inventory No:	TX04636
Stream:	Turtle Creek
Location:	Highland Park, Dallas County, Texas
Dam Owner:	Town of Highland Park
Owner Address:	4700 Drexel Dr. Dallas, TX 75205-3199
Phone Number:	(214) 521-4161
Type of Dam:	Gravity Dam
Year Constructed:	1890, Rehabilitated in 1944
Dam Height:	33 feet
Dam Length:	130 feet
Drainage Area:	5.3 square miles
Hazard Classification:	Significant Hazard
Principal Spillway:	Three concrete lined ogee spillways
Principal Spillway Capacity:	Undefined (spillway is the top of the dam)
Auxiliary Spillway:	Not Applicable
Normal Storage Volume:	66 acre-feet
Maximum Storage Volume:	77 acre-feet
Elevations (Mean Sea Level):	Principal Spillway Crest: 491.50
	Auxiliary Spillway Crest: Not Applicable
	Top of Dam: 491.50

Wycliff Avenue Dam

Based on available data, Wycliff Avenue Dam appears to be a 26-foot tall earthen embankment dam. The crest of the dam is made of the roadway intersections of Wycliffe Avenue, Fitzhugh Avenue, Lakeside Drive, and St. Johns Drive. A vicinity map is included below. The service spillway consists of a 40-foot diameter concrete riser pipe that is approximately 20 feet deep. This riser pipe is drained by two horseshoe shaped concrete culverts. The older culvert, which appears to be original to the dam, is 12 feet wide and is situated at the bottom of the riser pipe. The newer culvert, which appears to have been constructed in the 1940s, is 10 feet wide and is situated approximately five feet above the base of the riser pipe. A shallow grass-lined swale, two to three feet deep, traverses from the low point of Wycliffe Avenue south to the culvert outfall area on Turtle Creek. This swale serves as the emergency spillway. Significant floods will overflow both spillways and flood a significant section of Wycliffe Avenue, Fitzhugh Avenue, Turtle Creek Boulevard and St. Johns Drive.

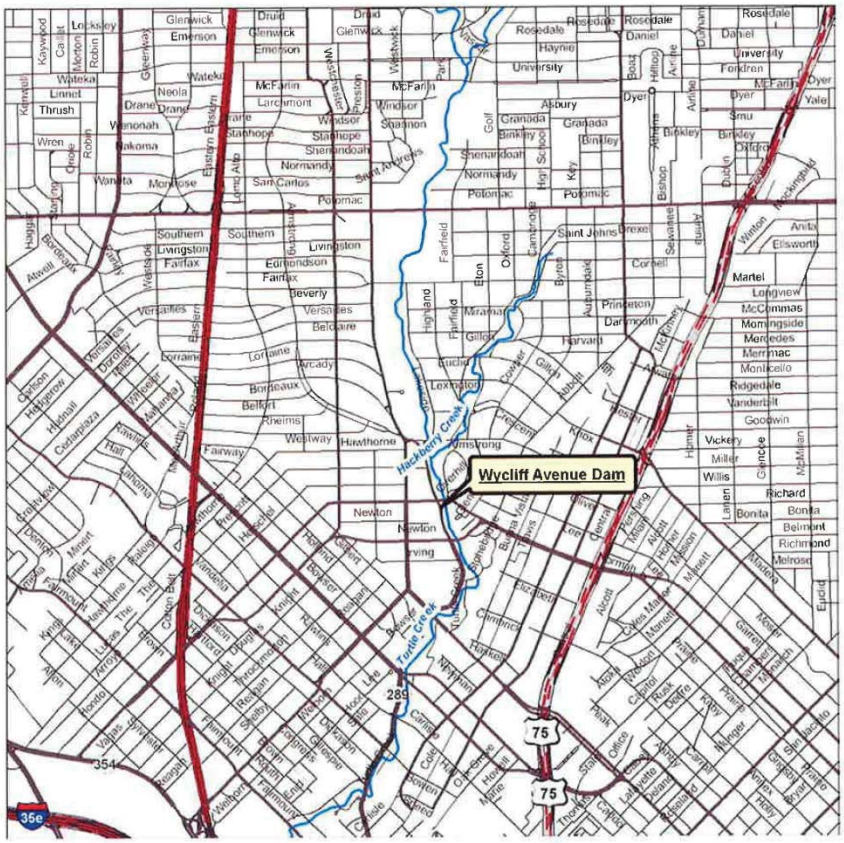
The horseshoe culverts have headwalls that seem to correspond to their age, with the older portion being constructed from grouted masonry blocks and the newer portion consisting of reinforced concrete. The outfall of the older 12-foot wide pipe is typically submerged, while the newer 10-foot wide pipe outfalls to a concrete apron that directs the water into the

channel. The west side of the channel bank in this area is armored with gabion mattresses, while the east side is generally unarmored, except for some mixed vegetation.

The total service spillway capacity is approximately 3,100 cubic feet per second (cfs), which is somewhat less than the flow estimated to be the 10 percent annual chance (10% AC) flood. Flows in excess of this will overtop the dam. Consequently, the dam is likely to overtop with substantial frequency. The report "Dam Safety Evaluation of Exall Lake and Wycliff Avenue Dams on Turtle Creek", further describes the dam and its condition as well as the hydrologic and hydraulic modeling. All of those responsible for operations and maintenance of Wycliff Avenue Dam should be familiar with that report.

The extent of inundation depth for susceptible areas due to a failure or breach can ranges between 0 feet to 3 feet.

Map HP5: Vicinity Map of Wycliff Dam



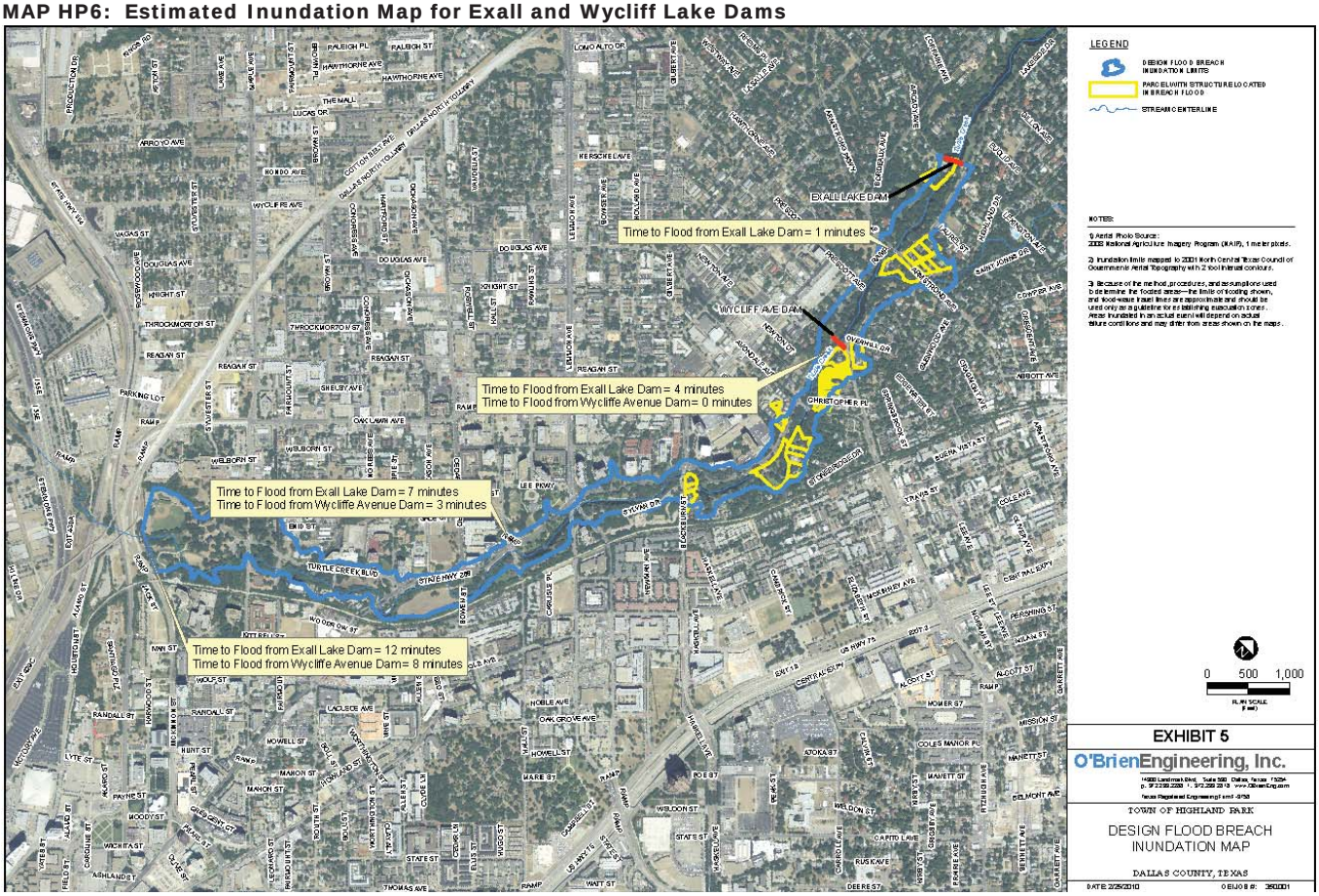
VITAL DAM INFORMATION

Official Dam Name:	Wycliff Avenue Dam
TCEQ Inventory No:	TX04637
Stream:	Turtle Creek
Location:	Dallas County, Highland Park, Texas
Dam Owner:	Town of Highland Park
Owner Address:	4700 Drexel Dr. Dallas, TX 75205-3199
Phone Number:	(214) 521-4161
Type of Dam:	Compacted Earth fill
Year Constructed:	1958
Dam Height:	26 feet
Dam Length:	200 feet
Drainage Area:	5.4 square miles
Hazard Classification:	Significant Hazard
Principal Spillway:	40 feet Diameter
Principal Spillway Capacity:	3100 cubic feet per second
Normal Storage Volume:	30 acre-feet
Maximum Storage Volume:	67 acre-feet
Elevations (Mean Sea Level):	Principal Spillway Crest: 463.50
	Auxiliary Spillway Crest: 470.00
	Top of Dam: 470.00

D. Stream Bank Erosion: The Town of Highland Park has several miles of creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The Town of Highland Park is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the Town of Highland Park. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

MAP HP6: Estimated Inundation Map for Exall and Wycliff Lake Dams



E. Earthquake: There are no known active geological faults and no historical data of earthquakes in the Town of Highland Park. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

Vulnerability Assessment

High Wind	
Population	According to National Climatic Data Center (NCDC), in the previous 10 years, there have been 0 recorded injuries or fatalities from high wind events. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), in the previous 10 years there have been 2 high wind events. The two events had estimated losses of $225,000 per event. No crop losses resulted from this hazard in Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Dallas County are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), there has been 1 reported injury and no deaths caused by hail in the last 10 years. All of Dallas County is potentially exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), a loss of $1.14 billion has been reported in property loss due to hailstorm damage over the past 10 years. All Dallas County improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Dallas County indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in Dallas County are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), in the last 10 years lightning events have caused 1 death and 1 injury in Dallas County. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there has been a $748,500 recorded property loss resulting from lightning in Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Dallas County are exposed to this hazard.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), in the last 10 years, there has been $2.02 million in property losses from winter storm events. No crop losses are expected from this hazard in Dallas County. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Dallas County are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), in the last 10 years there have been 13 recorded injuries from tornado events in Dallas County. All the population of Dallas County is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), over the last 10 years, there has been a total loss of $402.844 million in property losses from tornado events. One of the events did cause crop losses. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Dallas County are exposed to this hazard.

Flooding	
Population	Over the past 10 years an average of 10.5 fatalities have occurred annually. Approximately 10% of the population of Highland Park is located within the 100-year floodplain.
Improved Property	Since 1979, 66 claims for a total of $351,685 have been paid out by the NIFP. 12% of the total assessed value of improvements in Highland Park is at risk from the 100-year storm event.
Emergency Facilities	There is 1 emergency facility at imminent risk from the 100-year storm event.
Critical Facilities	There is 1 critical facility located within the 100-year storm event.
Critical Infrastructure	60% and bridges and 100% of dams are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain due to unavoidable circumstances.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), in the last 10 years there have been 14 deaths recorded due to extreme heat. Dallas County and its population are exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there has not been a monetary loss to improved property in Dallas County because of extreme heat. All improved property is exposed to this hazard.
Emergency Facilities	All emergency facilities in Dallas County are exposed to this hazard.
Critical Facilities	All critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	All critical infrastructure in Dallas County is exposed to this hazard.

Wildfire	
Population	Based on geographical data, approximately 0**%** of Highland Park is vulnerable to wildfires.
Improved Property	Based on geographical data, a loss of 0$ per year can be expected in property loss due to wildfires, which is 0% of the overall property improvement values across Highland Park.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are no schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges or dams at risk from wildfire events.

Drought	
Population	According to National Climatic Data Center (NCDC) zero recorded injuries or fatalities have been recorded for drought events. There are no personal losses expected from drought events.
Improved Property	According to National Climatic Data Center (NCDC), a loss of $510,000 has occurred in the past 10 year period in Dallas County. Crop loss could also be expected if a drought event occurs. All improved property is exposed to this hazard.
Emergency Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	Because of the nature of this hazard, there are no losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	Because of the nature of this hazard, there are no losses or direct impacts expected on critical infrastructure due to drought events.

The town has been divided into 4 geographic quadrants, two representing the west side of town and two representing the east side of town.

The West side of Highland Park:

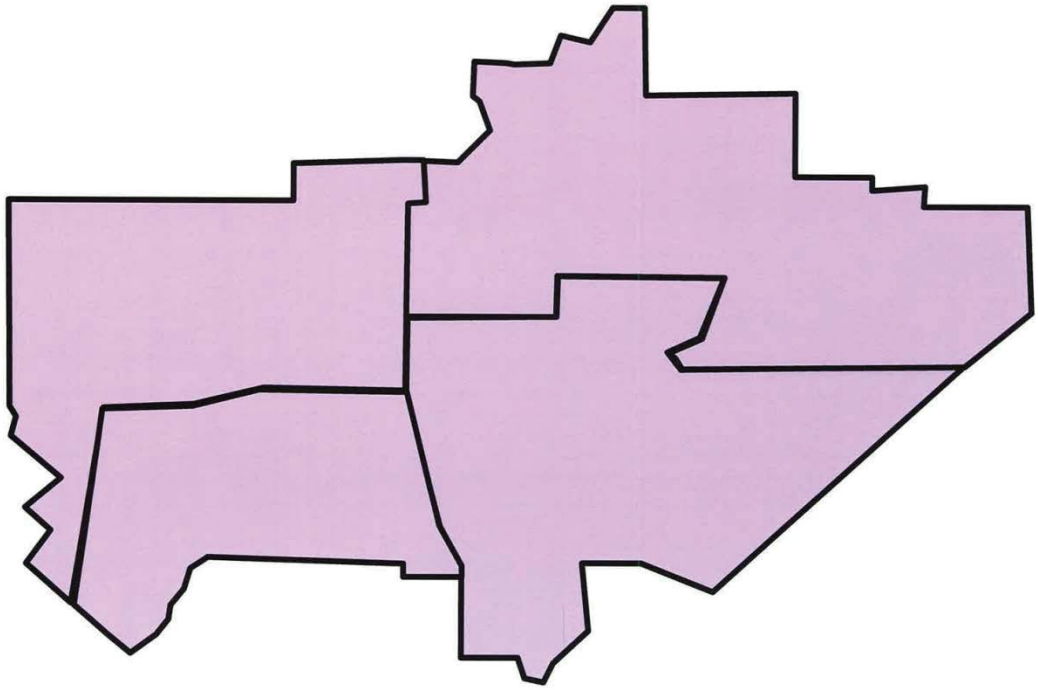
- ✓ Quadrant 41: Encompasses the area located on the west side of Preston Road running north from the town's southern border to Beverly Drive. And the area to the south of Beverly Drive west to Westside Drive.
- ✓ Quadrant 43: Encompasses the area located on the west side of Preston Road running north from Beverly Drive to Potomac Avenue. And the area to the south of Potomac Avenue to Douglas Avenue south to Mockingbird Lane west to Westside Drive.

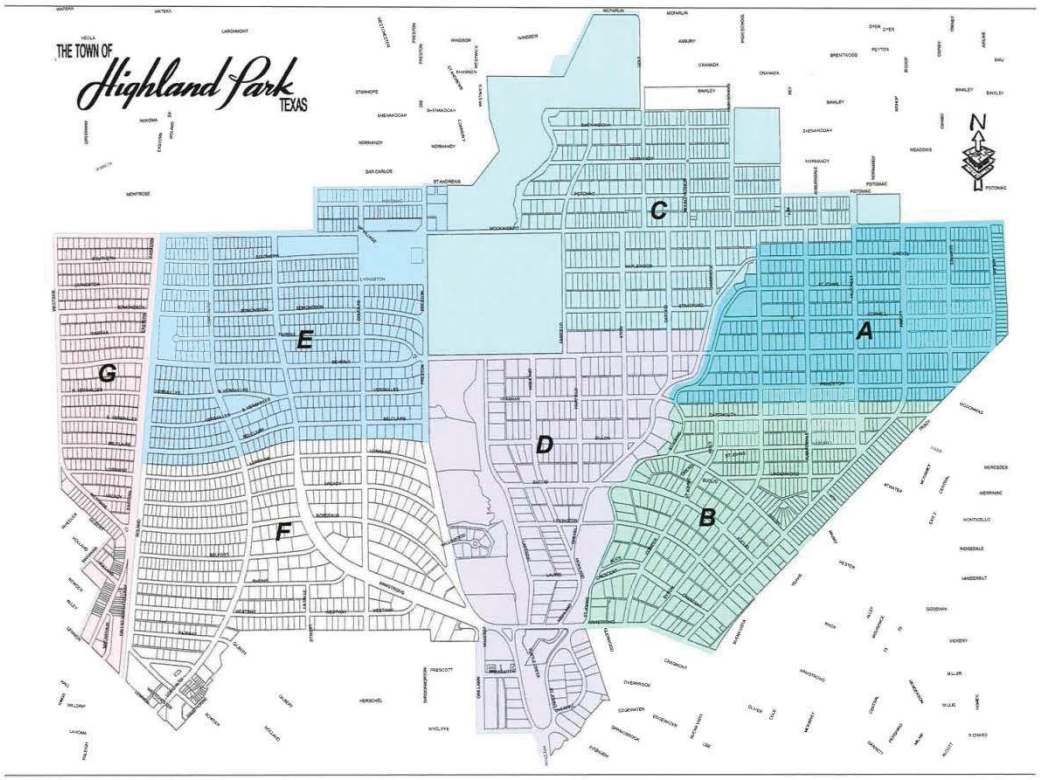
The East side of Highland Park:

- ✓ Quadrant 42: Encompasses the area bordered on the east by Abbott Avenue, the north by Beverly Drive and the west by Preston Road. The southern border is Armstrong Avenue west from Abbott Avenue, to south on St. Johns Avenue to west on Wycliffe Road, to north on Oaklawn Avenue to west on Armstrong Pkwy, to west on Westway Drive to south on Lomo Alto Drive, to west on Lemmon Avenue to the western most border of Westside Drive.
- ✓ Quadrant 44: Encompasses the area bordered on the south by Beverly Drive, the west by Preston Road, the east by Airline Road. The north border is Mockingbird Lane west from Airline Road to north on Hillcrest Avenue, to west on Potomac Avenue to north on Key Avenue, to west on Shenandoah Avenue to Preston Road.

The maps below depict the Quadrants of the Town of Highland Park

Map HP6: Quadrants of Highland Park





Special Facilities located in each Quadrant

Each quadrant has special facilities that need to be addressed and identified. Some of the special facilities located within these areas include schools, churches, governmental buildings, and residential high-rise structures.

- ✓ **Quadrant 41**
  - Businesses – Whole Foods, two strip shopping centers
  - High-rise multi-family structures – The Crestpark, Park Plaza, The Gables and the Towns of Highland Park
  - Other
    - Water tower – 5000 Holland Ave.
- ✓ **Quadrant 43**
  - Schools – Bradfield Elementary School – 4300 Southern
  - Businesses – Highland Park Shopping Village
- ✓ **Quadrant 42**
  - Businesses – The Shops of Highland Park
  - Other
    - Highland Park Town Hall/Department of Public Safety Building
    - Highland Park pump station
- ✓ **Quadrant 44**
  - Schools – Armstrong Elementary School – 3600 Cornell
  - Churches – Highland Park United Methodist Church – 3300 Mockingbird
  - Businesses - Dallas Country Club – 4100 Beverly Drive

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan Update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster

- ✓ ***Objective 2-A***: *Identify areas where repetitive damages occur during chronic hazard events*
- ✓ ***Objective 2-B***: *Incorporate disaster resistant features in government facilities and infrastructure*

- ✓ ***Objective 2-C****:* Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters

- ✓ ***Objective 3-A:*** *Provide public education materials to residents and private sector*
- ✓ ***Objective 3-B:*** *Encourage private sector participation in future mitigation efforts*
- ✓ ***Objective 3-C:*** *Encourage public participation in future mitigation efforts*
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the Town of Highland Park

- ✓ ***Objective 5-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5*****-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP Update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the Updated Plan. The new actions items are as follows:

Town of Highland Park Action Item	Make Improvements to the Stormwater Drainage System Capacity at specific problem areas. This may include installing additional storm drainage systems, re-routing or increasing the capacity of the storm drainage system
Hazard(s) Addressed	Flooding, Stream bank erosion, dam/levee failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$1.1 Million
Potential Funding Sources	Town Budget Highland Park/University Park
Lead Department	Town Engineer
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	Following heavy rainfall flooding and erosion occur in developed areas particular along the roadways. Stormwater management projects that can prevent this include dimensions of drainage culverts in flood-prone and stream restoration to ensure adequate drainage and diversion of stormwater

Town of Highland Park Action Item	Install flood warning systems at Wycliffe and St. Johns consists of stilling wells, Remote Processing Units (RPUs), Dynamic Message Signs (DMS), a radio communication system, and a central computer system
Hazard(s) Addressed	Flooding, Stream Bank Erosion and Dam/Levee Failure
Goal/Objective	4-B
Priority	High
Estimated Cost	$75,000
Potential Funding Sources	Town Budget Highland Park
Lead Department	Town Engineer
Implementation Schedule	Within One Year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits the project will provide
Discussion	Installing a warning system will not only save lives by providing timely information, but the cumulative data collected by these system will allow the town get valuable information on flooding and related events

Town of Highland Park Action Item	Protect Critical Facilities from the effects of flooding. This can include requiring all critical facilities to meet requirements of Executive Order 11988 and be built 1 foot above the 500-year flood elevation. In the case of the Town protecting the Town Hall from flooding by using flood proofing techniques
Hazard(s) Addressed	Flood
Goal/Objective	4-B
Priority	High
Estimated Cost	$75,000
Potential Funding Sources	Town Budget Highland Park
Lead Department	Town Engineer
Implementation Schedule	Within One Year of funding
Effect on Old Buildings	Flood proofing of old building will result in the building being less vulnerable to flooding
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits the project will provide
Discussion	The purpose of this action is to help ensure that vulnerable public facilities are adequately protected from flood related events

Town of Highland Park	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	3-A, 3-D, 5-A
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	Town of Highland Department of Public Safety – Public Information Officer
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Town of Highland Park	Provide incentives and requirements for residents of the Town to Install or construct Safe Rooms in their homes and public areas
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	Can vary by the type of Safe Room installed
Potential Funding Sources	Homeowner
Lead Department	Town Administration Town of Highland Department of Public Safety – Public Information Officer
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	Requiring construction of safe rooms in new schools, daycares, and nursing homes will save lives

Town of Highland Park Action Item	Install backup generators UPS systems to all Town facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, Town budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Highland Park Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

Town of Highland Park	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the Town of Highland Park

Town of Highland Park Action Item	Purchase a series of lightning prediction devices to be deployed around Parks and Schools. Not only would these provide advance warning to those in the area but the cumulative data collected by these devices will allow the Town to identify additional action items tailored to mitigating the lightning hazard.
Hazard(s) Addressed	Lightning
Goal/Objective	5-A
Priority	Medium
Estimated Cost	$30,000
Potential Funding Sources	Town Budget
Lead Department	Engineer/DPS, Parks
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during weather conditions that comes with lightning.

Town of Highland Park Action Item	Develop and implement a maintenance protocol for Drainage Systems and Flood Control Structures in and around the Exall and Wycliffe Dams
Hazard(s) Addressed	Stream Bank Erosion, flooding and Dam/Levee Failure
Goal/Objective	2-D
Priority	High
Estimated Cost	$5.5 Million
Potential Funding Sources	Town Budget, HMGP, PDM, Private Business
Lead Department	Town Engineer
Implementation Schedule	2 years upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is low compared to the potential benefits of reduction in personal injuries or death
Discussion	The warning system will be used in alerting people who live and work in Highland Park of impending severe weather situations. Warning system have proved to have saved lives and mitigated the loss of lives

Town of Highland Park Action Item	Replace the current outdoor severe weather system. The system will not only expand coverage to the entire Town. The system will be narrow banded updated sirens that will improve communication , meet the new regulations as well as will replace the antiquated system
Hazard(s) Addressed	High wind, hail, tornado, flooding
Goal/Objective	2-D
Priority	Medium
Estimated Cost	$500,000
Potential Funding Sources	Town Budget, HMGP, PDM, Private Business
Lead Department	Office of Emergency Management (OEM)
Implementation Schedule	2 years upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is low compared to the potential benefits of reduction in personal injuries or death
Discussion	The warning system will be used in alerting people who live and work in Highland Park of impending severe weather situations. Warning system have proved to have saved lives and mitigated the loss of lives

Town of Highland Park Action Item	Require Water Conservation During Drought Conditions through a town ordinance
Hazard(s) Addressed	Drought
Goal/Objective	2-B, 3-B, 3-C, 4-A
Priority	High
Estimated Cost	Staff Time
Potential Funding Sources	Town Budget
Lead Department	Parks Department
Implementation Schedule	Immediately after being approved by Town Council
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water conversation standards is always important
Discussion	Require mandatory water conservation measures during drought emergencies, including developing an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, and /or adopting ordinances to prioritize or control water use, particularly for emergency situations

Town of Highland Park	In conjunction with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Plan Maintenance

The Director of Public Safety for the Town of Highland Park will be responsible for ensuring that this plan is monitored, evaluated and updated on an on-going basis. The Town's Public Safety Department will call the Highland Park Hazard Mitigation Team (HMPT) together to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Highland Park Department of Public Safety will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Town Council. The Department of Public Safety will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the Town of Highland Park or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The Town of Highland Park is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Town of Highland Park will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the town will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the Town of Highland Park will engage stakeholders in community emergency planning.

Plan Incorporation

The Town of Highland Park has several other documents including plans, ordinances, policies and procedures which were considered during the mitigation planning process. These documents included the Federal Emergency Management Agency (FEMA) FIRM maps, comprehensive plan, future land use and zoning plans, emergency operations plan, adopted building codes and amendments as well as the town ordinances. The Hazard Mitigation Team will continue to use these documents as guidance in determining gaps in the capabilities of the town as well as developing goals and mitigation action items in response to the vulnerability assessment. The table below illustrates how this integration will be conducted.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
Town of Highland Park	Town Council & Town Administrator	Budget Meetings	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Town Engineer	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	Town Council, Town Administrator and Town Engineer	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Town Administrator & Town Engineer	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

Appendix THP-1: HIRA Matrix for the Town of Highland Park

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4	2	2	2	6	67%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	1	3	1	5	40%
Winter Storms	2	3	3	2	2	1	1	4	50%
Tornado	4	4	4	4	2	3	2	7	57%
Flooding	3	3	4	4	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	3	3	4	2	1	7	43%
Extreme Temperatures/Heat	4	4	2	2	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	1	1	4	4	4	4	3	11	36%
Wildfire	1	2	1	.5	1	1	3	5	10%
Utility Failure	3	1	2	2	1	1	1	3	66%
Energy/Fuel Shortage	1	1	3	3	4	2	1	7	43%
Terrorist Attack	1	1	4	4	4	4	3	11	36%
Urban Fire	4	4	4	4	2	2	2	6	67%
Earthquake	1	1	3	3	3	4	3	10	30%
Levee/Dam Failure	1	1	2	2	1	3	3	7	28%
Drought	4	3	2	2.66	2	4	4	10	28%
Aircraft Accident	1	1	2	2	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.5	1	1	3	5	10%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4	4	4	3	11	36%
Civil Disorder	1	1	2	2	2	3	2	7	28%

NB: This Town of Highland Park HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

C. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

3.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

11.) Severity:

Low	1	Very few injuries, if at all none
Medium/Moderate	2	Minor Injuries
High	3	Multiple deaths/injuries
Catastrophic	4	High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

12.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

13.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

14.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

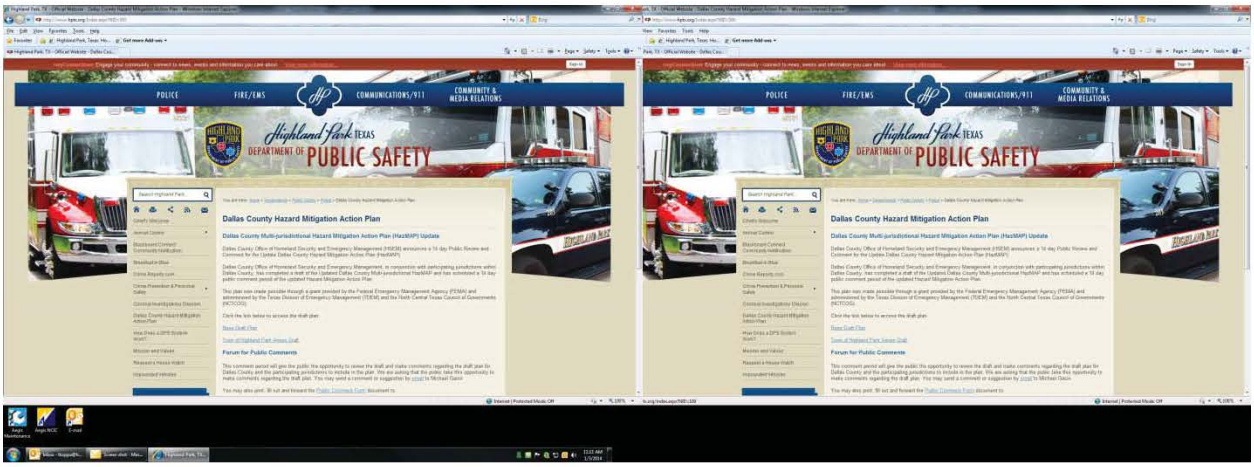
7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix THP-1: Supporting Documentation

Figure HPB-1: Online Public Survey




POLICE
FIRE/EMS
COMMUNICATIONS/911
COMMUNITY & MEDIA RELATIONS
Highland Park TEXAS
DEPARTMENT OF PUBLIC SAFETY
Dallas County Hazard Mitigation Action Plan
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update
Forum for Public Comments

Good Afternoon,

Dallas County Office of Homeland Security and Emergency Management (HSEM) would like to invite you to the 2nd Dallas County Hazard Mitigation Planning Working Group meeting. The details of the meeting are as follows:

Date: Wednesday, July 24, 2013

Location: Richardson Civic Center 411 West Arapaho Road, Richardson, TX 75080

Time: 10:30 am

The purpose of this meeting is to discuss the initial deliverables for the Dallas County HazMAP Update process as outlined in the proposed work plan schedule distributed at the kick off meetings. The discussions at the meeting will include:

1. Hazard Identification and Risk Analysis (HIRA) Form
2. Capability Assessment – This is a product of reviewing your jurisdictions current capabilities in handling the hazards identified above or reviewing and changing capabilities identified in the original plans your jurisdictions may have in place
3. Mitigation Goals – These could be a by-product of the capabilities assessment. It is possible that some of the gaps identified in the in the capabilities assessment could serve as mitigation goals

If your jurisdictions has already taken the above steps and have completed them, your participation at the meeting will be very much appreciated as you can provide ideas to other jurisdictions on what you did to complete these tasks.

We look forward to seeing you at the meeting.

Please contact me if you have any questions or concerns about the meeting or the HazMAP Update process.

Sincerely,

Mike Gaciri

Hazard Mitigation Specialist

Dallas County Homeland Security & Emergency Management

Tel: 214-653-6962

Email: michael.gaciri@dallascounty.org

City of Irving Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Irving has a FEMA approved hazard mitigation plan. The city was one of the 11 jurisdictions that participated in the Dallas County Hazard Mitigation Action Plan that was adopted in 2009.

The City of Irving was represented at the 2013 Countywide Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan Working Group meetings. In addition to the countywide hazards and strategies discussed in the previous sections, this annex serves as a complete hazard mitigation planning tool for the City of Irving. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

The City of Irving is located at 32.4842 N and 96.573 W. The city is directly west of the City of Dallas and east of the Dallas County line. Interstate 635, and highways 183, 114, 161 and loop 12 run through its city limits.



Irving was founded in 1903 by J.O. "Otto" Schulze and Otis Brown. It is believed that literary author Washington Irving was a favorite of Netta Barcus Brown (Otis Brown's wife), and consequently the name of the town site, Irving, was chosen. Irving had two names before the name it holds today was chosen. In 1889 the city was known as Gorbit, and in 1894 the name changed to Kit. Irving was incorporated April 14, 1914, with Otis Brown as the first mayor.

According to the 2010 U.S. Census, the population of Irving is approximately 216,290. The racial makeup of the city was 64.2% White, Hispanic or Latino of any race were 31.2% of the population, 10.2% African American, 0.7% Native American, 8.24% Asian, 0.13% Pacific Islander, 13.4% from other races, and 3.20% from two or more races. The city has a total area of 67.7 square miles with all of it being land. There are approximately 80,293 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.



The city of Irving operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of City activities. The Council sets policy for the city, adopts the annual budget, appoints

committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.



Irving is home to several large corporations such as Nokia, Verizon, Citigroup, Microsoft, and Exxon Mobil. Irving also has five colleges/universities including University of Texas at Dallas Irving campus, DeVry University, and University of Phoenix.

Internal Planning Process:

The purpose of our Mitigation Action Plan (MAP) is to outline the nature and extent of vulnerability and risk from natural hazards and man-made hazards potentially affecting the City of Irving. It describes the actions required to minimize and/or eliminate the effects of those hazards on our city.

The Public Works Director was designated as the Hazard Mitigation Coordinator (HMC). The Emergency Management Coordinator (EMC) worked with the HMC in order to develop the framework and create an outline of Irving's Hazard Analysis. Through multi-departmental, jurisdictional and sector involvement, Irving's Emergency Management staff facilitated discussions and information sharing necessary for a comprehensive hazard analysis update.

Upon completion of the hazard analysis, a meeting was held involving the essential departments, in order to develop a coordinated approach to Mitigation Action Planning and to update the city's current plan. After carefully considering input and discussions that occurred in the meeting, essential information was gathered and used to develop and update Irving goals, objectives, and actions regarding mitigation planning. It should be noted that multiple objectives and mitigation action items were updated and developed with a high level of sensitivity to hazards seen as major threats to the City of Irving (per Irving's hazard analysis).

Many professionals were involved in the planning process of Irving's Mitigation Action Plan (MAP). Including, but not limited to, multiple Irving departments and offices (Public Works, Emergency Management, Capital Improvements, Code Enforcement, Traffic and Transportation, Water Utilities, Inspection, Development Services, Parks and Recreation, Housing and Human Services, Financial Services), and citizens of Irving.

The table below lists members of the City of Irving Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Irving.

Name	Title/Department or Agency	Role
Jason Carriere	Emergency Management Coordinator	HMPT Coordinator, Hazard Identification, capabilities assessment
Alyson M. Brooks	Assistant Emergency Management Coordinator	Assisted as the HMPT Coordinator, Hazard Identification, capabilities assessment
Greg Goedecker	Emergency Management Planner	Hazard Identification, capabilities assessment; Developed annex draft
Ramiro Lopez	Public Works	Hazard & Plan development, Hazard Identification, capabilities assessment, Hazard Identification, City Critical Infrastructure
Casey Tate	Capital Improvements	Hazard & Plan development, Hazard Identification, capabilities assessment, Hazard Identification
Teresa Adrian	Code Enforcement	Hazard & Plan development, Hazard Identification, capabilities assessment, Building Codes
Dan Vedral	Traffic and Transportation	Hazard & Plan development, Hazard Identification, capabilities assessment
Todd Reck	Water Utilities	Hazard & Plan development, Hazard Identification, capabilities assessment
Gary Miller	Inspection	Hazard & Plan development, Hazard Identification, capabilities assessment
Jonathan Bazan	Development Services	Hazard & Plan development, Hazard Identification, capabilities assessment
Ray Cerda	Parks and Recreation	Hazard & Plan development, Hazard Identification, capabilities assessment
Chris Hooper	Housing and Human Services	Hazard & Plan development, Hazard Identification, capabilities assessment
Max Duplant	Financial Services	Hazard & Plan development, Hazard Identification, capabilities assessment

External stakeholders invited via email to participate in the planning and review process of the City of Irving HazMAP annex section included:

Representing	Position/Department	Role
Jill Shaw	Emergency Preparedness Manager/Dallas Area Rapid Transit	Review Plan
Dallas Burke	Operations Manager/Dallas County Utility and Reclamation District	Review Plan
Patrick Daly	Associate VP for Administration, Business Services/ University of Dallas	Review Plan
Terry Zettle	Director of School Safety and Security/ Irving ISD	Review Plan
Joe Santos	Office of Safety& Emergency Preparedness/ North Lake College	Review Plan

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. A summary of their discussion are provided in the table that follows:

Meeting Dates	Summary of Discussions
5/9/2013	First Dallas County HazMAP Group Meeting -- Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
7/24/2013	Second Dallas County HazMAP Group Meeting - HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning
10/3/2013	Third Dallas County HazMAP Group Meeting - Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Discussed city capabilities and worksheets to determine appropriate department to address specific capabilities discussed in worksheet
10/25/2013	Meeting with Flood Plain Manager and Field Operations Officer to discuss capabilities of the city
10/30/2013	Meeting with Capital Improvements to discuss previous mitigation action items
10/30/2013	Updated progress of previous mitigation action items and developed new action items. Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of City's Annex to the HAzMAP.

Public Involvement

In the summer of 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. The residents of Irving were invited through the City Spectrum and city website to participate in an online survey.

This survey was a key component of our planning process. It was used to gather public input and comments on hazards facing the City of Irving. Informational pamphlets, and brochures were given out during a number of public outreach opportunities and these informational materials include Irving Office of Emergency Management contact information allowing further opportunities for comments. Irving OEM feels that public involvement is necessary for the effective development of mitigation policy and procedure.

The City of Irving was represented and participated in the Dallas County HazMAP Working Group. This Working Group provided the forum for participating jurisdictions to share ideas and concerns from businesses in their own area together.

Representatives from volunteer agencies, including the American Red Cross, had opportunities to attend the open meetings held regarding mitigation planning. Irving Emergency Management staff members have numerous professional affiliations which directly increases the incoming of new or best practice mitigation ideas through email listings and info dissemination, meetings, seminar opportunities, and further training opportunities.

Survey Results

The City of Irving made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of five (5) survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The majority of the survey respondents from the City of Irving identified eight hazards that were deemed as most likely to occur in their jurisdiction. Extreme heat, hail, high winds, winter storms, drought, flooding and erosion as the hazards that were rated the most likely to occur (had an average rating of above 3.00) and have the highest impact on the community. Overall the Irving Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards.

The results of the survey provide valuable information for the City of Irving hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. The survey also allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

The City of Irving will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

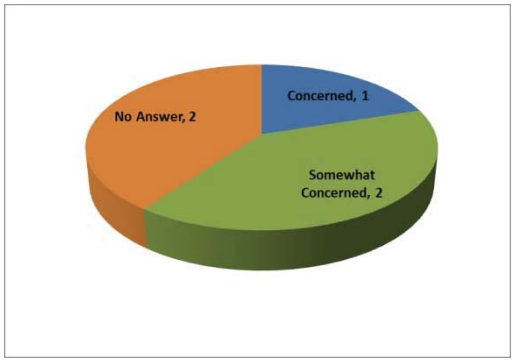
1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ City of Irving (5 responses)

2. Have you ever experienced or been impacted by a disaster?
    - ✓ Yes (0)
    - ✓ No (3)
    - ✓ No Answer (2)

    If "Yes", please indicate what hazard you have endured and where it occurred?

- ✓ No Answers

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact.

	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total	Average Rating
Earthquake	0	1	0	0	4	1	2
Tornado	0	1	1	0	3	2	2.5
Hail	0	0	2	0	3	2	3
High Winds	0	0	2	0	3	2	3
Winter Storms	0	0	1	0	4	1	3
Extreme Heat	0	0	2	0	3	2	3
Drought	0	0	2	0	3	2	3
Flooding	0	1	1	1	2	3	3
Dam Failure	0	1	0	0	4	1	2
Stream Bank Erosion	0	1	0	1	3	2	3
Levee Failure	0	0	1	0	4	1	3

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

	Limited	Minor	Major	Substantial	Skipped	Total
Earthquake	1	1	0	0	3	2
Tornado	0	1	1	0	3	2
Hail	0	1	1	0	3	2
High Winds	0	1	1	0	3	2
Winter Storms	0	1	0	0	4	1
Summer Heat	0	1	1	0	3	2
Drought	0	1	1	0	3	2
Flooding	0	1	2	0	2	3
Dam Failure	0	1	0	0	4	1
Stream Bank Erosion	0	1	1	0	3	2

	Limited	Minor	Major	Substantial	Skipped	Total
Levee Failure	0	1	0	0	4	1

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ✓ Yes (1)
   - ✓ No (2)
   - ✓ No Answer (2)

   If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed

Type of Hazard	Amount
Sink Holes	1

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control)	3
Improve, adopt and enforce building codes:	2
Implement the Texas Individual Tornado Safe Room Rebate Program	2
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs	1
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program	2
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events	2
Coordinate with Dam owners to conduct inundation studies of dams	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners	1
Purchase and improve on the Weatherization Assistance Program (WAP)	1
Conduct an earthquake vulnerability study	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure	1
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing	0
Structural Retrofitting of Existing Buildings	1
Total Respondents	5

Public Review Period

On December 10, 2013 the City of Irving announced the availability of the City of Irving's Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through the city's website that invited the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period. The Emergency Management Department also used Social media to reach out to the public informing them of the opportunity. The public were encouraged to submit comments prior to December 25, 2014 for consideration and possible incorporation into this draft. Copies in the outreach materials and screen shots have been provided in Appendix COI B-1.

The public comments were directed to the Jason Carrier the Emergency Management Coordinator with the City of Irving. Michael Gaciri, the Hazard Mitigation Specialist with Dallas County was also provided as an alternate contact.

It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

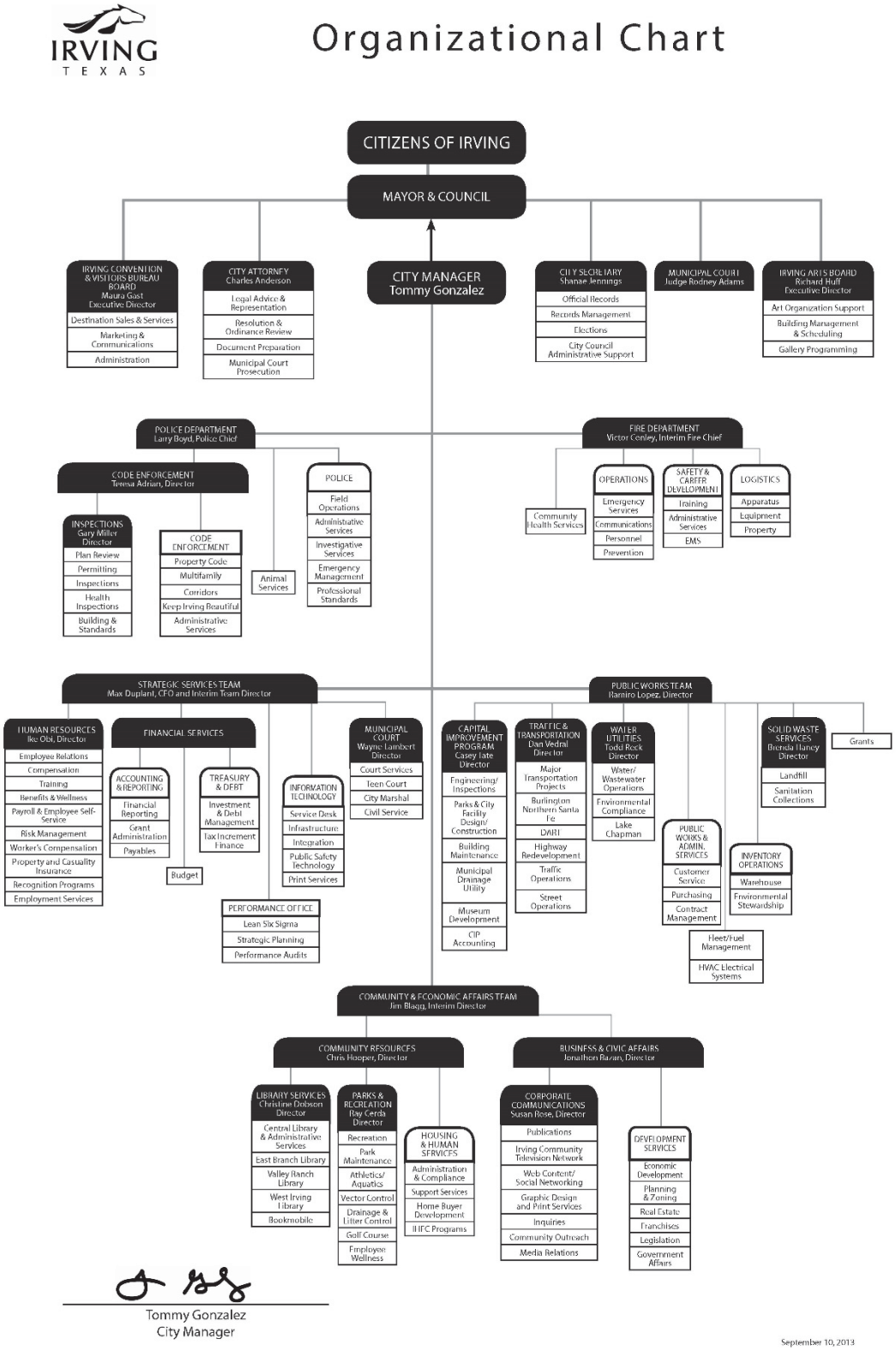
Capability Assessment:

The City of Irving identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

It is important to note that the City Council for the City of Irving, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans. The direction determined by the city council is implemented through the office of the City Manager who is the administrative Officer for the City of Irving.

The list of participating departments outlined in the table above provides a summary of existing departments in the city that are responsible for hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the city. The administrative and technical capabilities of the city are summarized in this section. Figure COI 1 depicts the city's organizational structure as well as provides a picture of the different departments within the City of Irving that will have a role in implementing the plan.

Figure COI 1: City of Irving Organizational Chart



Summary of Capabilities

The tables below identify the current capabilities in the City of Irving.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	The plan will be developed this year and will address all the questions.
Capital Improvements Plan	Yes	Yes – It is a five year plan that is updated annually. It addresses the hazards, identifies mitigation projects, and can be used to implement mitigation actions.
Economic Development Plan	Yes	This plan will be part of the Comprehensive Master Plan
Local Emergency Operations Plan	Yes	1. Yes 2. Yes 3. Yes
Continuity of Operations Plan	Yes	1. Yes 2. Yes 3. Yes
Transportation Plan	Yes	1. Yes 2. Yes 3. Yes
Storm water Management Plan	Yes	1. Yes 2. Yes 3. Yes
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N/A	N/A

Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	Version/Year: 2009 IBC – IRC – All Others 2011 NEC
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	Score: 150-2
Fire Department ISO rating	Yes	Rating: 2
Site Plan review requirements	Yes	Yes
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Yes Yes
Subdivision ordinance	Yes	Yes Yes
Floodplain ordinance	Yes	Yes Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Yes Yes – Storm water and steep slope ordinances
Flood insurance rate maps	Yes	Yes Yes
Acquisition of land for open space and public recreation uses	Yes	Yes, along drainage corridors
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Administrative and Technical

Administration	**Yes/No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Yes – coordination is effective
Mitigation Planning Committee	Yes	Yes – coordination is effective
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	The city has tree-trimming crews and clearing drainage systems. Yes – coordination is effective
Mutual aid agreements	Yes	Yes – coordination is effective
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes	Yes; Yes; Yes
Floodplain Administrator	Yes	Yes; Yes; Yes
Emergency Manager	Yes	Yes; Yes; Yes
Community Planner	Yes	Yes; Yes; Yes
Civil Engineer	Yes	Yes; Yes; Yes
GIS Coordinator	Yes	Yes; Yes; Yes
Other	N/A	N/A
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	City has 25 outdoor warning sirens. City also uses a mass notification system (iAlert) to help notify the public of emergency situations. Yes
Hazard data and information	Yes	
Grant writing	Yes	
HAZUS analysis	Yes	
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
The city is will purchase new sirens to increase coverage in the city. The older models did not cover all areas of the city. Updating the sirens will increase the capabilities of the city in warning residents.		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1. Drainage and street enhancements to reduce flooding 2. Yes
Authority to levy taxes for specific purposes	Yes	1. Yes – MDU fund to fix homes in flood prone areas 2. Yes
Fees for water, sewer, gas or electric services	Yes	1. Yes – Fees for water and sewer 2. Yes
Impact fees for new development	No	
Storm water utility fee	Yes	Yes – Implementation of storm water best management practices. Not currently funded and then only as permitted by state law (supports TPDES programming and storm water management)
Incur debt through general obligation bonds and/or special tax bonds	Yes	1. Yes 2. Yes
Incur debt through private activities	No	
Community Development Block Grant	Yes	1. Yes – To buy homes and build homes for families that couldn't afford to. 2. Yes
Other federal funding programs	Yes	Texas Parks and Wildlife for public trails in public parks
State funding programs	Yes	Trail Grants from Dallas County
Other	Yes	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

The Finance Services is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Building Officials Assn. of Texas Trained in Rapid Damage Assessment
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Provide public emergency preparedness information through public outreach events. Yes
Natural disaster or safety related school programs	Yes	Provide school emergency preparedness information and trainings through outreach events Yes
StormReady certification	Yes	Building Officials Assn. of Texas Trained in Rapid Damage Assessment
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	Building Officials Assn. of Texas Trained in Rapid Damage Assessment
Other	No	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?		✓
Capital Improvement Program and Infrastructure Policies	**Yes**	**No**
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	✓	

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: As stated earlier, the city or town council, including the councilmembers and mayor, have the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources for mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

The direction determined by this city council is implemented through the office of the City Manager who is the administrative Officer for the City of Irving.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	770 policies, Premiums $77,128 Coverage $152,800
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	113 Claims, $703,330 paid No substantial Damage
How many structures are exposed to flood risk within the	Community Floodplain Administrator (FPA)	1,016
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	None
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit review of all development in Floodplain. Discussion of possible LOMA LOMR – F Floodplain
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	No Barriers
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		One
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		January 2012
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	December 1977
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceed, Finished floor 2 foot above Floodplain and Trinity River. No loss of Valley Storage
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Floodplain manager has preliminary discussion with developer or home builder explaining criteria. If a LOMR is required it must be approved by FEMA before construction occurs with
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Irving HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Irving are as follows:

High Risk (over 65% on HIRA)	Tornado
Moderate Risk (41%- 65% on HIRA)	Flooding Hail Winter Storms Extreme Heat Dam/Levee Failure
Low Risk (12 %-40% on HIRA)	Drought Earthquake High Winds Lightning
No Risk (Below 12% on HIRA)	Stream Bank Erosion Wildfire

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for Dallas County. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk as there is no property or people that have been identified as being at risk from this hazard in the jurisdiction.

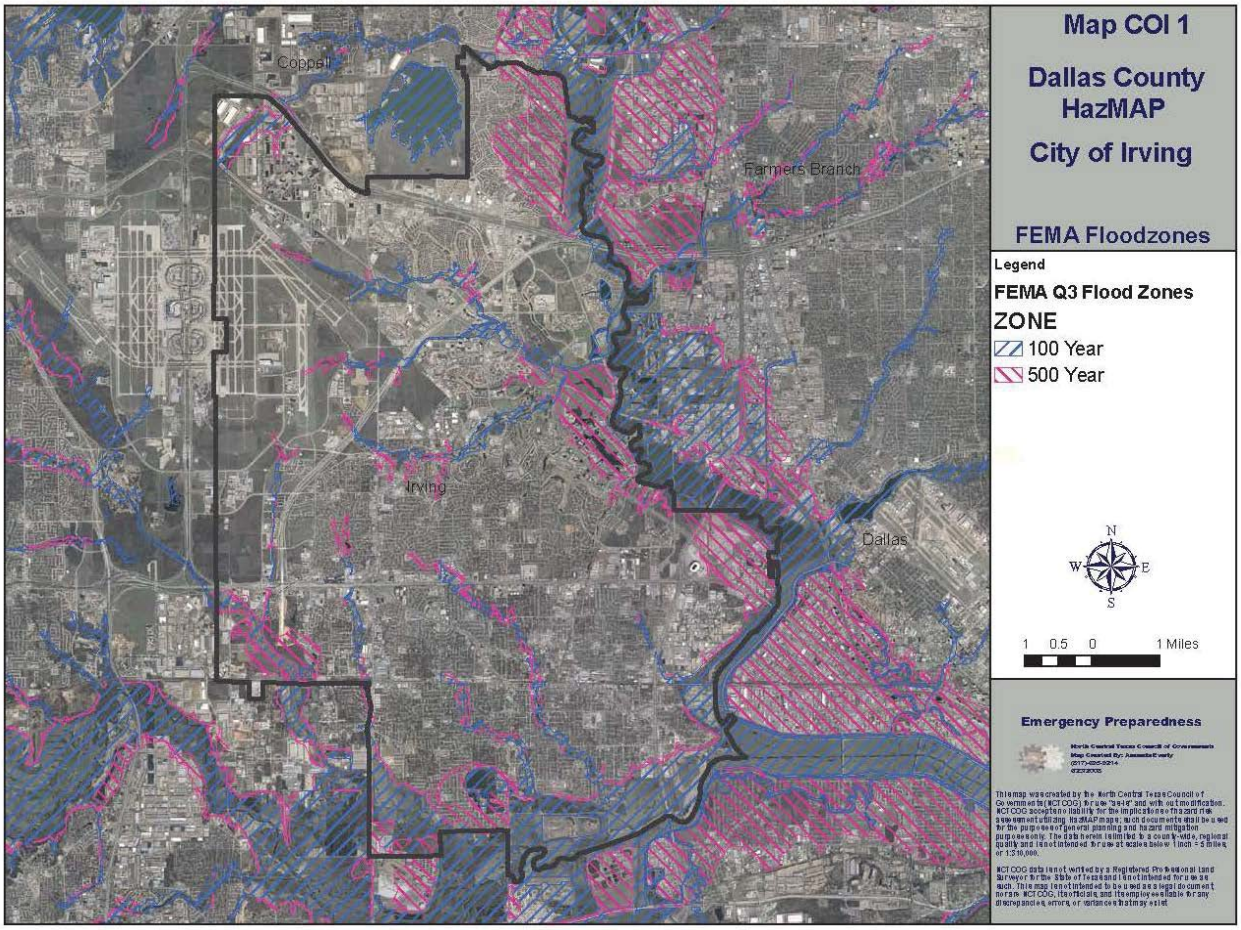
Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Irving. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

A. Flooding: There are five drainage basins that cause the majority of flooding in Irving. The Elm Fork of the Trinity River is our eastern border. There are no insurable structures in the Elm Fork floodplain. The West Fork of the Trinity River is a major portion of the southern boundary. There are over 300 insurable structures in the West Fork floodplain. Bear Creek is the third largest watershed. There are over 100 insurable structures in the Bear Creek floodplain, however, most of them are in the shared Bear Creek/West Fork floodplain and would have 6 inches to one foot more water inside the structure during a West Fork flood.

Delaware Creek has a 9.23 square mile watershed with approximately 100 insurable structures in the floodplain. West Irving Creek has a 3.2 square mile watershed with approximately 160 insurable structures in the floodplain.

The last major flood in Irving was May 5, 1995 with approximately 100 structures being flooded. The city has been making drainage improvements to our systems based on that event ever since. Map COI 1 depicts the FEMA flood zones for the City of Irving

Map COI 1: City of Irving Floodplain



Source: North Central Texas Council of Governments

The City of Irving participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. According to the Texas Water Development Board there are 11 properties that are considered repetitive loss or severely repetitive loss properties. See Table 5.8.1

Irving	Years	Properties	Number of losses	Payments
Single Family	1979, 1981, 1982, 1983, 1989, 1993, 1995, 1996, 1998, 2001, 2002, 2007, 2012	8	15	$177,919.28
Other Residential	-	-	-	-
Non Residential	1981, 1982, 1987, 1996, 2008, 2011	3	7	$229,557.22
Total		**11**	**22**	**$407,476.50**

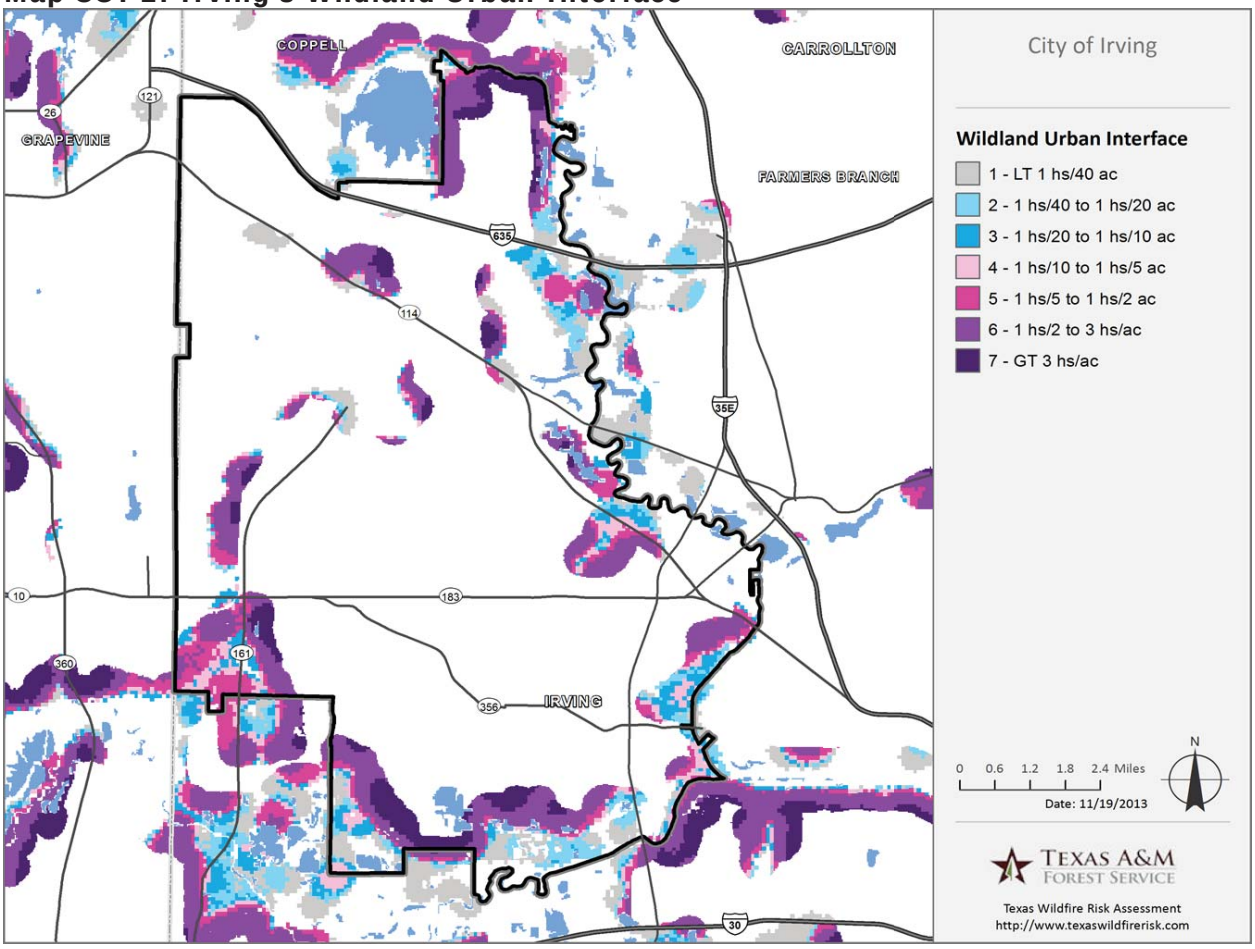
The City continues to be in compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 27,512 people or 14 percent of the total project area population (202,772) live within the WUI. Map COI 1 depicts the Wildland Urban Interface (WUI) for the City of Irving.

A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Irving ranges from Non-Burnable to Low.

Map COI 2: Irving's Wildland Urban Interface



Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

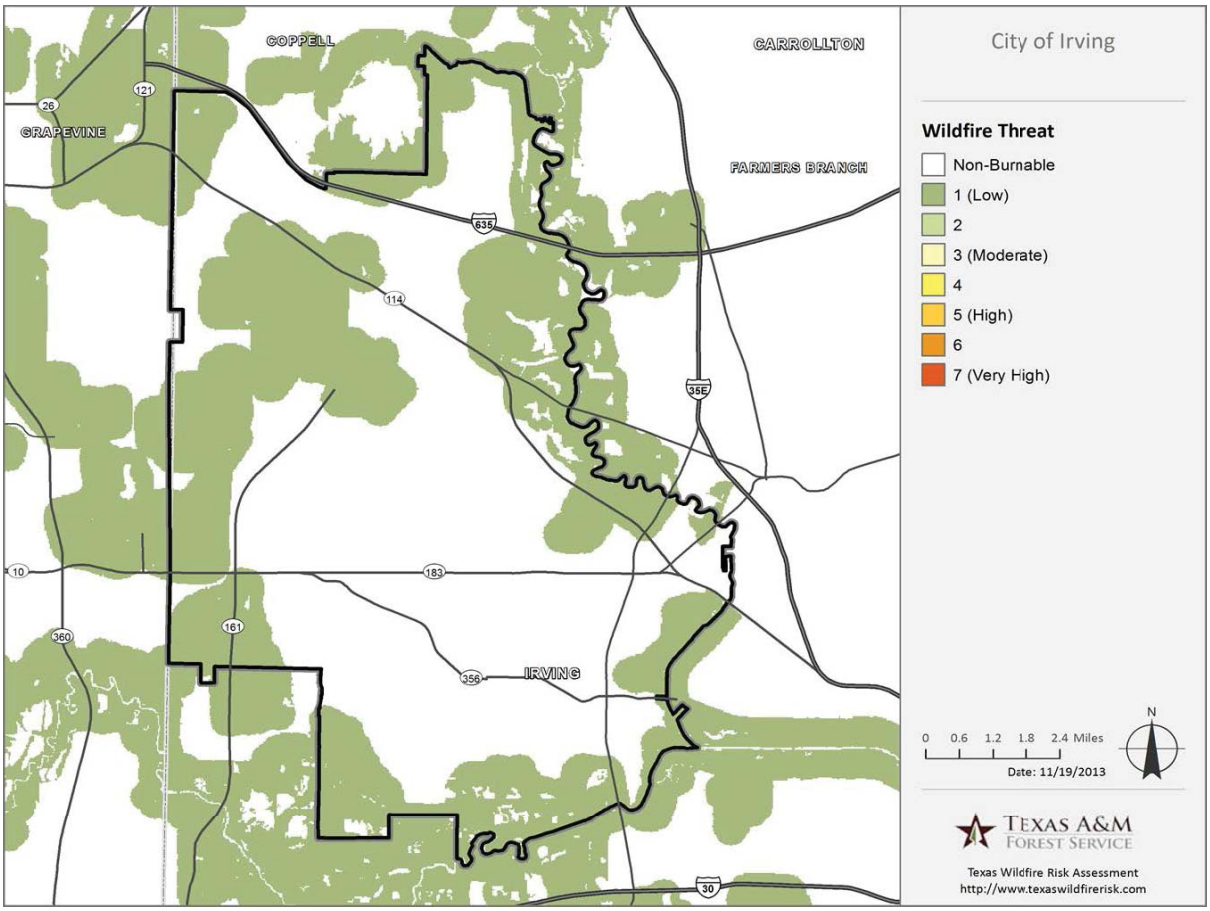
from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The wildfire threat Map COI 3 is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map COI 3: Irving Wildlife Threat



C. Dam Failure: While the City of Irving does not own or operate any dam it is assumed that the inundation zones for the Lake Lewisville Dam, Grapevine Dam and Joe Pool Dam would affect the jurisdictional area for the City of Irving.

Lake Lewisville Dam: The dam operated by the Army Corp of Engineers. Lake Lewisville Dam was completed in 1955 and is estimated by the Corps of Engineers to have prevented $31.2 Billion in flood damages since that time. Figure provides a diagram and description of the dam's key features and embankment specifications. The dam was authorized by the River and Harbor Act, approved 2 March of 1945. The primary purposes of the dam are flood risk management and water supply. Conservation pool level is currently elevation 522.

Lewisville Dam is situated at river mile 30 of the Elm Fork of the Trinity River, about 1 mile north of Lewisville, Texas adjacent to Interstate 35E.The project includes an earth fill embankment that is Roughly 32,328-ft long, with maximum structural height of 125-ftabove the riverbed (elevation 560 feet NGVD) and a 20-ft crest. The dam has gated outlet works which are 16-foot diameter concrete conduits (invert elevation 448 feet NGVD), with three 6.5-ft x 13-ft tractor type gates. Outlet works releases into Elm Fork of the Trinity River. The spillway is uncontrolled concrete ogee weir, roughly 560-ft wide with a crest elevation of 532 feet NGVD. Spillway releases into the Elm Fork of the Trinity River.

The extent of a failure of **Lake Lewisville Dam** to the **City of Irving** has not yet been determined. As a result the City of Irving has cited a data deficiency, as there is no information on the inundation levels. The c**ity** does not own or maintain any data that would show the extent of a dam/levee failure. The **City of Irving** will need to conduct studies and work with the owners and operators of the dam to get a better understanding of the risks and extent of inundation that it will face in the event of a failure.

Grapevine Dam: Grapevine Dam was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1952. USACE operates Grapevine Dam for flood control and storm water management, water supply, and recreation. This dam has provided $251.4 million in annual flood damage reduction since placed into service. Grapevine Lake provides 136,300 acre-feet (ac-ft.)2 of water to a number of communities downstream of the dam. The annual water supply benefits gained from Grapevine Lake amount to nearly $34.5 million. Annual recreational benefits to the area are $16.2 million.

The dam is a rolled earth-fill type, 28 feet (8.5 m) thick, which spans 12,850 feet (3,920 m). The crest of the dam is located at 588 feet (179 m) above sea level. At the dam, the original creek bed was at 451 feet (137 m), making the dam approximately 137 ft. (42 m) tall.

The dam's spillway is located at approximately 560 feet (170 m) above sea level. This gives it a flood capacity of at least 425,500 acre feet (524,800,000 m^3), including an allowance for the build of up sediment in the lake's bottom. Typically, the lake is maintained near its conservation level, at 535 ft. (163 m), giving it a capacity of 181,100 acre feet (223,400,000 m^3) and a surface area of 7,280 acres (29.5 km^2).[2]

At conservation level, the lake has approximately 60 mi (97 km) of shoreline.

The extent of a failure of **Grapevine Dam** to the **City of Irving** has not been determined. As a result the City of Irving has cited a data deficiency, as there is no information on the inundation levels. The c**ity** does not own or maintain any data that would show the extent of a dam/levee failure. The **City of Irving** will need to conduct studies and work with the owners and operators of the dam to get a better understanding of the risks and extent of inundation that it will face in the event of a failure.

Joe Pool Dam: The project was approved by Congress in 1965 and known as Lakeview Lake until 1982 when it was renamed to the present name. Actual construction began in 1977 and was completed in December 1985. Impoundment of water began in January 1986 and the lake was filled by June 1989. The dam is formed by an earth-fill embankment with a maximum height of 108.5 feet above the streambed and a total length of 4.2 miles, including a concrete spillway 50 feet wide. The lake is currently operated by the U.S. Army Corps of Engineers for municipal water supply, flood control and recreational purposes. At top of flood control pool, elevation of 536 feet above mean sea level, the lake would cover 10,940 acres and stores 304,547 acre feet water. According to data from U. S. Army Corps of Engineers, at elevation of 522 feet above mean sea level (top of conservation pool), the lake measured 7,470 acres of water surface with a storage capacity of 176,895 acre feet in 1985. The dam controls a total drainage area of about 304 square miles.

The extent of a failure of **Joe Pool Dam** to the **City of Irving** has not yet been determined. As a result the City of Irving has cited a data deficiency, as there is no information on the inundation levels. The c**ity** does not own or maintain any data that would show the extent of a dam/levee failure. The **City of Irving** will need to conduct studies and work with the owners and operators of the dam to get a better understanding of the risks and extent of inundation that it will face in the event of a failure.

Levee Failure: As discussed in the earlier the City of Irving and The City of Dallas are the two cities that have the most levee systems in Dallas County. See Table 5.14

As stated earlier the risk of levee failure from the base flood event is minimal for the levee systems listed. However, there is a greater risk of levee failure or levee systems being overtopped for flood events that exceed the base flood event. The three foot freeboard required by FEMA provides a greater safety factor, but major floods of long duration such as the 1993 Mississippi River Flood can result in major damage and potential loss of life.

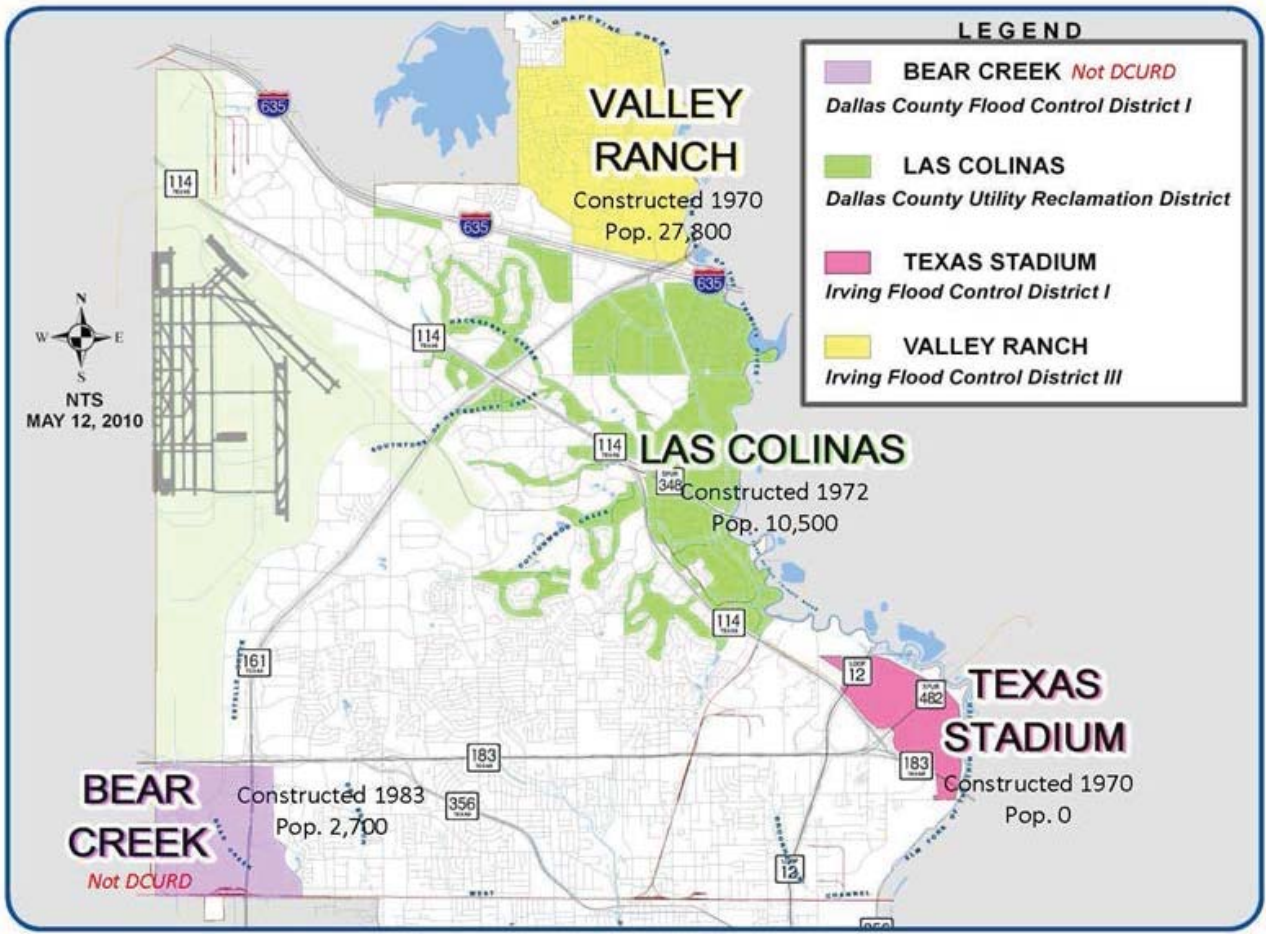
Parts of Irving are protected by levees that are operated and maintained by Dallas County Utility Reclamation District (DCURD), and Dallas County Flood Control District I. DCURD is responsible for operations and maintenance of the levee systems and flood control measures for the Las Colinas Development, Irving Flood Control Districts I and III. Dallas County Flood Control District I protects the Bear Creek area. The inundation areas that are protected by these levees are highlighted in **MAP CO I-1**.

D. Drought: Periods of drought can have significant environmental, economic and social consequences. The most common consequences are:

- ✓ Wildfires
- ✓ Ground drag and desertification
- ✓ Loss of agricultural production
- ✓ Disease
- ✓ Thirst
- ✓ Famine due to lack of water for irrigation
- ✓ Social unrest
- ✓ Migration or relocation of those impacted

The effect varies according to vulnerability. Drought can also reduce water quality, because lower water flows reduce dilution of pollutants and increase contamination of remaining water sources. All citizens of Irving will be vulnerable to a drought. Water supplies would be low thus seriously impacting the ability of the City of Irving to provide water to its residents.

MAP COI-1: CITY OF IRVING INUNDATION AREAS



Because of Irving's soil type, a drought could damage water lines and cause ruptures. Not only would this mean a loss of water but it would also mean a loss of water pressure. During a drought, where water rationing is needed, another issue would be that concerning firefighting. Depleted sources of water and low water pressure could seriously affect Irving's ability to protect buildings from fires.

E. Earthquake: Since 2008, the USGS National Earthquake Information Center (NEIC) in Golden, CO, began reporting felt and locatable earthquakes in the Irving area, a region with no prior earthquake activity going back to at least 1970. We identify the beginning of the ongoing earthquake sequence in Irving as April 17, 2014 based on the first felt earthquake (magnitude 2.4) reported for eastern Irving and Dallas. Since then, the rate of earthquakes has varied but increased significantly in early January 2015 including the occurrence of two magnitude 3.5 and 3.6 events on January 6. For this sequence, the NEIC reports that the largest earthquake to date has been a magnitude of 3.6, that there have been five earthquakes over magnitude 3, and that there have been 46 total reported earthquakes with the smallest reported magnitude being 1.1. The table below provides a summary of the recent earthquake activities in the City of Irving.

Date	Size	Depth	Location
04/03/2015	2.4	5.0 km	Irving
03/08/2015	2.2	8.0 km	Irving
01/20/2015	2.5	8.3 km	Irving
01/20/2015	2.3	10.5 km	Irving
11/23/2014	3.3	4.0 km	Irving
11/15/2014	2.6	4.0 km	Irving
10/01/2014	2.1	6.6 km	Irving
09/11/2014	2.8	5.0 km	Irving

This increase in earthquake activity has prompted to Irving to further study this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

F. Extreme Heat: Irving is particularly vulnerable due to the fact that it is primarily an urban setting. Because asphalt and concrete store heat longer and gradually release heat at night, which produces higher nighttime temperatures known as the "urban heat island effect", people living in urban areas (most of Irving) are at greater risk from the effects of a prolonged heat wave than those living in rural areas.

Also, other specific vulnerable populations include elderly persons, small children, chronic invalids, those on certain medications or drugs (especially tranquilizers and anti-cholinergic), and those persons with weight and alcohol problems.

In Irving, there are a few areas where the elderly (age 65 +) live in high concentrations (not counting senior homes and assisted living). High concentrations are in the MacArthur, Plymouth Park, and Irving Heights areas. Also, it should be pointed out that among Irving's elderly, 32.1% have a disability.

The poor are also specifically vulnerable in an extreme summer heat or heat wave situation. 19% of Irving residents are living in poverty and a high concentration of these are in the south-eastern section of Irving's Las Colinas Urban Center and the Irving Heights areas.

G. Stream Bank Erosion: There are no areas of Irving where stream bank erosion is considered to be a hazard nor is there any history of stream bank erosion in Irving. Stream Bank Erosion is not considered a hazard that affects Irving and will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Irving. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ Population: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ Improved property: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ Emergency facilities: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ Critical facilities: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ Critical infrastructure: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Irving. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Irving.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Irving.
Critical Infrastructure	According to National Climatic Data Center there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Irving.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Irving due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Irving are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Irving are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Irving are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Irving is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), 80,000 of property damage has been recorded due to high wind events in the City of Irving. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Irving are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Irving are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Irving are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), one injury has been recorded in City of Irving as a result of lightning. All the population in the City of Irving is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property damage as a result of lightning has been reported in the City of Irving. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in the City of Irving are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in City of Irving are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in City of Irving are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Irving. All the population of City of Irving is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Irving. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Irving are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Irving are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Irving are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Irving is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $300,000 of property damage was reported for City of Irving. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Irving indicates that there are no expected crop losses from this event. All improved property is exposed to this hazard.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Irving are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Irving are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Irving are exposed to this hazard.

Wildfire	
Population	Based on geographical data 14% of the population in City of Irving lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. The improved properties in the WUI are exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	According to National Climatic Data Center (NCDC), $60,000 of property damage was reported as a result of flooding in the City of Irving. There are $153,526,800 dollars of improved valued properties in the City's areas at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	0 % of railways/highways and bridges, 0 % of dams, 0 % of water treatment works, and 0 % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013

Changes in Population and Development

The City of Irving was a participant in the last Dallas County Hazard Mitigation Action Plan. The table 3.1 shows that the estimated growth in population for the city was from 216,290 to 227,030 an increase of 5%. The city added 2,935 new housing units between 2008 and 2014. There were 366 new commercial developments of the same period. The total structural and economic developments included offices, industrial parks, retail outlets, educational, medical and sports facilities. None of these new developments were built in floodplains.

To help mitigate the impacts of the hazards identified, the city identified broad mitigation strategies to lower the vulnerability due to the changes in population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stormwater ordinances, stricter code regulations such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

The table below provides a summary of the essential infrastructure for the City of Irving.

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals		
Irving/Coppell Surgical Hospital	N32° 54.7278', W096° 57.1099'	1
Baylor Medical Center	N32° 50.112', W096° 57.6604'	1
Las Colinas Medical Center	N32° 54.0226', W096° 57.4695'	1
Senior Homes and Centers		
Avante Rehabilitation Center	N32° 48.9366', W096° 57.2045'	1
Avalon Alzheimer's Care Homes	N32° 48.9366', W096° 57.2045'	1
Stone Gate (Northgate Plaza) Nursing and Rehabilitation	N32° 51.3905', W096° 58.4398'	1
Irving Nursing and Rehabilitation Center	N32° 49.1609', W096° 56.5539'	1
Ashford Hall	N32° 50.1131', W096° 56.9193'	1
Elmcroft of Irving	N32° 50.3438', W096° 58.3962'	1
Centre for Neuro Skills	N32° 51.6277', W097° 0.361'	1
Centre for Neuro Skills	N32° 51.5855', W097° 0.3106'	1
Centre for Neuro Skills Unit 1	N32° 51.5828', W097° 0.3305'	1
Center for Neuro Skills Unit 2	N32° 51.5947', W097° 0.3375'	1
Centre for Neuro Skills Unit 3	N32° 51.6056', W097° 0.3454'	1
Centre for Neuro Skills Unit 4	N32° 51.616', W097° 0.3426'	1
Silverado Senior Living – Valley Ranch	N32° 55.6686', W096° 57.536'	1
Emeritus at Irving	N32° 49.2765', W096° 56.4836'	1
Towne Lake Court Assisted Living	N32° 49.0637', W097° 0.4696'	1
VIP Living Center Irving	N32° 48.458', W096° 59.3945'	1
The Remington at Valley Ranch	N32° 55.4713', W096° 56.6665'	1
Childcare Facilities		1
Adventure Discovery Center	N32° 50.5066', W096° 58.3053'	1
Adventure Discovery Center Number 3	N32° 48.6534', W096° 58.8836'	1
Allison's Clubhouse	N32° 51.1183', W096° 59.6212'	1
Amazing Kids Academy	N32° 50.3317', W096° 56.7491'	1
Bright Horizons Family Center	N32° 51.6245', W096° 55.8022'	1
Bright Steps Learning Center	N32° 48.0734', W096° 58.6063'	1
Childcare Network #170	N32° 48.1055', W096° 57.5893'	1
Children First Academy	N32° 51.452', W097° 0.0419'	1
Children's Choice Learning Center	N32° 55.7335', W097° 0.5074'	1
Children's Courtyard	N32° 55.7225', W096° 57.5393'	1
Children's Discovery Center of First Baptist Irving	N32° 48.6341', W096° 56.7726'	1
Childs Choice	N32° 49.1888', W096° 57.495'	1
Education Station Learning Center	N32° 49.8207', W096° 54.6296'	1
First Class Learning Center	N32° 48.0868', W096° 58.2793'	1
Holy Trinity Learning Center	N32° 50.7261', W096° 57.0559'	1
I Montessori School	N32° 54.5925', W096° 57.7453'	1
Irving YMCA	N32° 49.6208', W096° 58.5101'	1
Irving YMCA at Brown Elementary	N32° 48.341', W096° 58.7982'	1
Irving YMCA at TJ Lee Elementary	N32° 51.1819', W096° 57.9729'	1
Irving YMCA at Townley Elementary	N32° 47.8525', W096° 57.5299'	1
Irving YMCA at Townsell Elementary	N32° 51.422', W096° 59.201'	1
Islamic School of Irving	N32° 50.5902', W097° 0.6398'	1
Kid quarters Day School	N32° 49.7555', W096° 55.6214'	1
Kids Academy	N32° 50.1301', W096° 58.5837'	1
Kids Palace Learning Center	N32° 50.7537', W096° 57.4352'	1
Kids R Kids #10 Texas	N32° 55.0881', W096° 58.9362'	1
Kim's Stepping Stone Learning Center	N32° 48.7811', W096° 56.3241'	1

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Kinder Care #1246 Greenway	N32° 53.4301', W096° 57.9889'	1
Kinder Ranch	N32° 56.0808', W096° 57.6999'	1
KinderCare at Ranch Trail	N32° 55.6048', W096° 57.1703'	1
KinderCare Learning Center	N32° 51.1471', W096° 58.5475'	1
Kings Kids Academy	N32° 51.2063', W096° 58.7118'	1
Kinwest Montessori Academy	N32° 54.4925', W096° 57.7283'	1
Landry After the Bell	N32° 55.8895', W096° 56.8817'	1
Las Colinas Children's Academy	N32° 53.0978', W096° 58.4161'	1
Little Peoples Learning Academy	N32° 49.235', W096° 57.5441'	1
Little Star Montessori Home School	N32° 56.7197', W096° 57.8416'	1
Miss Bloomingdales Academy	N32° 51.595', W096° 55.5946'	1
Montessori School of Las Colinas	N32° 52.0615', W096° 56.7727'	1
Morgan's Private School & Day Care	N32° 49.7275', W096° 59.1608'	1
Ms. Lee's Learning Center	N32° 50.3617', W096° 59.0338'	1
New Age Montessori	N32° 56.0367', W096° 56.9983'	1
Our Children's Center At Irving	N32° 49.5828', W096° 59.526'	1
Pam's Play and Learn	N32° 56.106', W096° 57.665'	1
Pierce Private Day School	N32° 56.4034', W096° 57.2074'	1
Polka Dot Playhouse Child Care	N32° 48.2737', W096° 59.0365'	1
Primrose School Of Las Colinas	N32° 48.8411', W096° 56.9337'	1
Primrose School of Valley Ranch	N32° 56.0148', W096° 57.2333'	1
Rainbow Academy	N32° 50.3326', W097° 0.4121'	1
RARE Learning, Inc.	N32° 54.7668', W096° 57.8832'	1
RARE Learning, Inc.	N32° 55.8857', W096° 56.762'	1
Redeemer Montessori	N32° 50.6208', W096° 56.6016'	1
Rock brook Montessori Academy at Valley Ranch	N32° 55.6274', W096° 57.4766'	1
Shady Grove Learning Center	N32° 48.1658', W096° 59.4107'	1
Simply Smarts Learning Center	N32° 50.8385', W096° 59.6816'	1
St Francis Montessori Irving	N32° 49.3285', W096° 58.6221'	1
The Children's Courtyard	N32° 51.8382', W097° 0.0294'	1
The Kidz Zone	N32° 49.2632', W096° 57.4336'	1
The Learning Tree Academy	N32° 49.0853', W096° 57.2339'	1
The Sloan School	N32° 50.8933', W096° 57.0798'	1
Valley Ranch Elementary YMCA	N32° 56.2649', W096° 57.3576'	1
Visions Learning Center	N32° 48.8585', W096° 57.8519'	1
Wesleyan Academe	N32° 50.2658', W096° 58.0348'	1
YMCA at Lively Elementary	N32° 49.8623', W096° 58.1003'	1
Zales Child Development Center	N32° 53.1035', W096° 57.7595'	1
Schools		
Irving High School	N32° 51.9119', W096° 56.9329'	1
MacArthur High School	N32° 51.2521', W096° 57.5198'	1
Nimitz High School	N32° 47.6232', W096° 56.7917'	1
The Academy of Irving ISD	N32° 52.2092', W096° 57.5434'	1
Cardwell Career Preparatory Center	N32° 49.2743', W096° 56.775'	1
Austin Middle School	N32° 49.4119', W096° 56.2166'	1
Bowie Middle School	N32° 48.4055', W096° 56.2619'	1
Crockett Middle School	N32° 50.1306', W096° 58.672'	1
de Zavala Middle School	N32° 49.2229', W096° 57.2264'	1
Houston Middle School	N32° 51.7305', W096° 59.2067'	1
Lamar Middle School	N32° 48.7727', W096° 59.0039'	1
Travis Middle School	N32° 50.98', W096° 57.9895'	1
Lady Bird Johnson Middle School	N32° 49.9459', W096° 59.8791'	1

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Barton Elementary School	N32° 49.3103', W096° 59.1355'	1
Brandenburg Elementary School	N32° 50.7273', W096° 57.9208'	1
Britain Elementary School	N32° 48.2959', W096° 56.3966'	1
Brown Elementary School	N32° 48.3822', W096° 58.7915'	1
Davis Elementary School	N32° 49.0988', W096° 59.9876'	1
Elliott Elementary School	N32° 47.4129', W096° 58.5352'	1
Farine Elementary School	N32° 50.8234', W096° 57.1729'	1
Gilbert Elementary School	N32° 49.0557', W096° 55.613'	1
Good Elementary School	N32° 49.3183', W096° 55.8559'	1
John Haley Elementary School	N32° 48.6857', W096° 57.5386'	1
Thomas Haley Elementary School	N32° 51.2851', W097° 0.0817'	1
Hanes Elementary School	N32° 50.5632', W097° 0.168'	1
Johnston Elementary School	N32° 50.5859', W096° 59.0524'	1
Keyes Elementary School	N32° 49.8116', W096° 56.7503'	1
Lee Elementary School	N32° 51.1835', W096° 57.9826'	1
Lively Elementary School	N32° 49.8623', W096° 58.1003'	1
Schulze Elementary School	N32° 48.0568', W096° 55.542'	1
Stipes Elementary School	N32° 47.8957', W096° 59.4226'	1
Townley Elementary School	N32° 47.8525', W096° 57.5299'	1
Townsell Elementary School	N32° 51.422', W096° 59.201'	1
Clifton Early Childhood School	N32° 51.5344', W096° 59.2472'	1
Kinkeade Early Childhood School	N32° 48.4066', W096° 58.5553'	1
Pierce Early Childhood School	N32° 49.481', W096° 56.5741'	1
School for the Deaf	N32° 48.2959', W096° 56.3966'	1
Ratteree Center	N32° 47.5552', W096° 57.6146'	1
Secondary Reassignment Center	N32° 49.7532', W096° 59.4466'	1
Wheeler Transitional & Development Center	N32° 48.0176', W096° 55.443'	1
Administration Building	N32° 50.2975', W096° 58.9394'	1
Facilities Service Center	N32° 50.9914', W097° 1.2323'	1
School Meal Application Center	N32° 49.2847', W096° 56.9467'	1
Learning Resources (at Ratteree)	N32° 47.5552', W096° 57.6146'	1
Irving Schools Stadium	N32° 48.4055', W096° 56.2619'	1
Ranchview High School	N32° 55.25', W096° 56.6567'	1
Barbara Bush Middle School	N32° 56.9142', W096° 57.2946'	1
Bernice Chatman Freeman Elementary	N32° 55.5496', W096° 57.5606'	1
Tom Landry Elementary	N32° 55.8895', W096° 56.8817'	1
Las Colinas Elementary	N32° 54.9817', W096° 58.4137'	1
Valley Ranch Elementary	N32° 56.2649', W096° 57.3576'	1
Winfree Academy Charter School	N32° 52.1457', W096° 59.3114'	1
North Hills Charter School	N32° 53.6886', W096° 55.9904'	1
Universal Academy	N32° 50.5589', W096° 57.487'	1
Berean Christian Academy	N32° 48.5134', W096° 56.0625'	1
Cistercian Preparatory School	N32° 51.3054', W096° 55.3526'	1
Faustina Academy	N32° 49.8399', W096° 58.0404'	1
Holy Family Nazareth School	N32° 50.334', W097° 0.395'	1
Islamic School of Irving	N32° 50.5902', W097° 0.6398'	1
The Highlands School	N32° 50.8743', W096° 55.8073'	1
Shady Grove Christian Academy	N32° 48.1114', W096° 58.1303'	1

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
St. Luke School	N32° 48.7854', W096° 57.5918'	1
Wesleyan Academe	N32° 50.2658', W096° 58.0348'	1
North Lake College	N32° 52.3508', W096° 57.9629'	1
DeVry University	N32° 56.0487', W097° 0.7741'	1
University of Dallas	N32° 50.7797', W096° 55.1782'	1
Police Stations		
Criminal Justice Center	N32° 48.9906', W096° 57.0676'	1
North Police Station	N32° 53.4129', W096° 56.1449'	1
Fire Stations		
Fire Admin/Purchasing	N32° 48.8163', W096° 57.4114'	1
Fire Prevention Building	N32° 48.0466', W096° 58.4211'	1
Fire Station #1	N 32° 48.2044', W096° 56.0993'	1
Fire Station #2	N 32° 49.6566', W096° 58.5594'	1
Fire Station #3	N32° 49.8652', W096° 55.2647'	1
Fire Station #4	N32° 51.0996', W096° 57.5489'	1
Fire Station #5	N32° 48.1684', W096° 59.1981'	1
Fire Station #6	N32° 50.6669', W097° 0.6146'	1
Fire Station #7	N32° 51.935', W096° 59.3712'	1
Fire Station #8	N32° 51.6496', W096° 55.976'	1
Fire Station #9	N32° 55.0359', W097° 0.184'	1
Fire Station #10	N32° 55.9952', W096° 56.9915'	1
Fire Station #11	N32° 53.6059', W96° 57.2885'	1
Emergency Operations Facilities		
EOC	N32° 49.0928', W097° 1.8307'	1
Dams		
LEWISVILLE DAM	N33-04'07'' 096-57'52'' W	1
GRAPEVINE DAM	N32-58'00'' 097-03'01'' W	1
JOE POOL LAKE	N32°38'45" 97°0'1"W	1
Other		
Animal Shelter	N32° 51.7288', W097° 1.1207'	1
Auto Pound at VVMC	N32° 49.1214', W097° 1.9438'	1
Building Maintenance/HVAC	N32° 49.2779', W096° 57.4351'	1
Central Library	N32° 48.812', W096° 57.3232'	1
Cimarron Park Rec Center	32° 55.8857', W096° 56.762'	1
Civic Center	N32° 48.8536', W096° 57.3359'	1
Community Building/Code Enforcement	N32° 48.7682', W096° 56.6955'	1
Community House	N32° 48.7883', W096° 56.7155'	1
Custodial Supply Storage	N32° 48.9766', W096° 59.3694'	1
Family Advocacy Center	N32° 49.0611', W096° 57.1818'	1
Friends of Library	N32° 48.8909', W096° 59.2285'	1
Fritz Maintenance Office	N32° 47.8833', W096° 56.4795'	1
Garden Arts Center	N32° 48.2811', W096° 56.7732'	1
General Services/Records	N32° 48.8117', W096° 57.3725'	1
Guard Shack Gate	N32° 48.9578', W096° 59.3672'	1
Hackberry Pump Station	N32° 55.5275', W096° 58.2'	1
Heritage House	N32° 48.9713', W096° 57.0283'	1
Heritage Park Bldg.	N32° 48.737', W096° 56.7952'	1
Irving Arts Center	N32° 51.0319', W096° 57.6173'	1
Irving Community Television Network	N32° 48.8092', W096° 57.852'	1
Irving Convention & Visitors Bureau	N32° 52.2617', W096° 56.6032'	1
Irving Soccer Complex	N32° 52.8926', W096° 59.6597'	1
Jaycee Art Center	N32° 50.1981', W096° 56.7867'	1
Landfill Garage	N32° 47.1982', W096° 56.7347'	1
Landfill Office	N32° 47.1982', W096° 56.7347'	1

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Las Colinas Service Centers (5)	N32° 48.8411', W096° 56.9337'	1
Lee Recreation Center	N32° 50.8939', W096° 57.9071'	1
Lively Community Center	N32° 49.4698', W096° 57.1193'	1
MacArthur Pump Station	N32° 50.085', W096° 57.416'	1
Municipal Garage	N32° 49.0753', W096° 59.3671'	1
Museum	N32° 48.8519', W096° 56.9768'	1
Mustang Park Rec Center	N32° 54.7668', W096° 57.8832'	1
North Service Center	N32° 53.3113', W096° 59.1478'	1
Northwest Branch Library	N32° 50.8029', W096° 59.4794'	1
Northwest Park Rec Center	N32° 50.6216', W097° 0.1136'	1
Old Warehouse	N32° 49.0741', W096° 59.3671'	1
Training Academy	N32° 50.0674', W097° 0.5671'	1
Public Works	N32° 49.0741', W096° 59.3671'	1
Radio Shop	N32° 49.0665', W096° 59.3671'	1
Sanitation Office	N32° 49.0764', W096° 59.3671'	1
Senter East Bldg.	N32° 48.1307', W096° 56.6947'	1
Senter Park Rec Center	N32° 48.3013', W096° 56.8171'	1
Southwest Branch Library	N32° 48.0236', W096° 58.5637'	1
Traffic Signal, Welding &Maintenance	N32° 49.0471', W096° 59.3671'	1
Valley Ranch Library	N32° 56.0433', W096° 57.0528'	1
Valley View Municipal Center	N32° 49.0928', W097° 1.8307'	1
Warehouse/Public Works	N32° 48.8909', W096° 59.2285'	1
West Park Rec Center	N32° 49.2761' W097° 0.009''	1

Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	$131,067,800	100	Within
Commercial	$21,459,000	100	Within
Industrial		100	Within
Government / Public	$1,000,000	100	Within

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events

- ✓ Objective 1-A: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ Objective 1-B: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ Objective 1-C: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster

- ✓ Objective 2-A: Identify areas where repetitive damages occur during chronic hazard events
- ✓ Objective 2-B: Incorporate disaster resistant features in government facilities and infrastructure
- ✓ Objective 2-C: Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters

- ✓ Objective 3-A: Provide public education materials to residents and private sector
- ✓ Objective 3-B: Encourage private sector participation in future mitigation efforts
- ✓ Objective 3-C: Encourage public participation in future mitigation efforts
- ✓ Objective 3-D: Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ Objective 4-A: Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Irving

- ✓ Objective 5-A: Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ Objective 5-B: Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ Objective 5-C: Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis :

Irving Action Item	Coordinate with dam owners to attain proper inundation studies for dam safety and establish action items which prove to be more cost efficient
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A, 2-C, 3-B
Priority	Low
Estimated Cost	Unknown - To be determined
Potential Funding Sources	City Funds
Lead Department	Emergency Management Department
Implementation Schedule	Within two years
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	As cited in the hazard assessment section of this annex, there is a deficiency of inundation data of the Soil Conservation Dams that could potentially affect the City of Irving. The City will need to work the owners and operators of the dams to conduct inundation studies to determine the most appropriate mitigation actions.

Irving Action Item	NOAA weather radios for city owned building and/or department heads
Hazard(s) Addressed	Tornado, High Winds, Hail, Lightning, Winter Storm, Extreme Heat, Drought, Flooding, Wildfires, dam/levee failure
Goal/Objective	2-C
Priority	Medium
Estimated Cost	TDB
Potential Funding Sources	HMGP, City Budget
Lead Department	Emergency Management
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is much less than the benefit it can provide
Discussion	NOAA weather radios provide a constant connection between citizens and authorities, allowing for dissemination of emergency notifications

Irving Action Item	Apply enhancements and additional equipment to sirens. These enhancements will allow the city to expand coverage to areas not covered.
Hazard(s) Addressed	Tornado, High Winds, Hail, Lightning, Winter Storm, Dam Failure
Goal/Objective	2-C
Priority	Medium
Estimated Cost	TDB
Potential Funding Sources	HMGP, City Budget
Lead Department	Emergency Management
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is much less than the benefit it can provide
Discussion	The additional enhancements and equipment will include upgrading the software that runs the system and upgrade components within the sirens to ensure ultimate performance and coverage capabilities

Irving Action Item	Protect power lines and infrastructure - Burying power lines to provide uninterrupted power after severe winds, considering both maintenance and repair issues.
Hazard(s) Addressed	High Winds, Winter Storms, Tornado, wildfire, lightning and hail
Goal/Objective	2-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Reduce power outages and repairs to power lines during and after high wind, winter storm, tornado, and severe storm events.
Discussion	Power lines will be buried alongside Riverside Drive from Teleport Boulevard to California Crossing Road. Burying these power lines will make them less vulnerable to high winds and ice.

Irving Action Item	Retrofit Public Buildings and Critical Infrastructure: Improve wind engineering measures and construction techniques. This can include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, window shutters, or interlocking roof shingles. This can also include installing lightning arrestors and water delivery systems to accommodate drought events
Hazard(s) Addressed	Tornado, High Winds, Hail, earthquake, lightning, flooding. Wildfires, drought
Goal/Objective	1-A
Priority	Medium
Estimated Cost	TDB
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	Old buildings will be retrofitted to reduce future damage from severe weather
Effect on New Buildings	New buildings will meet the new requirements when being constructed
Cost Effectiveness	The cost of the is much less than the benefit
Discussion	Retrofitting public buildings and critical infrastructure to FEMA 361 standards will help mitigate the loss of life and property

Irving Action Item	Improve the flood risk assessment capabilities of the city: This will be done by conducting a review of the area in the four levee districts that would be inundated by a levee failure during a 100 year and 500 year, and standard project flood. Analyze all available routes out of the Levee Districts and any new streets that would not be flooded
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Potential Matching Sources	Budget, Donations
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levees
Discussion	This can be done by incorporating procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

Irving Action Item	Channel improvement on Delaware Creek from 183 to Grauwlyer and reconstruction of the Cripple Creek Bridge
Hazard(s) Addressed	Flooding, Dam/Levee Failure
Goal/Objective	1-A
Priority	High
Estimated Cost	$14,000,000
Potential Funding Sources	Capital Improvement Bond fund, Water Utility Bond Fund
Lead Department	Public Works and Transportation
Implementation Schedule	Long Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Loss of life and property can be prevented through this action.
Discussion	The drainage improvements will place the 100 year flood plain within the channel easement resulting in 150 residential structures to not have to pay flood insurance. The project will reconstruct 6,000 linear feet of channel from SH183 to Grauwyler Road, replace 7 bridges and replace/upgrade 5,000 linear feet of Wastewater Mains.

Irving Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	3-A
Priority	Low
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	Building Inspections Department
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the NCTCOG

Irving Action Item	Provide public outreach materials and presentations at city sponsored events. These materials will be geared to providing the public and understanding of the risks identified in this plan and what steps to take to protect themselves, their family, and their property
Hazard(s) Addressed	Flooding, Hail, Lightning, Tornadoes, High Winds, Winter Storms, Drought, Extreme Heat, Earthquakes, Wild Fires, Dam & Levee Failure
Goal/Objective	3-A, 3-D
Priority	High
Estimated Cost	$3,000
Potential Funding Sources	City Budget
Potential Matching Sources	Budget, Donations
Lead Department	Police/Emergency Management
Implementation Schedule	Short Term, Within one year of funding
Effect on Old Buildings	This has no direct effect on structures
Effect on New Buildings	This has no direct effect on structures
Cost Effectiveness	This is extremely cost effective
Discussion	To develop the public education on hazards they face in this area may help to relieve the burden on public infrastructure during disasters. It also sets a realistic understanding of what will be provided to include education on mitigation activities

Irving Action Item	Install water-saving equipment and technology supported by city wide strategies to water conservation. These will include improving water supply and delivery systems and equipment such as low flowing devices that will reduce mitigate against drought and converse water
Hazard(s) Addressed	Drought
Goal/Objective	1-B
Priority	High
Estimated Cost	TBD
Potential Funding Sources	City Budget
Potential Matching Sources	Budget, Donations
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	Replacement of water and waste water mains that have met or exceeded their design life throughout the city. The replacement of these mains will help alleviate the frequent repairs, water quality issues, and water loss.

Irving Action Item	Implement a Weatherization Program that coordinates and complements that Dallas County assists eligible elderly and/or disabled residents with repairing or replacing their heating and cooling system
Hazard(s) Addressed	Extreme Heat and Winter Storms
Goal/Objective	3-C
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget/TBD
Potential Matching Sources	Budget, Donations
Lead Department	Dallas County
Implementation Schedule	Long Term
Effect on Old Buildings	Repairs cooling and heating systems so at risk population within the City can avoid the Extreme Temperatures/Heat
Effect on New Buildings	None
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work

Irving Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Plan Maintenance

The City of Irving Emergency Management Department will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator will lead the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Irving	Emergency Management Coordinator	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will call the Irving Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Emergency Management Coordinator will communicate the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed, to the City's Administration. Irving's HMPT will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Irving or its community, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Irving is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Irving will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and, as appropriate, during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Irving will engage stakeholders in community emergency planning.

Plan Incorporation: The City of Irving maintains a comprehensive and coordinated approach to all of its planning and strategy development. During the mitigation planning process this approach was continued. Building codes, ordinances, Emergency Operations Plan, the Irving Hazard Vulnerability Assessment, and the Capital Improvement Plan were all used during the Irving MAP planning process. Each of these plans provides direction for the City of Irving and allowed mitigation planners to assess what the city's needs were. By utilizing these plans in the planning process, planners were able to create mitigation goals and develop

mitigating action items for consideration which would align with other city planning mechanisms.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Irving	City Council, Budget and City Manager	Budget Meetings	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	City Engineer	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council, Capital Improvement Program, Planning and Community Development	Capital improvement plans	As needed	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Utilities/ Customer Service Department	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. Meeting Documentation

b. Outreach Materials

Appendix COI A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Irving
Hazard Identification and Risk Assessment (HIRA)
Date: AUGUST 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	2	2	1	3	3	7	29%
Hail	4	4	3	3	2	3	1	6	50%
Lightning	4	4	2	2	1	3	1	5	40%
Winter Storms	3	4	3	2.25	2	1	1	4	56%
Tornado	4	4	4	4	1	2	2	5	80%
Flooding	3	3	4	4	1	3	3	7	57%
Pandemic/Public Health Emergency	2	4	4	2	3	1	1	5	40%
Extreme Temperatures/Heat	4	4	2	2	2	2	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3	3	2	2	7	42%
Wildfire	1	1	2	.33	1	1	1	3	11%
Utility Failure	4	3	2	2.66	2	4	4	10	26%
Energy/Fuel Shortage	1	1	1	1	3	2	1	6	16.6%
Terrorist Attack	1	1	4	4	4	4	3	11	36%
Urban Fire	4	4	4	4	4	1	1	6	66%
Earthquake	1	1	3	3	3	4	3	10	30%
Levee/Dam Failure	2	2	3	3	2	3	1	6	50%
Drought	4	3	1	1.33	2	3	3	8	16%
Aircraft Accident	1	1	2	2	3	3	3	9	22%
Stream Bank Erosion	1	1	2	.33	1	1	1	3	11%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4	4	4	4	12	33%
Civil Disorder	2	2	3	3	2	2	2	6	33%

NB: This City of Irving HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7) The descriptors in the Priority Risk Index (PRI) is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix B-1: Meeting Documentation and Outreach Materials

Dallas County/Irving Hazard Mitigation Plan (HazMAP)

Greg Goedecker

Sent: Wed 4/15/2015 9:02 AM
To: 'mpdaly@udallas.edu'

Good Morning Mr. Daly,

The City of Irving and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **The University of Dallas** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Much Obliged

Greg Goedecker
Emergency Management Planner
Irving Police Department
City of Irving I CityofIrving.org
825 W. Irving Blvd., Irving, TX 75060
P: (972) 721.2100 I C: (469) 744-5904
ggoedecker@cityofirving.org

Malcolm Baldrige National Quality 2012 Award Recipient

Dallas County/Irving Hazard Mitigation Plan (HazMAP)

Greg Goedecker

ent: Wed 4/15/2015 9:02 AM
o: 'JSANTOS@DCCCD.EDU'

Good Morning Joe,

The City of Irving and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **North Lake College** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Much Obliged

Greg Goedecker
Emergency Management Planner
Irving Police Department
City of Irving I CityofIrving.org
825 W. Irving Blvd., Irving, TX 75060
P: (972) 721.2100 I C: (469) 744-5904
ggoedecker@cityofirving.org

Malcolm Baldrige National Quality 2012 Award Recipient

Dallas County/Irving Hazard Mitigation Plan (HazMAP)

Greg Goedecker

Sent: Wed 4/15/2015 9:02 AM

To: 'jshaw@dart.org'

Good Morning Mrs. Shaw,

The City of Irving and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **DART** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Much Obliged

Greg Goedecker
Emergency Management Planner
Irving Police Department
City of Irving I CityofIrving.org
825 W. Irving Blvd., Irving, TX 75060
P: (972) 721.2100 I C: (469) 744-5904
ggoedecker@cityofirving.org

Malcolm Baldrige National Quality 2012 Award Recipient

Dallas County/Irving Hazard Mitigation Plan (HazMAP)

Greg Goedecker

Sent: Wed 4/15/2015 9:02 AM

To: Dallas Burke (dburke@dcurd.org)

Good Morning Mr. Burke,

The City of Irving and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **DCURD** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

Much Obliged

Greg Goedecker
Emergency Management Planner
Irving Police Department
City of Irving I CityofIrving.org
825 W. Irving Blvd., Irving, TX 75060
P: (972) 721.2100 I C: (469) 744-5904
ggoedecker@cityofirving.org

Malcolm Baldrige National Quality 2012 Award Recipient

Dallas County/Irving Hazard Mitigation Plan (HazMAP)

Greg Goedecker

Sent: Wed 4/15/2015 9:02 AM

To: tzettle

Good Morning Chief Zettle,

The City of Irving and Dallas County Office of Homeland Security and Emergency Management (HSEM) is in the process of updating its Hazard Mitigation Plan (HazMAP). We would like to invite **Irving ISD** to provide input on the draft plan. A link to the plan is provided below. Any input you provide will be duly considered and be incorporated into the plan as appropriate.

Thank you for your consideration and assistance in this matter.

http://www.dallascounty.org/department/osem/documents/DallasCounty_HazMAP_June2014_FinalDraft.pdf

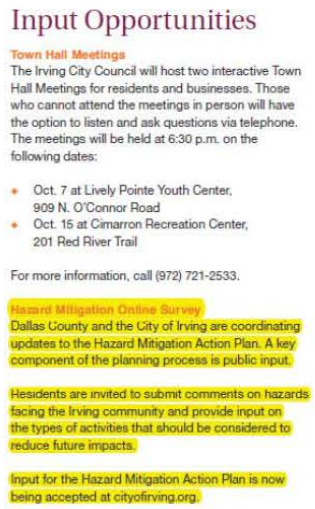
Much Obliged

Greg Goedecker
Emergency Management Planner
Irving Police Department
City of Irving I CityofIrving.org
825 W. Irving Blvd., Irving, TX 75060
P: (972) 721.2100 I C: (469) 744-5904
ggoedecker@cityofirving.org

Malcolm Baldrige National Quality Award 2012

Malcolm Baldrige National Quality 2012 Award Recipient





Input Opportunities

Town Hall Meetings

The Irving City Council will host two interactive Town Hall Meetings for residents and businesses. Those who cannot attend the meetings in person will have the option to listen and ask questions via telephone. The meetings will be held at 6:30 p.m. on the following dates:

- Oct. 7 at Lively Pointe Youth Center, 909 N. O'Connor Road
- Oct. 15 at Cimarron Recreation Center, 201 Red River Trail

For more information, call (972) 721-2533.

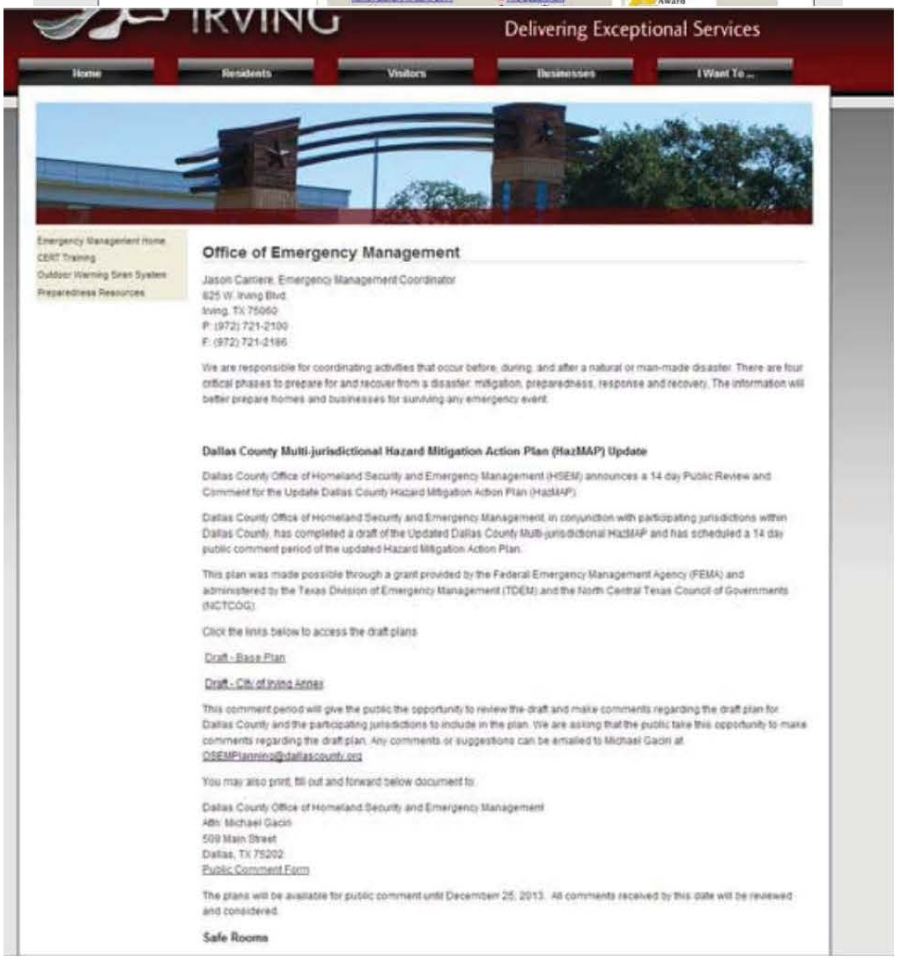
Hazard Mitigation Online Survey

Dallas County and the City of Irving are coordinating updates to the Hazard Mitigation Action Plan. A key component of the planning process is public input.

Residents are invited to submit comments on hazards facing the Irving community and provide input on the types of activities that should be considered to reduce future impacts.

Input for the Hazard Mitigation Action Plan is now being accepted at cityofirving.org.


IRVING
Quick links
Search Site
Delivering Exceptional Services
Home
Residents
Visitors
Businesses
I Want To ...
Year In Review 2013
2013 Martin Luther King Jr. Observance to be held Jan. 19
Irving's Year in Review insert highlights the city's accomplishments in 2013
Maximize the Use of Your e-Reader Holiday Gift at Irving Central Library Jan. 12
Departments
Payments
Public Input
Know the Facts
Irving News
Updates Proposed for Downtown
Library to Hold E-Reader, Digital Downloads Fairs
Civil War 150: Program Draws Upon Personal Accounts 150 Years Later
Events Calendar
January 2014
Irving in the News
ICTN
All About Irving
Enter email address
Sign Me Up!


IRVING
Delivering Exceptional Services
Home
Residents
Visitors
Businesses
I Want To ...
Emergency Management Home
CERT Training
Outdoor Warning Siren System
Preparedness Resources
Office of Emergency Management
Jason Carriere, Emergency Management Coordinator
825 W. Irving Blvd.
Irving, TX 75060
P: (972) 721-2100
F: (972) 721-2186
Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update
Draft - Base Plan
Draft - City of Irving Annex
Safe Rooms

Appendix C-1 – Survey Results City of Irving

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

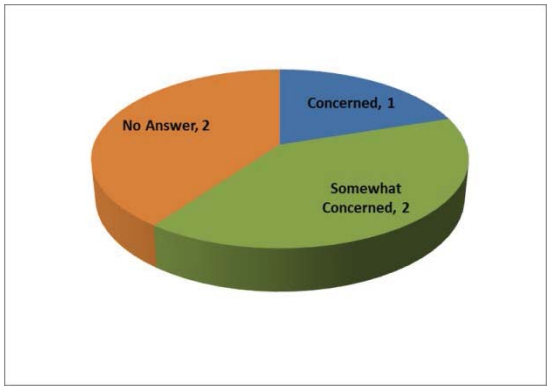
    - ✓ City of Irving (5 responses)

2. Have you ever experienced or been impacted by a disaster?

    - ✓ Yes (0)
    - ✓ No (3)
    - ✓ No Answer (2)

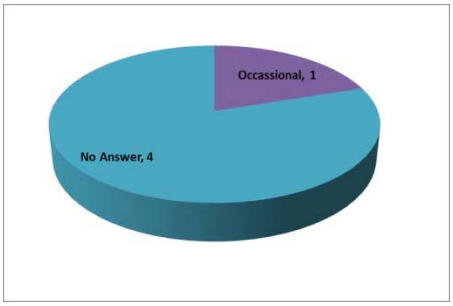
    If "Yes", please indicate what hazard you have endured and where it occurred?
    - ✓ No Answers

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

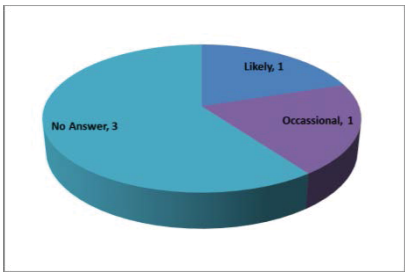


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact.

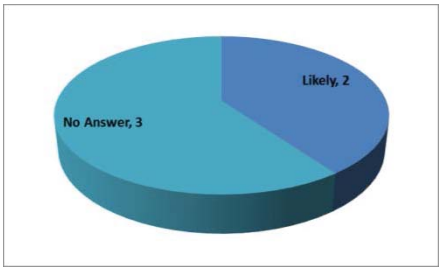
    a. Earthquake



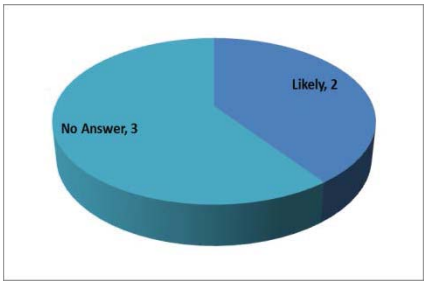
b. Tornado



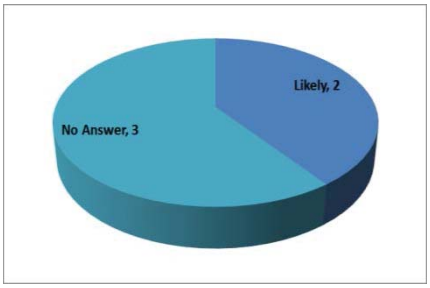
c. Hail



d. High Winds



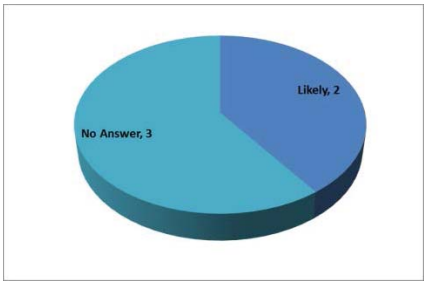
e. Winter Storms



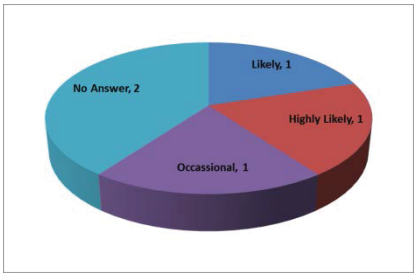
f. Summer Heat



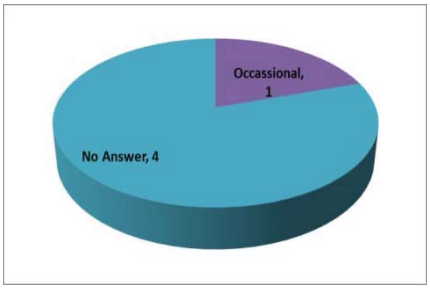
g. Drought



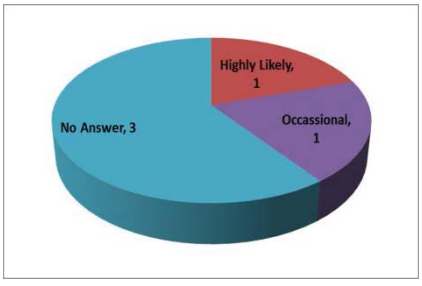
h. Flooding



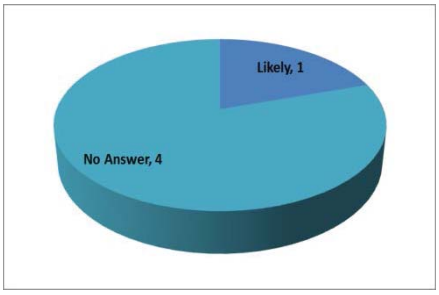
i. Dam Failure



j. Stream Bank Erosion

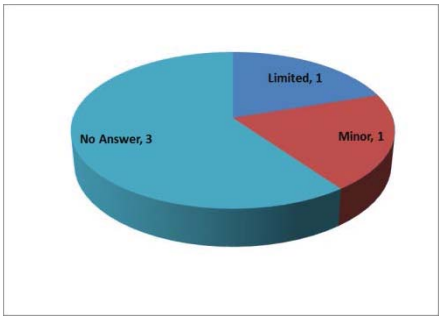


k. Levee Failure

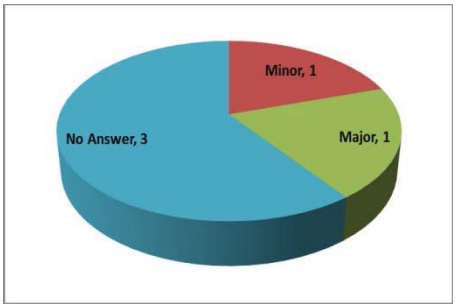


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

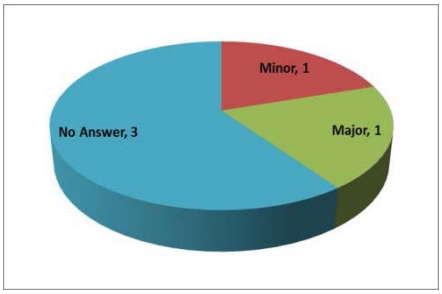
a. Earthquake



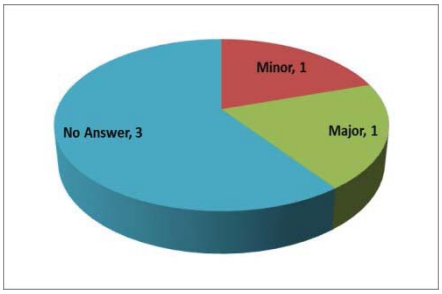
b. Tornado



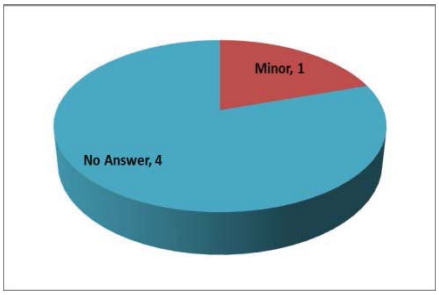
c. Hail



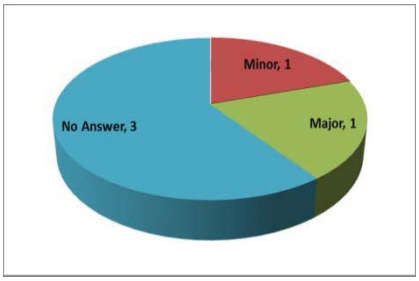
d. High Winds



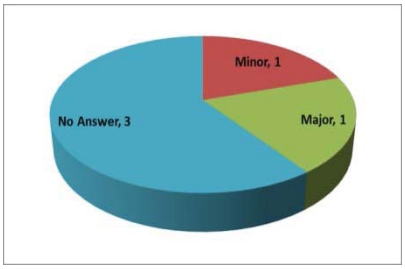
e. Winter Storms



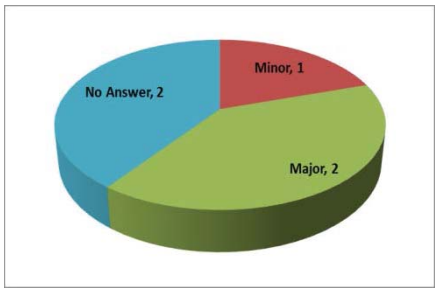
f. Summer Heat



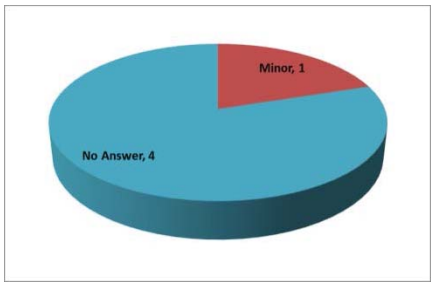
g. Drought



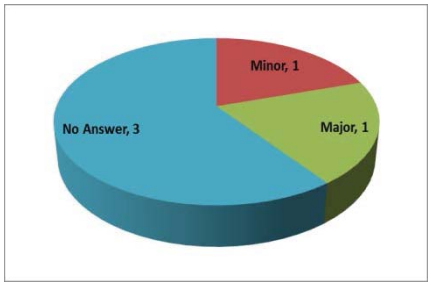
h. Flooding



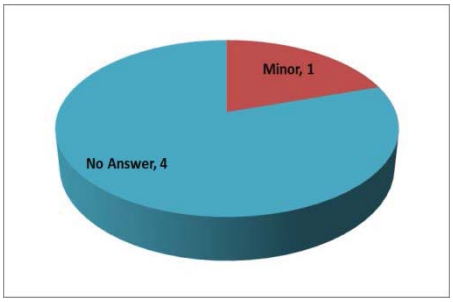
i. Dam Failure



j. Stream Bank Erosion



k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

- ✓ Yes (1)
- ✓ No (2)
- ✓ No Answer (2)

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	2
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	3
Improve, adopt and enforce building codes:	2
Implement the Texas Individual Tornado Safe Room Rebate Program:	2
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	1
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	2
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	2
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	1
Purchase and improve on the Weatherization Assistance Program (WAP):	1
Conduct an earthquake vulnerability study:	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	1
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	0
Structural Retrofitting of Existing Buildings:	1
Total Respondents:	5

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events.

   ✓ No Responses – Skipped by all Respondents

City of Lancaster Annex

The City of Lancaster annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Lancaster has a FEMA approved hazard mitigation plan that was adopted in 2009. The city was one of the 11 jurisdictions that participated in the initial Dallas County Hazard Mitigation Action Plan.

This annex together with the countywide hazards and strategies discussed in the previous section serves as a complete hazard mitigation planning tool for the City of Lancaster and is an addition to. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.



Introduction

Lancaster is located at 36.368 N and 96.4630 W. It is at the southern border of Dallas County and sits directly east of DeSoto and approximately 20 minutes for downtown Dallas. Ten Mile Creek and its tributaries run throughout the area.

Abram Bledsoe bought half of the Roderick Rawlins survey in 1847 and five years later laid out a city plan near the community of Pleasant Run. He named his township Lancaster, after the name of his birthplace, Lancaster, Kentucky. Bledsoe brought with him his daughter, Virginia, a schoolteacher, who married Roderick A. Rawlins, the son of Roderick Rawlins, a settler in the area since 1845. The White family of Tennessee moved to Lancaster in late 1851, and R. P. Henry, a native of France, moved his family to Lancaster in the early 1860s. A carding machine was operated in the community in 1850. Dr. H. J. Moffett established his drugstore and practice there in 1851. In 1860 a post office was established in Lancaster and was later incorporated as a city in May 1887, becoming one of the first incorporated communities in Dallas County. R.P. Henry & Sons Bank that was robbed by Clyde Barrow of Bonnie & Clyde fame was located near the southeast corner of the town square.



According to the 2010 U.S. Census Bureau, the population of Lancaster is approximately 36,361. The racial makeup of the city is 12.9% Non-Hispanic White, 68.7% African American, 0.4% Native American, 0.3% Asian, and 2.1% from two or more races. Hispanic or Latino of any race is 17%. The city has a total area of 30.3 square miles with all of it being land. There are approximately 13,622 housing units in the city consisting of single-family, multi-family,

and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

The City of Lancaster operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.



Lancaster has access to two railroad lines with an intermodal facility, and its own municipally-owned 5,000-foot runway airport. These resources enhance the opportunities to distribute products and services around the world. Lancaster also offers citywide Triple Freeport which is important in landing logistic developments (lancastertx.org).

Internal Planning Process:

The table below lists members of the City of Lancaster Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Lancaster.

Group	Name	Department	Position	Role/Perspective
Administrative	*Thomas Griffith*	*Fire Department*	*Fire Chief/EMC*	*HMPT Coordinator, Policy, Oversight*
Administrative	*Marcus Knight*	*City Council*	*Mayor*	*Emergency Management Director*
Administrative	*Opal Mauldin-Robertson*	*City Manager's Office*	*City Manager*	*Administration, Oversight, Policy*
Administrative	*Aretha Adams*	*City Manager's Office*	*Assistant City Manager*	*Administration, Oversight, Policy*
Administrative	*Alicia Oyedele*	*City Manager's Office*	*PIO*	*Policy Communication with Public*
Administrative	*Dolle Downe*	*City Secretary Office*	*City Secretary*	*Policy*
Administrative	*Ange Arenas*	*City Secretary Office*	*Assistant City Secretary*	*Policy*
Fire	*Pat Adamcik*	*Fire*	*Assistant Fire Chief*	*Data, Policy, Disaster Response, Wildfire,*
Fire	*David Terry*	*Fire*	*Fire Marshal*	*Data, Wildfire, Fire Codes,*
Fire	*Dee Dee Hillary*	*Fire*	*Medical Office/ PIO*	*Data, Medical & Disaster Response*
Fire	*David Perez*	*Fire*	*A Shift Battalion Chief*	*Fire Response, Disaster Response*

Group	Name	Department	Position	Role/Perspective
Fire	Rob Franklin	Fire	B Shift Battalion Chief	Fire Response, Disaster Response
Fire	Will Rhodes	Fire	B Shift Battalion Chief	Fire Response, Disaster Response
Fire	Jared Karr	Fire	Emergency Management	Mitigation Plan Organizer
Fire	Kathie Eaton	Fire	Secretary	Mitigation Plan Secretary
Police	Larry Flatt	Police	Police Chief	Disaster Response
Police	Michael Smith	Police	Police AC	Disaster Response
Police	Samuel Urbanski	Police	Police AC	Disaster Response
Police/School	**Robert McIntyre**	LISD Police	Police Chief	School Representative
Hospital	Janice Miles	Creasent Hospital	Nursing Supervisor	Hospital Representative
Hospital	Darrell Carlin	Cresent Hospital	Director	Hospital Representative
Building Inspections	**Jim Brewer**	Building Inspections/Code	Director	Code/Planning/Building
Building Inspections	**Larry King**	Building Inspections/Code	Building Official	Code/Planning/Building Mitigation
Building Inspections	**Sen Surupa**	Building Inspections/Code	Planner	Code/Planning/Building Mitigation
Building Inspections	**Kim Pekofske**	Building Inspections/Code	Development Services/Animals	Code/Planning/Building Animal Services
Economic Development	**Ed Brady**	Economic Development	Director	Development Mitigation
Information Technology	Ron Gleaves	IT Systems	IT Manager	IT Mitigation
Information Technology	Scot Shepperd	IT Systems	IT Public Safety Manager	IT Mitigation
Information Technology	Laurel Maxell	IT Systems	GIS Manager	GIS Coordination and GIS Mitigation Plan
AirPort	Mark Davita	Airport	Airport Manager	Airport Mitigation
AirPort	Kellen Benbrook	Airport	Airport Operations	Airport Mitigation
Fleet Services	**Andy Hail**	Fleet Services	Fleet Superintendent	Equipment Perspective
Parks & Rec	Sean Johnson	Parks and Rec	Director	City Facilities
Parks & Rec	Jimi Davisn	Parks and Rec	Library Director	City Facilities
Parks & Rec	Kevin More	Parks and Rec	Parks Superintendent	City Facilities
Parks & Rec	Regina King	Parks and Rec	Senior Center	Senior Perspective
Parks & Rec	Michael Rasco	Parks and Rec	Park Superintendent	Park Perspective
Engineering / Public works	Shwetha Pandurangi	Engineering / Public Works	City Engineer	Engineering
Engineering / Public works	Depak Patel	Engineering / Public Works	Engineer	Engineering
Engineering / Public works	Allen Carsner	Engineering / Public Works	Streets Storm Water	Storm Water
Engineering / Public works	Andy Waits	Engineering / Public Works	Water Superintendent	Water

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), Texas Water Board Development Authority, NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal, city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
09/17/2013	HMPT training, disperse required information and data collection documents Instructions for all team members and assignments, time line of assignments. Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting; Discussed options for public input/comment. Posted request for input on City Website and placed on 6/4 City Council agenda. Discussed selection of Public Works representative. Created project benchmarks and completion dates. Set future meeting dates.
10/01/2013	Assemble data from team members, review and address each issue Collect comments on data, assemble information for distribution. Reviewed benchmark progress; Reviewed current plan and recommended changes; Identified hazards and estimated potential losses from future hazard events. Conducted Capabilities Assessment
10/22/2013	Gather all data and comments, develop and disseminate plan for review Set time line for completion, clean up any areas of concern, complete document. Completed like-kind reports; Complete HIRA Matrix; Public input for June 4 City Council meeting. Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks`

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Lancaster notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

External stakeholders invited via email to participate in the planning and review process of the City of Lancaster HazMAP annex section included:

Representing	***Position/Department***	***Role***
City of Red Oak	*Fire Chief and Emergency Management Coordinator*	*Review Plan*
City Of Ferris	*Fire Chief and Emergency Management Coordinator*	*Review Plan*
Local Business	*Brent Tag Management*	*Review Plan*

Survey Results

The City of Lancaster made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of seven (7) survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The majority of the survey respondents from the City of Lancaster identified six hazards that were deemed as most likely to occur in their jurisdiction. These include extreme heat, hail, high winds, drought, flooding and tornadoes as the hazards that were rated the most likely to occur (had an average rating of above 3.00) and have the highest impact on the community. Overall the Lancaster Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. A significant number of Lancaster respondents indicated they would like to see an increase in public outreach programs (i.e. CERT) and better enforcement of building codes.

The results of the survey provide valuable information for the City of Lancaster hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase

awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

The City of Lancaster will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

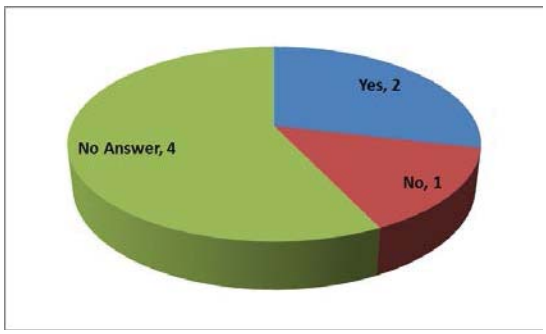
A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-2 of this annex.

Survey Overview

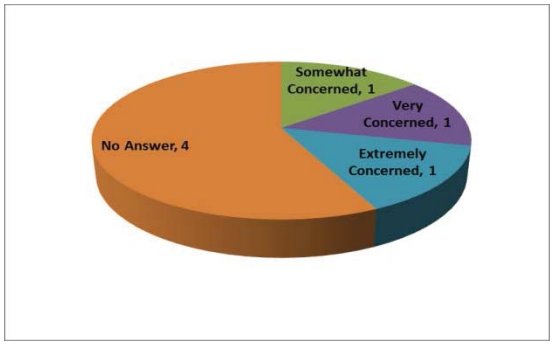
1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    - ✓ Total number of responses submitted from the citizens of the City of Lancaster – 7

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

✓ Unlikely ✓ Likely
✓ Occasional ✓ Highly Likely

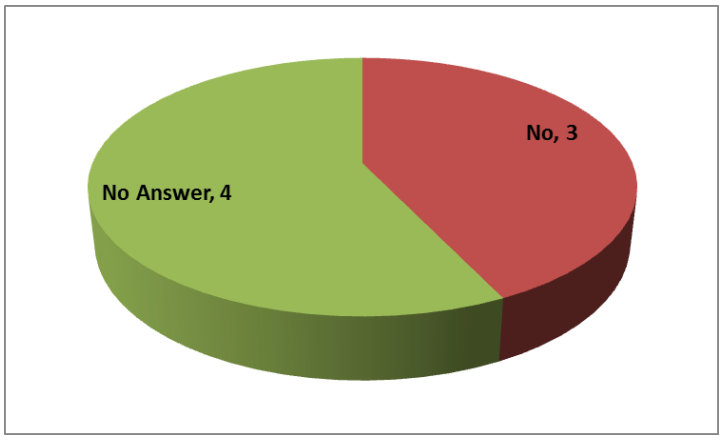
	Unlikely	Occasional	Likely	Highly Likely	No Answer	Total	Average Rating
Earthquake	1	1	1	0	4	3	2.00
Tornado	0	1	0	2	4	3	3.33
Hail	0	0	1	2	4	3	3.67
High Winds	0	0	0	3	4	3	4.00
Winter Storms	0	0	2	1	4	3	3.33
Summer Heat	0	0	0	3	4	3	4.00
Drought	0	0	0	3	4	3	4.00
Flooding	1	0	0	2	4	3	3.00
Dam Failure	2	1	0	0	4	3	1.33
Stream Bank Erosion	2	0	1	0	4	3	1.67
Levee Failure	2	1	0	0	4	3	1.33

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

✓ Limited ✓ Minor
✓ Major ✓ Substantial

	Limited	Minor	Major	Substantial	No Answer	Total
Earthquake	2	1	0	0	4	3
Tornado	0	0	1	2	4	3
Hail	0	0	2	1	4	3
High Winds	0	1	2	0	4	3
Winter Storms	0	2	1	0	4	3
Summer Heat	0	1	1	1	4	3
Drought	0	0	2	1	4	3
Flooding	0	1	2	0	4	3
Dam Failure	2	1	0	0	4	3
Stream Bank Erosion	2	0	1	0	4	3
Levee Failure	2	0	1	0	4	3

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	2
Implement the Texas Individual Tornado Safe Room Rebate Program:	3
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	2
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	2
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	3
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	3
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	3
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	7

Public Review Period

On January 8, 2013 the City of Lancaster announced the availability of the City of Lancaster's Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through Facebook and Twitter. The plan was also made available on the city's website. The external stakeholders identified above were also invited to provide input.

The announcement invited the public to provide input into the draft plan. The announcement provided a 14 day public review and comment period. The City of Lancaster also used Facebook and Twitter to inform all relevant stakeholders and interested community members of the availability of the draft for public comments and review.

The public were encouraged to submit comments prior to January 23, 2014 for consideration and possible incorporation into this draft.

The public comments were directed to the Thomas Griffith, Fire Chief and Emergency Management Coordinator with the City of Lancaster. The contact of Michael Gaciri with the Dallas County Office of Homeland Security and Emergency Management was also provided as an alternate. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

Despite outreach efforts, no input was provided through the public review period.

Capability Assessment:

The City of Lancaster identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Lancaster, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments: The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the town. The members of the city's Hazard Mitigation Planning Team as listed above identifies the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan.

Fire Department/Emergency Management: The Lancaster Fire Department (LFD) provides several services to the community. These services include:

- ✓ Paramedic Service: LFD state-of-the-art paramedic service comprises approximately 80% of the services provided by the department
- ✓ Fire-Suppression Services: LFD has three fire stations located in strategic geographical areas to provide fast response anywhere in the city



The Fire Department also provides specialized units. These units include:

- ✓ Hazardous-materials decontamination
- ✓ Swift-water rescue
- ✓ Mass-casualty situations

The department also has cooperative agreements with surrounding cities in two counties in order to enhance and increase the department's capabilities. Also the department conducts numerous school and public presentations each year to raise the public's awareness of fire and personal hazards. The Fire Chief also serves as the Emergency Management Coordinator. The EMC is responsible for coordinating activities of the city departments responsible for continued operations during disasters, coordinate agreements for the use of resources, communicate with State and Federal agencies, and provide education and training to citizens and municipal employees.

Public Works: The Public Works Department is comprised of four divisions. These include:

- ✓ Storm water: The City of Lancaster administers Storm Water Management Program (SWMP) in compliance with the Texas Pollutant Discharge Elimination System (TPDES) general permit. The city is actively participating in the Municipal Separate

Storm Sewer Systems (MS4) program. The City of Lancaster's SWMP includes best management practices developed for each of the following six minimum control measure:

- Public education and outreach on storm water impacts
- Public involvement/participation
- Illicit discharge detection and elimination
- Leaflet Construction site storm water runoff control
- Post-construction storm water management in new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

✓ Streets: The Streets Division is responsible for Traffic lights and signs and street repairs

✓ Wastewater: The Wastewater Division is responsible for water main breaks, sewer stoppage, industrial pre- treatment and backflow prevention

✓ Water: The Water Division is concerned with monitoring water quality and managing the water supply to the city

Parks and Recreation: The Parks and Recreation Department provides the citizens of Lancaster with well-maintained, safe, and affordable recreational opportunities. The Department Responsibilities include:

✓ Parks and Recreation Department responsibilities include:
✓ Athletics
✓ Bear Creek Nature Park
✓ Building services
✓ Country View Golf Course
✓ Facility reservations
✓ Lancaster Recreation Center
✓ Median and Right of Way maintenance
✓ Park maintenance
✓ Recreation programming
✓ Senior Life Center

The City of Lancaster features several neighborhood and community parks, a 64,000-square-foot recreation center, the Bear Creek Nature Park, and an 11,000-square-foot Senior Life Center. The Lancaster Parks and Recreation Department offers a wide variety of recreational programs, classes, facilities, and special events that we are sure will meet your needs and interests.

Human Resources: The Human Resources Department responsibilities are:

✓ Developing and managing procedures pertaining to civil service and personnel
✓ Developing and managing recruitment, training, risk management and policy development
✓ Maintaining positive employee relations
✓ Managing the city's compensation and benefit plans
✓ Managing and producing the city's employee payroll
✓ Monitoring policies and procedures to ensure compliance with federal and state regulations



Police Department: The Lancaster Police Department protects the

property and Constitutional Rights of all residents and visitors of Lancaster by providing professional law enforcement and public safety services.

Development Services: The Development Services Administration Program is used to account for administrative and overhead costs incurred by the development services departments. These departments include:

- ✓ Animal Services - Animal Services is responsible for:
  - o Capturing and housing animals found at large or abandoned
  - o Enforcing city ordinances and state laws that pertain to the ownership, vaccination, housing, and care of animals within the city
  - o Maintaining and promoting an adoption / rescue program
- ✓ Building Permits and Inspections - The Building Inspection Division is established for the purpose of providing minimum standards to safeguard life, health, safety, property, and the public welfare by regulating and controlling the design, construction, quality of materials, occupancy, use, location, and maintenance of all buildings and structures constructed within the City of Lancaster. The primary activities of the Building Inspection Division are:
  - o Certificate of Occupancy process
  - o Inspections
  - o Permit issuance
  - o Plan review
  - o Public consultation
- ✓ The Building Inspection Division also works closely with the Planning Division, Public Works Department, and the Fire Marshal's Office to enhance the city's overall ability to better serve the citizens of Lancaster. Additionally, the division maintains an active demolition program designed to mitigate the spread of blight through the elimination of substandard vacant structures.
- ✓ Code Compliance - Code Compliance works in partnership with the people of Lancaster to promote and maintain a safe and desirable living and working environment; to improve the quality of Lancaster's neighborhoods through education, enforcement, and abatement; and to respond to community concerns and attain code compliance while maintaining high professional standards and continually seeking improvements and innovations.
- ✓ Engineering - The Engineering Division's overall responsibility is the review, permitting, and inspection of all private development projects that are not initiated by the city to ensure compliance with all city standards, specifications, and requirements. These include:
  - o Private improvements such as fire lanes, parking, landscaping, etc. that will be maintained by the property owner
  - o Public infrastructure such as streets, water, sewer, and drainage that the city will maintain
  - o Administering the city's infrastructure reimbursements
  - o Flood plain management
  - o Permitting and inspection of the franchised utilities
  - o Review and inspection of trench-safety and erosion-control plans
  - o Serving as the city's overall coordinator for the review and inspection of public works projects and the city's rights of way
- ✓ Planning - The Planning Division helps ensure that the community develops in a safe, efficient, and attractive manner and strives to achieve quality developments that enhance the quality of life for our citizens. The responsibilities of the division include:
  - o Administration of the comprehensive plan, subdivision regulations, and the development code

  - Processing of all zoning, specific use permit, site plan, variance, and platting requests and recommending these requests to the Planning and Zoning Commission, Zoning Board of Adjustment, or City Council
  - Providing of zoning information to the general public, business owners, and developers
- ✓ Public Food and Health Safety

Economic Development: The purpose of the City of Lancaster's Department of Economic Development is to create favorable site-selection or expansion decisions for new and existing business and industry through aggressive sales and marketing programs that are designed to create a growing tax base for the community of Lancaster through new business development, existing business retention, and job creation, and also by ensuring a financially sustainable city government and enhancing the overall quality of life for the citizens of Lancaster. Economic development action plan:

- ✓ Assist in the development and implementation of a seamless process associated with the city's development procedures
- ✓ Create and recommend to the City Council new policies and formulas for determining the feasibility and financial return from incentives associated with potential development projects in Lancaster
- ✓ Create new collateral materials necessary to showcase all development opportunities in Lancaster
- ✓ Develop action-oriented sales and marketing programs that create an interest in Lancaster by commercial, industrial, and retail operations
- ✓ Develop and implement a program directed at manufacturers located in Asia that solicits their utilization of Lancaster as a destination point for the shipment of their products
- ✓ Identify foreign sources of financial investment in Lancaster
- ✓ Implement an aggressive sales-calling program on the commercial development and real estate brokerage communities
- ✓ Implement programs that identify the growth and expansion needs of existing industries in Lancaster
- ✓ Work with the board of the Lancaster Economic Development Corporation and respond to incentive requests made by projects that are considering locating in Lancaster

Finance Department: The purpose of the Finance Department is to support the administrative activities of the city in an efficient and effective manner. These activities include accounting, accounts payable, accounts receivable, investments, capital projects, debt management, auditing, purchasing, utility administration, and administrative policies in all of the above areas. Additionally, the department advises the mayor and City Council in matters of administrative procedure, financial prudence, and long-term financial planning. Responsibilities for the department include:

- ✓ Documenting revenues, expenditures, and accounts receivable and payable for accuracy and adherence to the approved budget
- ✓ Handling Lancaster's accounting, purchasing and accounts payable, and utility billing
- ✓ Providing an accounting system that complies with generally accepted accounting principles
- ✓ Reviewing contracts on an ongoing basis

Summary of Capabilities: The tables below identify the current capabilities in the City of Lancaster.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2013	The plan identifies hazards and mitigation strategy
Capital Improvements Plan	Yes 2012	The Capital Improvements Plan addresses hazards and mitigations
Economic Development Plan		
Local Emergency Operations Plan	Yes 2012	The local Emergency Operations Plan addresses mitigation strategy and hazards
Continuity of Operations Plan	Yes 2012	The Continuity of Operations Plan addresses hazards and mitigation
Transportation Plan	Yes 2006	The Transportation Plan addresses hazards and mitigation
Storm water Management Plan	Yes 2007	The Storm water Management Plan addresses hazards and mitigation
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N/A	
Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** IBC 2012
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	**Score:** ISO 4
Fire Department ISO rating	Yes	**Rating:** ISO 3
Site Plan review requirements	Yes	Plans are required to be submitted prior to building
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Ordinance adequately administered and enforced; measures reduction of hazards
Subdivision ordinance	Yes	Ordinance adequately administered and enforced; measures reduction of hazards
Floodplain ordinance	Yes	Ordinance adequately administered and enforced; measures reduction of hazards

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Need some expansion to include more
Flood insurance rate maps	Yes	Needs updates
Acquisition of land for open space and public recreation uses	Yes	Ordinance adequately administered and enforced; measures reduction of hazards
How can these capabilities be expanded and improved to reduce risk?		
Review with ordinances and update ordinances on a regular basis Meet with internal and external stakeholders Make and propose changes		

Administrative and Technical

	Yes/No	Describe capability Is coordination effective?
Planning Commission	Yes	Meets as needed; Yes, coordination is effective
Mitigation Planning Committee	Yes	Meets as needed; Yes, coordination is effective
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Department of Public Works has the capabilities of performing this task as indicated earlier. Coordination of this function is effective
Mutual aid agreements	Yes	Agreement; Law Enforcement Mutual Aid Agreement; Public Works Mutual Aid
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes FT	Yes; Yes; Yes
Floodplain Administrator	Yes FT	Yes; Yes; Yes
Emergency Manager	Yes PT	Yes; Yes; Yes
Community Planner	Yes FT	Yes; Yes; Yes
Civil Engineer	Yes FT	Yes; Yes; Yes
GIS Coordinator	Yes FT	Yes; Yes; Yes
Other		
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	CodeRED notifies residents at 20,000 per min.; 16 outdoor warning sirens/CodeRED Weather/Yes
Hazard data and information	Yes	Fire House/ Crimes/ NWSIWS/ NWSChat/ Web EOC/ VTC State/ Yes
Grant writing	Yes	Assistance to Firefighters/ Safer/ COPS/ SHS/ UASI/ Yes
Hazardous analysis	No	
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase funding		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	**1.** Yes **2.** Yes
Authority to levy taxes for specific purposes	Yes	**1.** Yes **2.** Yes
Fees for water, sewer, gas or electric services	Yes	**1.** Yes **2.** Yes
Impact fees for new development	Yes	**1.** Yes **2.** Yes
Storm water utility fee	Yes	**1.** Yes **2.** Yes
Incur debt through general obligation bonds and/or special tax bonds	Yes	**1.** Yes **2.** Yes
Incur debt through private activities	No	**1.** No **2.** No
Community Development Block Grant	Yes	**1.** Yes **2.** Yes Dallas County
Other federal funding programs	Yes	**1.** Yes **2.** Yes
State funding programs	Yes	**1.** Yes **2.** Yes Aviation/Parks/ Wildlife
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Capital Improvement items can be identified as a specific hazard mitigation item		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	CERT: The Best Southwest CERT is active with training and responses to disasters. The Comprehensive Plan Committee focuses on overall needs
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Dallas County Water Conservation Plan working group provides outreach to all cities in Metroplex to provide water conservation education
Natural disaster or safety related school programs	Yes	The Lancaster Public Safety Officers meet quarterly to cover safety-related school programs and school disaster response
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		

How can these capabilities be expanded and improved to reduce risk?
The City of Lancaster can pursue StormReady and Firewise Certifications. Include a discussion on Hazard Mitigation in the Comprehensive Long-term Plan (CLP) Increase awareness program to include Twitter/Facebook/ City Cable Access and City Website

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	N/A	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	✓	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	N/A	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to the Texas Water Development Board the City of Lancaster has 102 policies and a total premium paid is $84,246.00
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	104 claims were paid out in the City of Lancaster totaling $4,234,788.00. 34 of these claims were considered substantially damaged
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	1235 properties are exposed to flood risk in the community
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Most areas of flood risk with limited policy coverage were developed before the new FIRM was developed. Some of these areas, where structures were built have also been bought out
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Yes
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	FP Permits; GIS Maps; Inspections; Public Outreach
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Older structures, non-compliance, Lack of education
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		April, 2012
Is a CAV or CAC scheduled or needed?		Yes/ No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	1981
Are the FIRMs digital or paper?	Community FPA	Digital and Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceed
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	DRC to FP Permit/Site Plan Review. Then to inspection, to citizen, to re-inspection, to approval
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	Yes

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Lancaster HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Lancaster are as follows:

High Risk (over 65% on HIRA)	High Winds Flooding
Moderate Risk (41%- 65% on HIRA)	Tornado Hail Lightning Wildfire
Low Risk (12 %-40% on HIRA)	Drought Extreme Heat Winter Storms Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	Dam/Levee Failure

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Lancaster. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Lancaster**.**

A. Flooding: The city is surrounded by open farmland, low rolling hills, small creeks and woodlands. The Ten Mile Creek flows in an easterly direction through the south end of the city. There has been significant erosion of the stream banks in the area where Nokomis Road and Ten Mile Creek intersect. The creek was ten miles longer and flowed into the Trinity in Ellis County before it was diverted and channeled into the river at its present location. Where not diverted, the creek has a limestone bottom. Today, the creek flows through the corporate limits of Cedar Hill, Duncanville, De Soto, Lancaster, Wilmer, and Ferris.

The City of Lancaster joined the Federal Emergency Management Program on June 7, 1974. The city began the Flood Insurance Rate Mapping (FIRM) effort September 1981. Storm water management policies are defined by storm water management ordinance 2004-07-21, adopted on July 26, 2004. The city's policies for storm water management govern the planning, design, construction, operation, and maintenance of storm drainage facilities

within the city's jurisdiction. This storm water management policy is based on the Lancaster Storm Water Management Ordinance and Storm Water Design Manual.

The current City Parks, Recreation and Open Space Master Plan provided direction in the acquisition and development of park land and open space needs. The Open Space Plan creates an open space system to link parks, schools, greenbelts and open spaces in the city.

The city has also established criteria and standards to govern the use of natural streams and flood plains and to serve as guidelines for the development of man-made drainage facilities and improvement of natural channels. The drainage ways, creeks and flood hazard areas of the City of Lancaster are subject to periodic inundation which may result in property, health and safety hazards, disruption of commerce and governmental services and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.

National Flood Insurance Program

As has been indicated in earlier in this annex, the City of Lancaster participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. This is incorporated into all current and future planning for dealing with repetitive loss vulnerabilities. It is complaint with NFIP requirements and has no outstanding issues. The City has had repetitive loss or severe repetitive loss properties. See Table below. Most of these properties have been bought out by the city

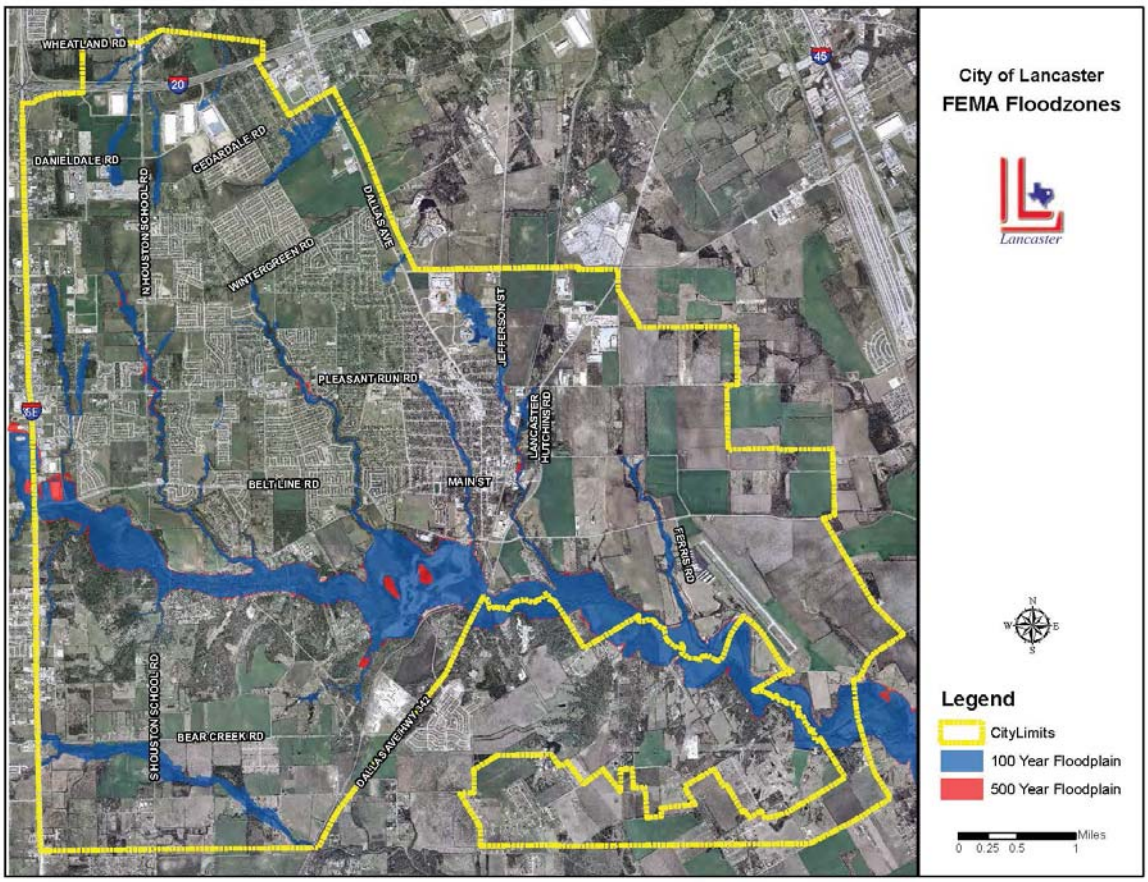
Lancaster	Years	Properties	Number of losses	Payments
Single Family	1979,1981, 1984, 1989, 1990, 1991, 1995, 1999, 2000, 2001, 2004, 2007, 2008, 2009	12	39	$1,357,647.91
Other Residential	-	-	-	-
Non Residential	-	-	-	-
Total		**12**	**39**	**$1,357,647.91**

Using this plan the City of Lancaster will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding. **Map COL.1** depicts the current FEMA flood zones for the City of Lancaster.

The table below provides the City's flood plain management process and activities.

Jurisdiction	Community Floodplain Administrator	NFIP Activity	Activity Description	Enforcement
City of Lancaster	Floodplain Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the Department of Development Services. The City of Lancaster requires-2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and elevation certificate document non-residential structures requires 2 feet of free board above the Base Flood Elevation or Flood Proof Certificate Document that will be built on properties created or platted after the effective date of the Flood Damage Prevention Ordinance.	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the city requirements may be fined in accordance with the Texas Water Code for each violation per day.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Take action to minimize the effects of flooding on people, property, and building.	Public Works (City Road and Street Operations) department installs signs at low water crossings	

Map COL.1: FEMA Flood Zones for the City of Lancaster

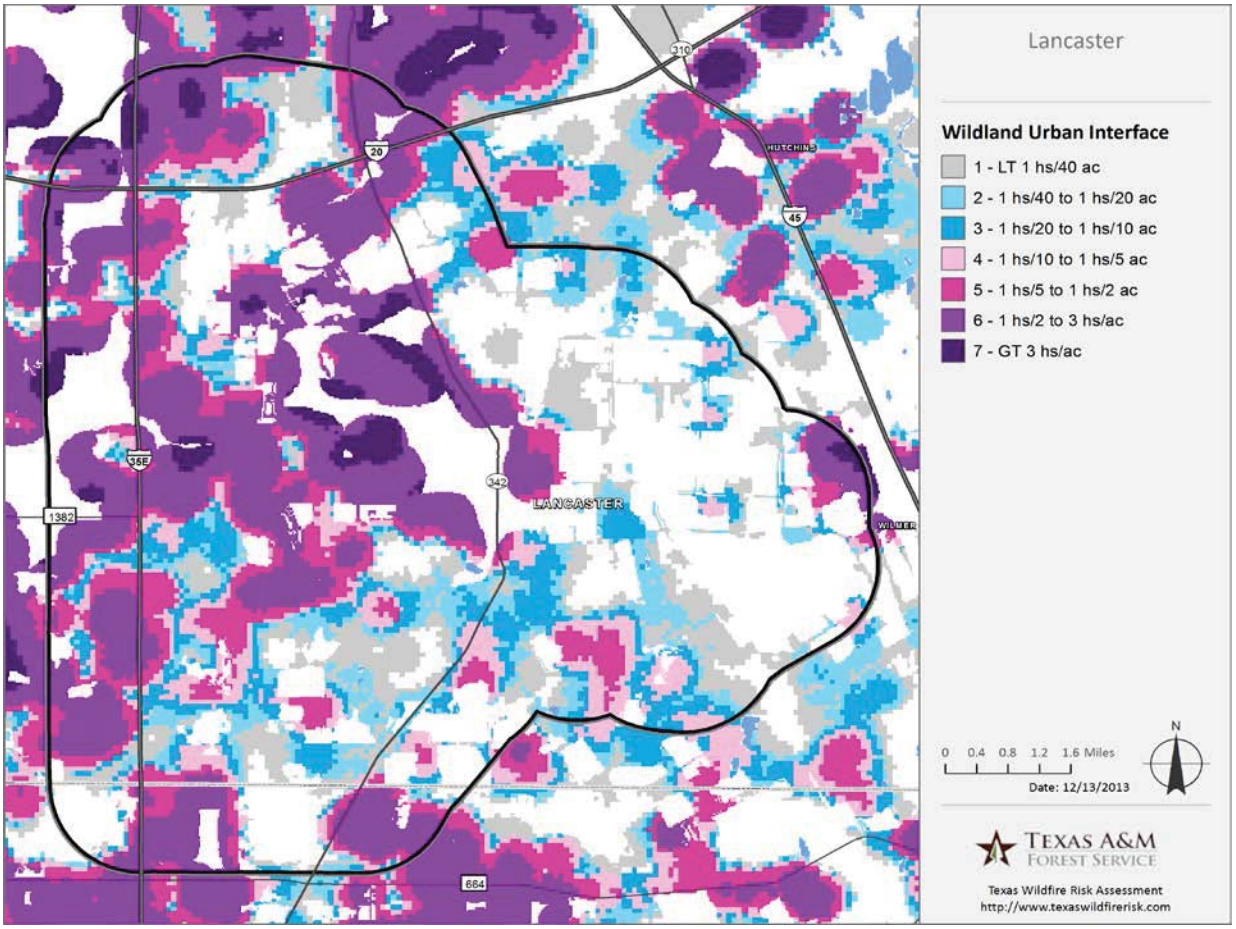


B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the WUI. The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated **43,666** people or **73 percent** of the total population of the City of Lancaster live within the WUI.

Map COL.2 depicts the WUI for the City of Lancaster.

Map COL.2: WUI for the City of Lancaster, TX



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Lancaster ranges from Non-Burnable to Moderate.

Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

Map COL.3 below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map COL.3: Wildfire Threat Map for the City of Lancaster, TX



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Lancaster as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults and no historical data of earthquakes in the City of Lancaster. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly

.

E. Stream Bank Erosion: A 2007 Environmental Assessment Study conducted by the U.S. Army Corps of Engineers indicated that there was need for stream bank protection near Nokomis Road and bridge at Ten Mile Creek. It was determined that the prepackaged concrete riprap bag slope protection alternative would provide stream-bank protection against further erosion and protect the affected public bridge and road.

Flooding has occurred along Ten Mile Creek. In 2008 localized flooding produced well above normal runoff and stream flows in the City of Lancaster. Emergency officials had to send out voluntary evacuation notices to 687 registered CodeRED phone numbers and closed about 16 streets in response to flooding. Homes located on Enchanted Lane experience flooding because of their proximity to Ten Mile Creek.

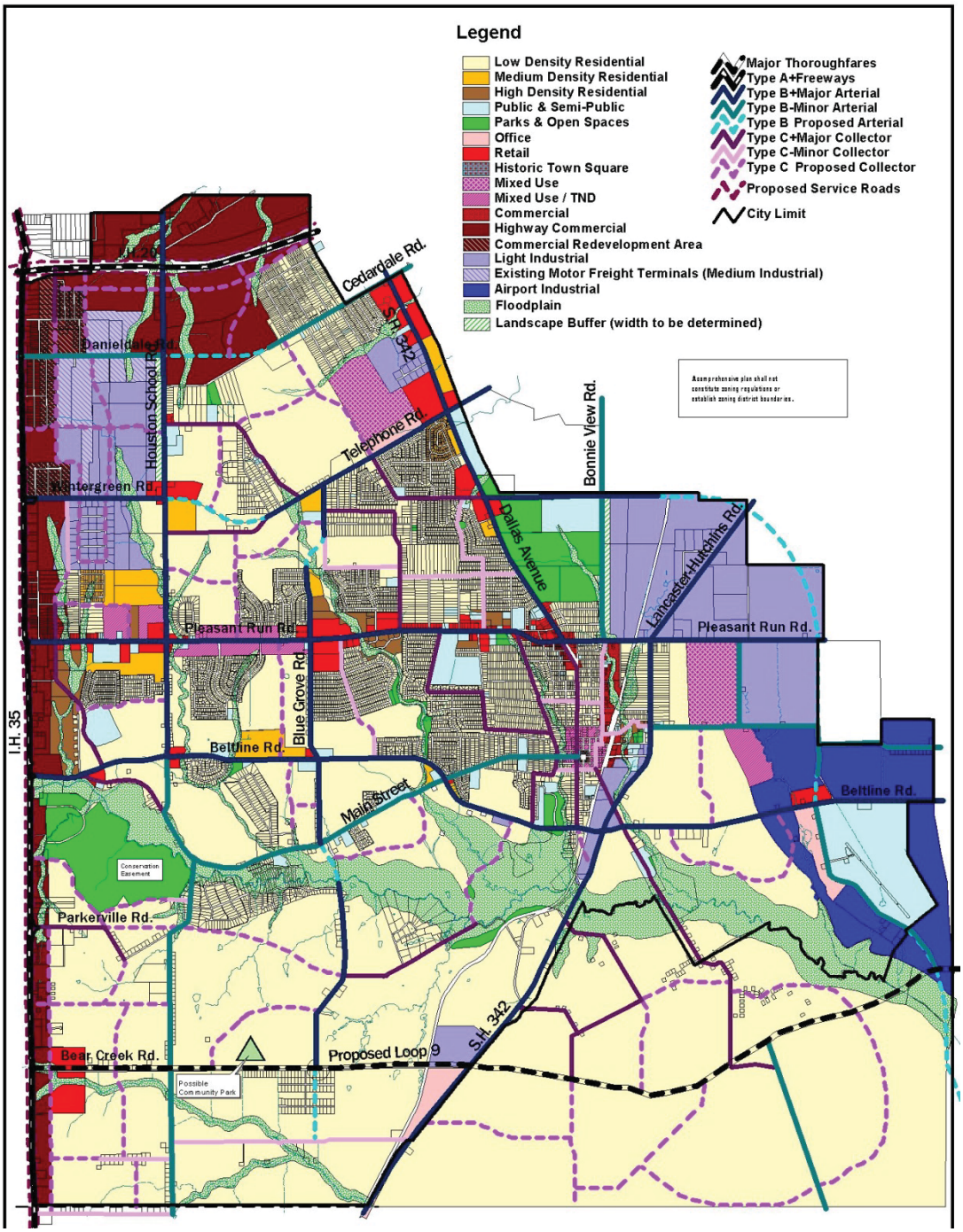
The City of Lancaster is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits.

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the City of Lancaster. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Land Use

The Future Land Use Plan for the City of Lancaster illustrates the desired pattern of growth for the foreseeable future. It is intended to guide public and private decision making for development and redevelopment in the city for the next several years. For purpose of this plan, the future Land Use Plan assists in decision making in incorporating hazard mitigation planning activities for the city. **Map COL.4** depicts the future land use for the City of Lancaster.

Map COL.4: Future Land Use Map for the City of Lancaster



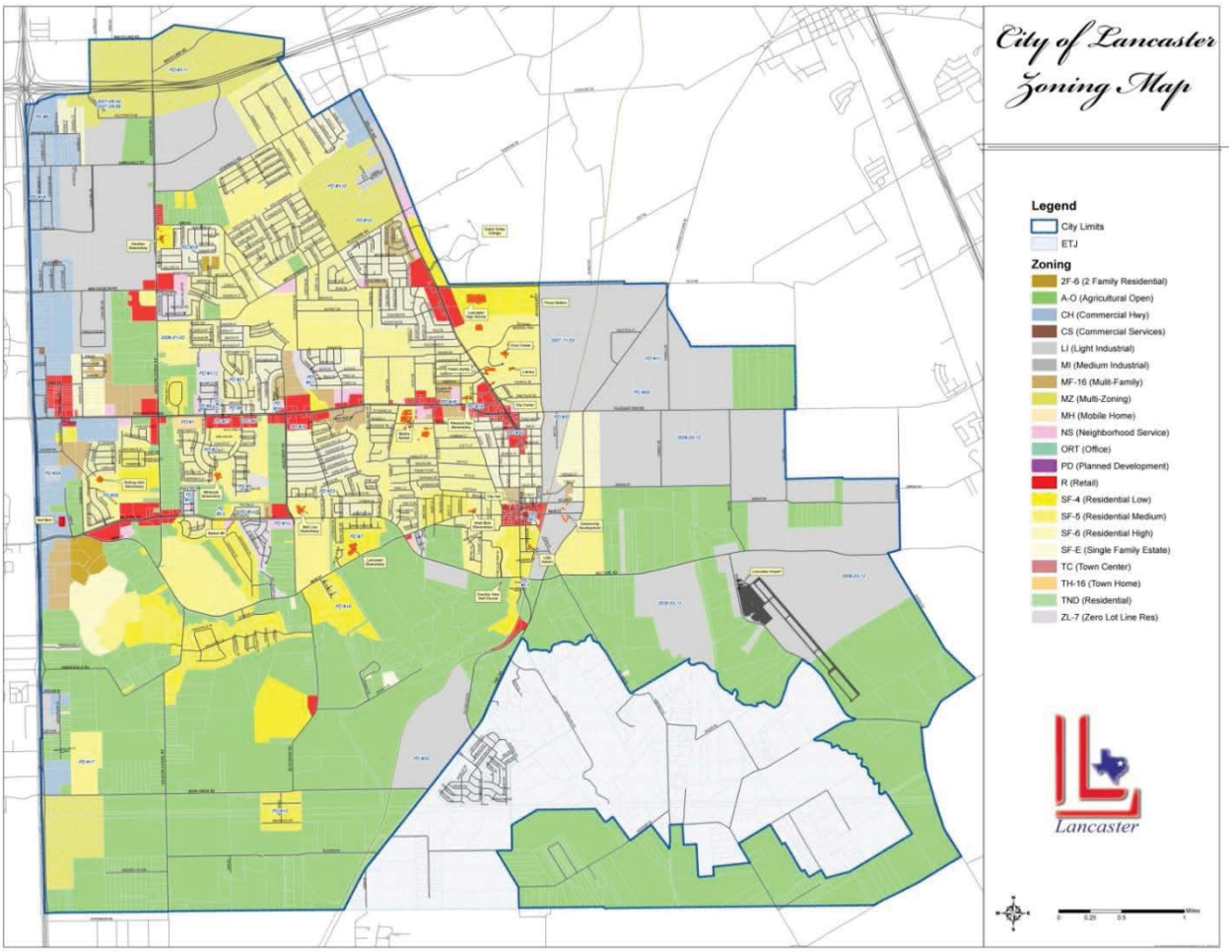
Source: The City of Lancaster Comprehensive Master Plan 2002

Zoning Districts

Zoning is a form of land use control permitted by both the federal and state governments. According to the Texas Local Government Code, there is a requirement that zoning be in conformance with the comprehensive plan. When a zoning change is requested, the first step in considering the change is to determine what the future land use plan indicates as

the appropriate use of the property. If the use differs substantially, the request should be denied. To grant the requested change would require that the future land use plan be amended before the zoning change could occur. This requires careful consideration to be sure that the change is in accordance with the principles, goals and objectives of the future land use element of the comprehensive plan. The use of the future land use plan in decision-making relating to zoning and subdivision approvals is to ensure that development and redevelopment are consistent with the city's comprehensive plan. Each new development or redevelopment should be reviewed for general compliance to the comprehensive plan. **Map COL.5** depicts the Zoning Map for the City of Lancaster.

Map COL.5: Zoning Map for the City of Lancaster



Source: City of Lancaster GIS

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Lancaster. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is at risk of this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is at risk of this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in the City of Lancaster. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Lancaster.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Lancaster.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Lancaster.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is at risk of this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Lancaster due to winter storm events. All improved property is at risk of this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Lancaster are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Lancaster are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Lancaster are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Lancaster is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $53,000 of property damage has been reported and no or crop damage has been recorded due to high wind events in the City of Lancaster. All improved property is at risk of this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Lancaster are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Lancaster are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Lancaster are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Lancaster have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Lancaster. All improved property is at risk of this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Lancaster are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Lancaster are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Lancaster are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Lancaster. All the population of City of Lancaster is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Lancaster. All improved property is at risk of this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Lancaster are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Lancaster are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Lancaster are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Lancaster is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Lancaster. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Lancaster indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Lancaster are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Lancaster are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Lancaster are exposed to this hazard.

Wildfire	
Population	Based on geographical data from the A&M Texas Forest Service TxWRAP 73 % of the population in City of Lancaster live in the WUI areas.
Improved Property	Based on geographical data no wildfires have been reported during the review period though no property or crops a loss were reported. $54,466,930 of property has been identified as vulnerable to wildfire
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	From the City GIS data, $218,740,960 of improved property has been identified as vulnerable to flooding. No property or crop loss due to flooding has been reported.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**No** critical infrastructure is at risk from the 100-year storm event.

Changes in Population and Development

The City of Irving was a participant in the last Dallas County Hazard Mitigation Action Plan. The table 3.1 shows that the estimated growth in population for the city was from 36,361 to 37,150 an increase of 2.1%. The city added 1,500 new housing units between 2008 and 2014, an increase of 13%. There were 4 major total structural and economic developments comprising of included offices and warehouse facilities totaling 4 million square feet. None of these new developments were built in floodplains.

To help mitigate the impacts of the hazards identified, the city identified broad mitigation strategies to lower the vulnerability due to the changes in population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stormwater ordinances, stricter code regulations such as the 2012 International Building and Fire Code Standards and expand education and awareness programs.

The tables below provide a summary of properties and structures that are vulnerable to Flooding and Wildfire within the City of Lancaster. The **Map COL.6** depicts the location of various city facilities.

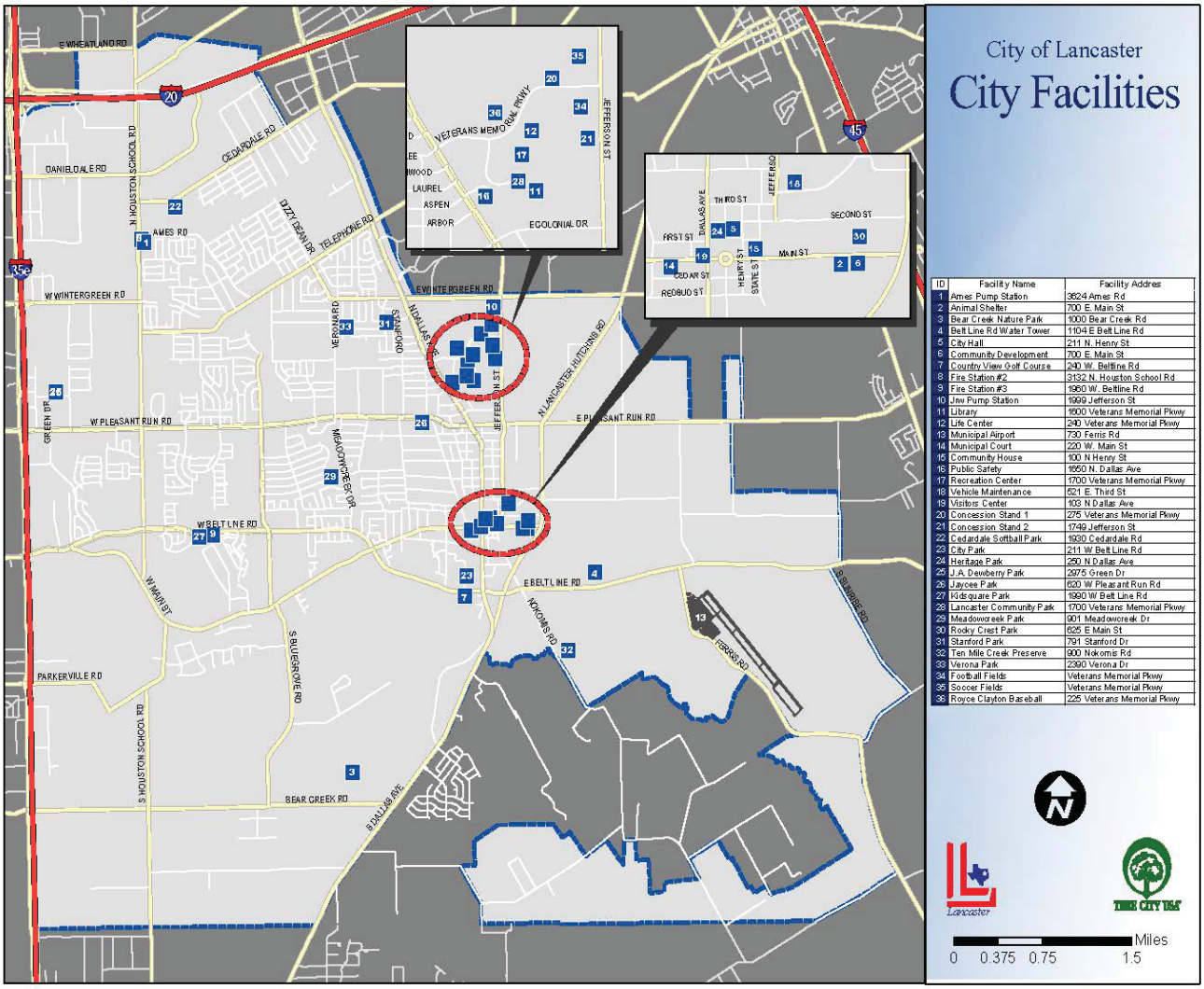
Structure / Property and Wildfire Vulnerability

Category of Property	Valuation	Land Valuation	Total Valuation	Acres
Public	$539,470	$1,183,900	$1,723,370	416.1794
Commercial	$18,191,790	$111,138,880	$122,776,640	7660.4033
Residential	$35,735,670	$15,934,600	$51,670,270	1577.7318

Structure / Property and Flood Vulnerability

Category of Property	Total # of Properties	Total Acres	Land Value	Improvement Value	Total Value
Public	96	1357.827	$12,434,850	$11,302,370	$23,737,220
Commercial	319	4471.4109	$81,784,780	$172,315,870	$254,100,650
Residential	820	1004.819	$17,491,160	$35,122,720	$52,613,880
Total	1235	6834.0569	$111,710,790	$218,740,960	$330,451,750

Map COL.4: City of Lancaster Facilities



ID	Facility Name	Facility Addres
1	Ames Pump Station	3624 Ames Rd
2	Animal Shelter	700 E. Main St
3	Bear Creek Nature Park	1000 Bear Creek Rd
4	Belt Line Rd Water Tower	1104 E Belt Line Rd
5	City Hall	211 N. Henry St
6	Community Development	700 E. Main St
7	Country View Golf Course	240 W. Beltline Rd
8	Fire Station #2	3132 N. Houston School Rd
9	Fire Station #3	1960 W. Beltline Rd
10	Jnw Pump Station	1999 Jefferson St
11	Library	1600 Veterans Memorial Pkwy
12	Life Center	240 Veterans Memorial Pkwy
13	Municipal Airport	730 Ferris Rd
14	Municipal Court	220 W. Main St
15	Community House	100 N Henry St
16	Public Safety	1650 N. Dallas Ave
17	Recreation Center	1700 Veterans Memorial Pkwy
18	Vehicle Maintenance	521 E. Third St
19	Visitors Center	103 N Dallas Ave
20	Concession Stand 1	275 Veterans Memorial Pkwy
21	Concession Stand 2	1749 Jefferson St
22	Cedardale Softball Park	1930 Cedardale Rd
23	City Park	211 W Belt Line Rd
24	Heritage Park	250 N Dallas Ave
25	J.A. Dewberry Park	2975 Green Dr
26	Jaycee Park	620 W Pleasant Run Rd
27	Kidsquare Park	1990 W Belt Line Rd
28	Lancaster Community Park	1700 Veterans Memorial Pkwy
29	Meadowcreek Park	901 Meadowcreek Dr
30	Rocky Crest Park	625 E Main St
31	Stanford Park	791 Stanford Dr
32	Ten Mile Creek Preserve	900 Nokomis Rd
33	Verona Park	2390 Verona Dr
34	Football Fields	Veterans Memorial Pkwy
35	Soccer Fields	Veterans Memorial Pkwy
36	Royce Clayton Baseball	225 Veterans Memorial Pkwy

Source: City of Lancaster GIS

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A:*** *Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant*
- ✓ ***Objective 1-B:*** *Maintain existing codes and ordinances that require front end mitigation of hazards*
- ✓ ***Objective 1-C***: *Limit development in flood plain areas*

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** *Identify areas where repetitive damages occur during chronic hazard events*
- ✓ ***Objective 2-B:*** *Incorporate disaster resistant features in government facilities and infrastructure*
- ✓ ***Objective 2-C:*** *Expand and coordinate Early Warning Systems currently in use.*

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A***: *Provide public education materials to residents and private sector*
- ✓ ***Objective 3-B:*** *Encourage private sector participation in future mitigation efforts*
- ✓ ***Objective 3-C:*** *Encourage public participation in future mitigation efforts*
- ✓ ***Objective 3-D:*** *Heighten public awareness for natural and man-made hazards*

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** *Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)*

Goal 5: Continue to build capacity for hazard mitigation in unincorporated areas of Dallas County

- ✓ ***Objective 5-A*****:** *Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts*
- ✓ ***Objective 5-B:*** *Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs*
- ✓ ***Objective 5-C*****:** *Promote land use for public recreation*

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Lancaster Action Item	Improve and Enhance Storm Water Draining Capabilities to prevent flooding in flood prone areas
Objective(s) Addressed	1-B
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	High
Estimated Cost	$60,000
Potential Funding Sources	City Budget, Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Lancaster Public Works Department
Implementation Schedule	1 year upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost of implementing this program is low compared to the benefits it offers
Discussion	Stormwater management projects will include: ✓ Installing, re-routing, or increasing the capacity of a storm drainage system. ✓ Increasing capacity of stormwater detention and retention basins. ✓ Increasing dimensions of drainage culverts in flood-prone areas.

City of Lancaster Action Item	Adoption and enforcement of building codes for the construction of storm shelters/safe rooms in existing buildings
Objective(s) Addressed	1-A
Hazard(s) Addressed	Tornado, high winds
Priority (High, Medium, Low):	High
Estimated Cost	Staff time
Potential Funding Sources	City Budget
Lead Agency/Department Responsible	City of Lancaster Building Inspection Department
Implementation Schedule	Within 1 year of funding
Effect on Old Buildings	Any reconstruction, remodeling or repair will have to comply with the new building code requirements
Effect on New Buildings	New construction, modifications or repair will be required to construct new buildings up to the required building code
Cost Effectiveness	The cost of implementing and enforcing this program is low
Discussion	Requiring or encouraging engineering measures and construction techniques that may include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, reinforced pedestrian and garage doors, window shutters, waterproof adhesive sealing strips, or interlocking roof shingles.

City of Lancaster Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Lancaster Fire Department and City Administration
Implementation Schedule	2 Years
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is very cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Lancaster Action Item	Participate in Firewise Program
Objective(s) Addressed	1-A, 1-C
Hazard(s) Addressed	Wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	No Cost
Potential Funding Sources	No cost other than enforcing the code
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	24 months
Effect on Old Buildings	Old buildings may not be affected by this
Effect on New Buildings	New regulations will require safer construction and incorporation of wildfire mitigation considerations into the permitting process
Cost Effectiveness	Cost of implementing this program is low compared to the benefits of the program
Discussion	The Firewise program provides a series of steps that individual residents and their neighbors can take to keep their homes and neighborhoods safer from fire. This can include Joining the Firewise Community recognition program sponsored by the National Wildlife Coordination Group (firewise.org); Sponsoring Firewise workshops for local officials, developers, civic groups and neighborhood associations, encouraging or requiring best firewise practices

City of Lancaster Action Item	Promote land use program, identify undeveloped land within the floodplain, and assess uses for conservation or recreation
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	TBD
Potential Funding Sources	Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	Lancaster Community Development Department
Implementation Schedule	Within 12 months of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Preserving natural areas and vegetation benefits natural resources while also mitigating potential flood losses.
Discussion	Program will include developing an open space re-use, and preservation plan targeting as well as developing a land banking program for the preservation of the natural and beneficial functions of flood hazard areas

City of Lancaster Action Item	Develop a comprehensive loss reduction program involving acquisition and relocation in areas along Ten Mile Creek to reduce loss and repetitive damage
Objective(s) Addressed	1-C
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	TBD
Potential Funding Sources	City Budget, Community Development Block grant, HMGP and Pre-Disaster Mitigation Grant
Lead Agency/Department Responsible	City of Lancaster Community Development Department and Public Works Department
Implementation Schedule	24 months upon funding
Effect on Old Buildings	Old building will be acquired and maintained by the city
Effect on New Buildings	None
Cost Effectiveness	The benefits of this program exceed the cost associated with flooding of this affected areas
Discussion	The removal of structures from flood prone areas will minimize future flood losses. This will be done by acquiring and demolishing of structures from voluntary property owners and preserving land subject to repetitive flooding

City of Lancaster Action Item	Implement the Texas Safe Room Rebate Program to provide the residents of Lancaster safe rooms
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Lancaster Fire Department, Department of Development Services
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Lancaster Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Lancaster Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Lancaster	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Lancaster

City of Lancaster Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Lancaster Action Item	Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities. This program will also be expanded to include residential areas,
Hazard(s) Addressed	Drought
Goal/Objective	5-A
Priority(High, Medium, Low)	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Developmental Services, Utilities Billing Department
Implementation Schedule	Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation.

Plan Maintenance

The City of Lancaster Emergency Management Coordinator/Fire Chief will be responsible for leading, the monitoring, evaluation and update efforts of the plan on an on-going basis.

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Lancaster	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will call the Lancaster Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Emergency Management Coordinator will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Lancaster's HMPT will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Lancaster or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Lancaster is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Lancaster will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Lancaster will engage stakeholders in community emergency planning.

Plan Incorporation: The City of Lancaster has several plans in place that address current mitigation activities. During the planning stage the Hazard Mitigation Planning Team will review protective mitigation measures that can be incorporated in to this annex of the Dallas County Hazard Mitigation Action Plan. The city's fire and building codes are reviewed by the City Building and Standards Commission and whatever is applicable to assisting mitigation activities will be noted and discussed during the annual HMPT meetings. Changes to the Dallas County Flood Plain Maps will also be noted and discussed at the annual meetings. Any changes to the city adopted floodplain management regulations as required for inclusion in the National Flood Insurance Program will also discussed and included in the

next update of the plan. The Comprehensive Zoning Plan and Capital Improvement Plan were important in developing this annex for the City of Lancaster and will continue to be key reference documents in carrying out updates. The Zoning Plan assisted with identifying subdivision, properties and citizens that maybe in a hazardous area. The Capital Improvement Project Plan is used to prioritize drainage projects for inclusion into the city's budget process. Each of these plans assisted and will continue to be used in future updates identifying goals and establishing mitigation items for the City of Lancaster.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Lancaster	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting and Meeting Documentation

c. Survey Results

Appendix COL A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Lancaster
Hazard Identification and Risk Assessment (HIRA)
Date: October 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4	1	3	1	5	80%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	3	3	1	2	1	4	50%
Winter Storms	2	4	4	2	1	2	2	5	40%
Tornado	4	4	4	4	2	3	3	8	50%
Flooding	3	3	4	4	1	2	3	6	66%
Pandemic/Public Health Emergency	1	1	4	4	3	1	3	7	57%
Extreme Temperatures/Heat	4	4	2	2	2	1	2	5	40%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3	2	2	1	5	60%
Wildfire	3	3	3	3	1	3	2	6	50%
Utility Failure	4	4	3	3	2	1	2	5	60z%
Energy/Fuel Shortage	1	1	3	3	2	1	3	6	50%
Terrorist Attack	1	1	4	4	4	4	4	12	33%
Urban Fire	4	4	3	3	2	3	3	8	37%
Earthquake	1	1	3	3	3	4	3	10	30%
Levee/Dam Failure	1	1	1	1	1	4	3	9	11%
Drought	3	3	1	1	1	1	1	3	33%
Aircraft Accident	1	1	2	2	3	3	3	9	22%
Stream Bank Erosion	1	2	1	.500	1	1	1	3	16%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4	4	4	4	12	33%
Civil Disorder	2	2	2	2	2	2	2	6	33%

NB: This City of Lancaster HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

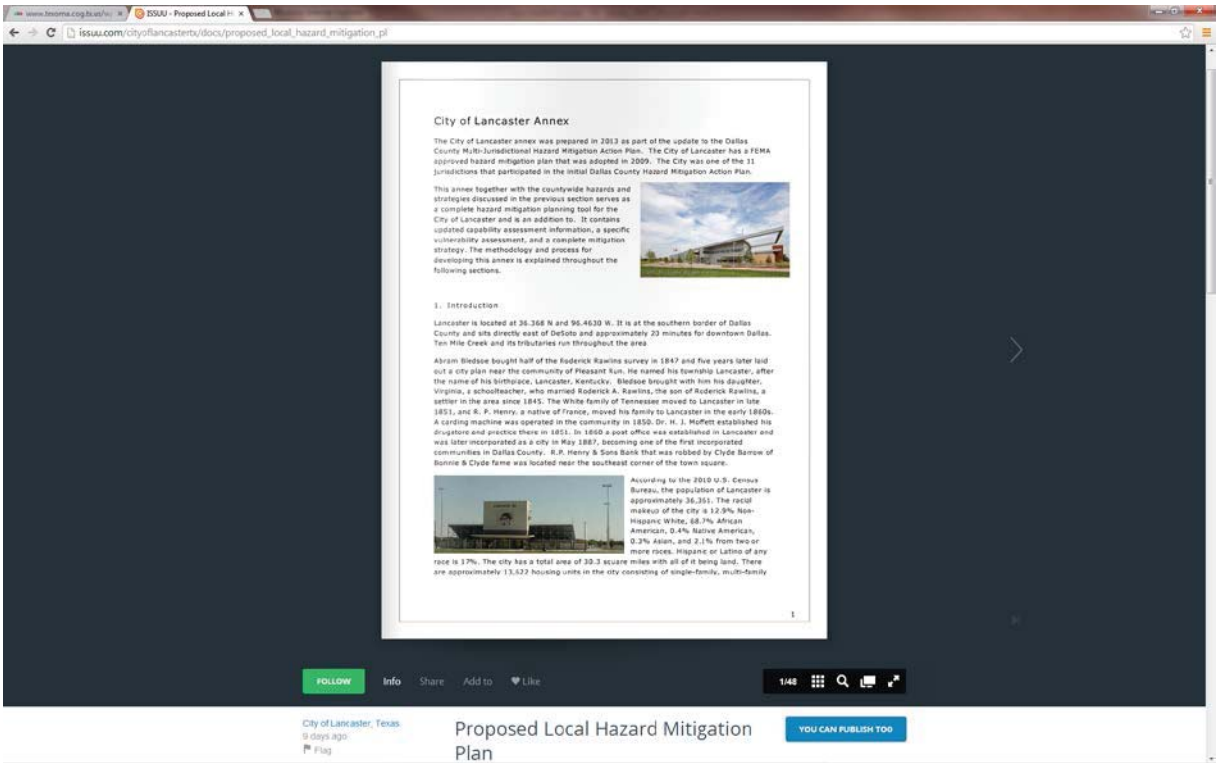
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

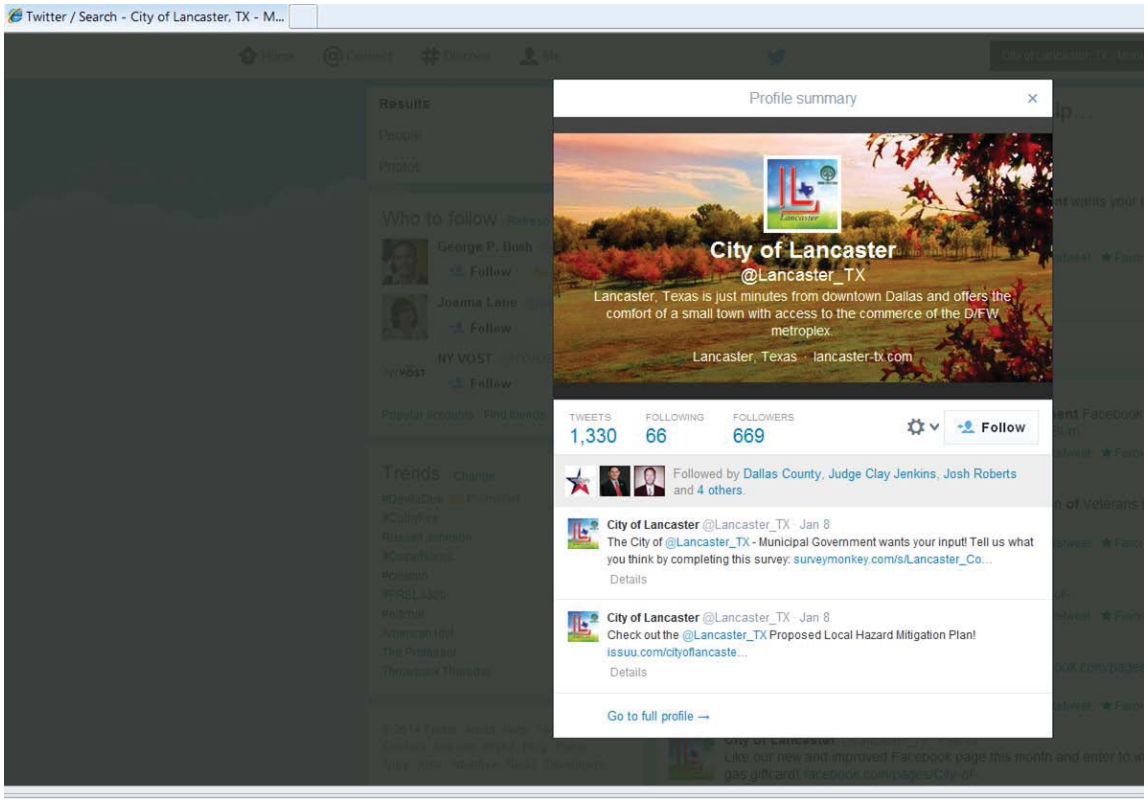
6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix COL B-1: Supporting and Public Outreach Documentation





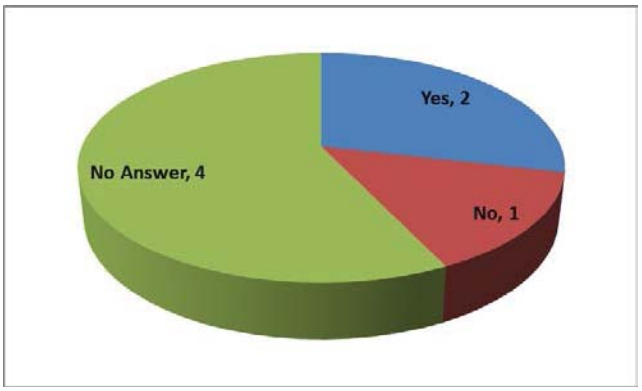

City of Lancaster, TX - Municipal Governm...
City of Lancaster, TX - Municipal Government
Home
City of Lancaster, TX - Mun...
Timeline
Recent
Like
The City of Lancaster, TX - Municipal Government wants your input! Tell us what you think by completing this survey:
https://www.surveymonkey.com/s/Lancaster_Comprehensive_Plan_Survey_1
City of Lancaster Survey
www.surveymonkey.com
Welcome! The City of Lancaster is kicking off an important new project – an update to the Lancaster Comprehensive Plan. It will help Lancaster take advantage of opportunities available to the City now and will enhance the attractions that already make this community special and unique.
Like · Comment · Share
2
City of Lancaster, TX - Municipal Government
January 8
Check out the @Lancaster_TX Proposed Local Hazard Mitigation Plan! http://t.co/TpWMC6K8U6
Proposed Local Hazard Mitigation Plan
issuu.com
City of Lancaster, Texas
Like · Comment · @Lancaster_TX on Twitter · Share
Isd Lancaster likes this.
Write a comment...
Press Enter to post.
City of Lancaster, TX - Municipal Government
December 25, 2013
City of Lancaster, TX - Municipal Government
December 31, 2013
The City of Lancaster will be closed on Wednesday, January 1, 2014 in observance of the New Year Holiday. Trash and recycling schedules will run as follows:
- Wednesday, January 1, 2014 trash pickup will run on Thursday, January 2, 2014
- Thursday, January 2, 2014 trash pickup will run as scheduled.
For more information please call 972-218-1300 or visit www.lancaster-tx.com.
Lancaster
HAPPY New Year 2014
All City of Lancaster Offices will be

Appendix COL C-1: City of Lancaster Survey Reponses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    - ✓ City of Lancaster (7 responses)

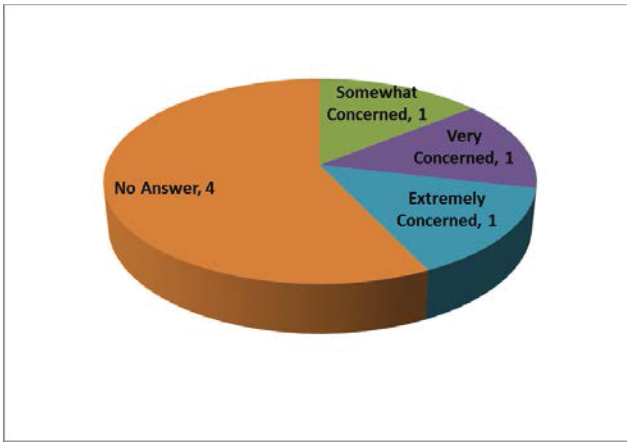
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

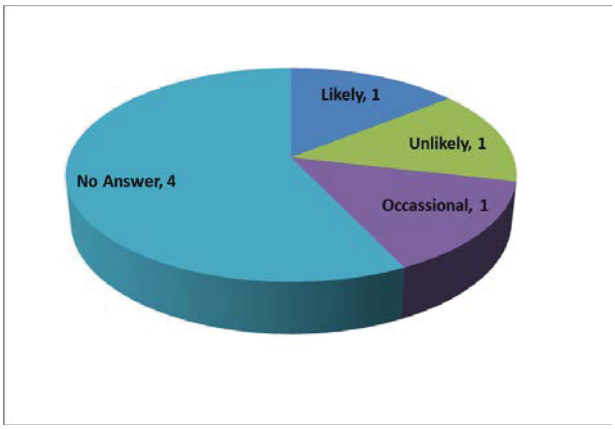
- ✓ "2012 Tornado"
- ✓ "Neighborhood hit by tornado; fence damaged. June 2004 – Apartment in DeSoto flooded when nearby creek overflowed its banks."

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

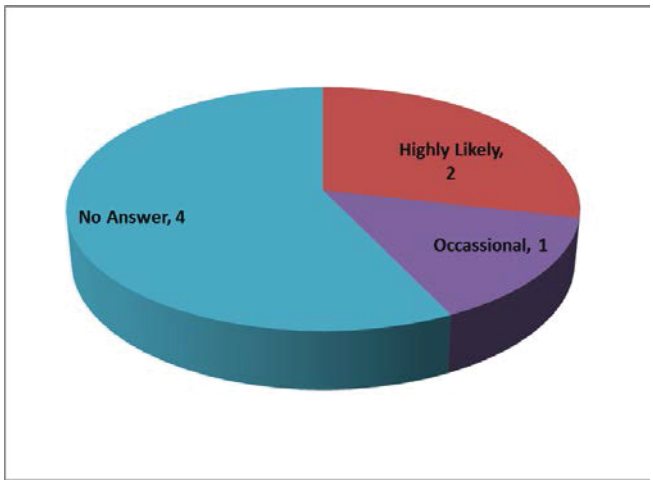


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

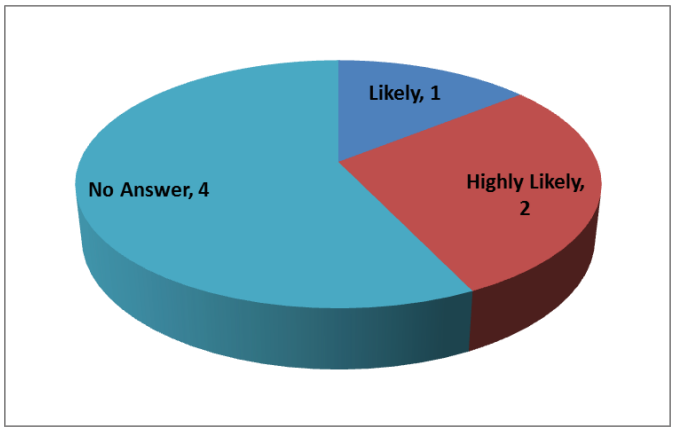
a. Earthquake



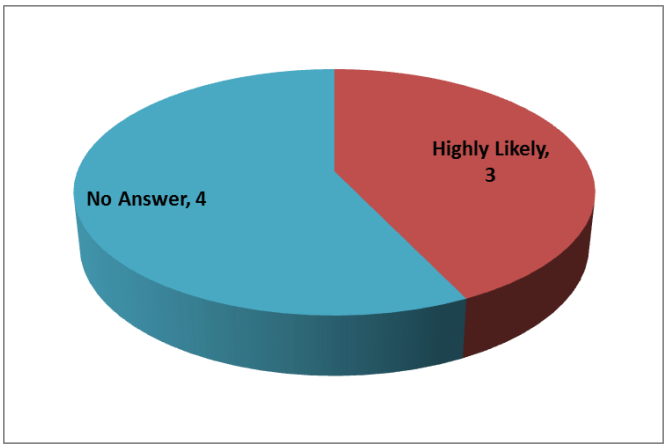
b. Tornado



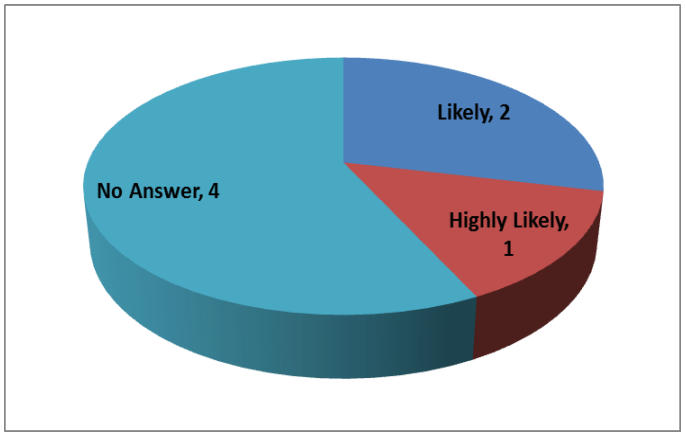
c. Hail



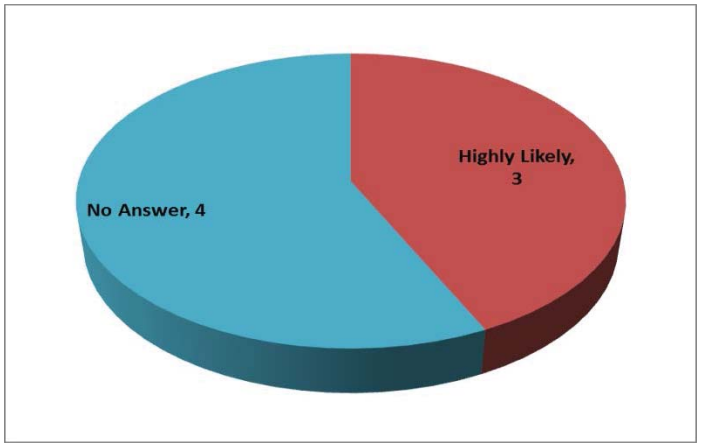
d. High Winds



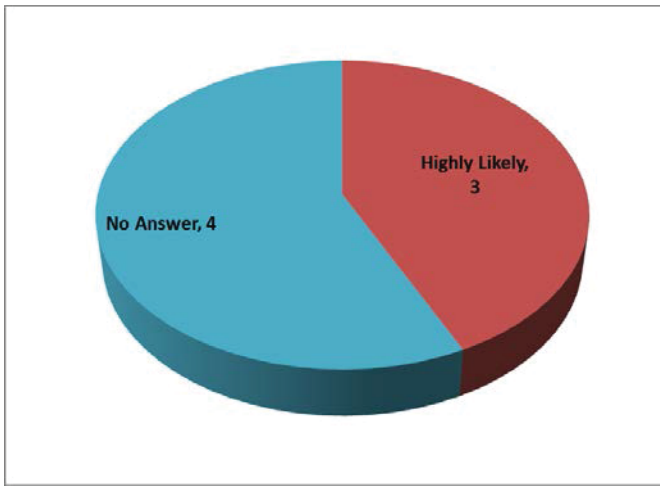
e. Winter Storm



f. Extreme Heat



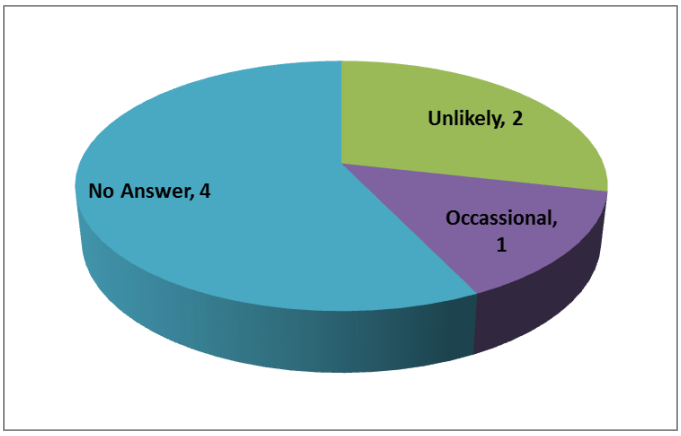
g. Drought



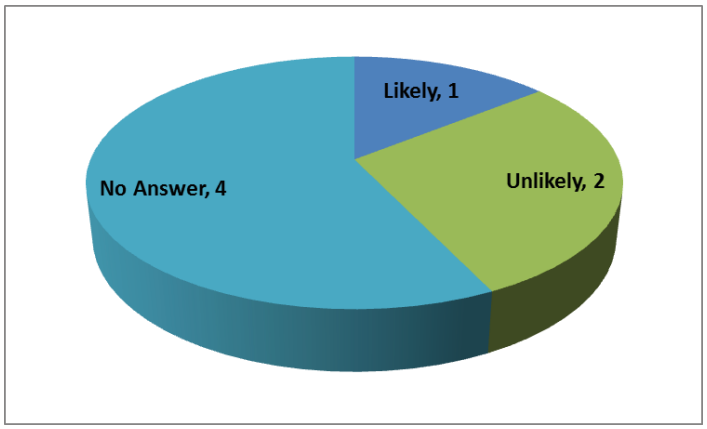
h. Flooding



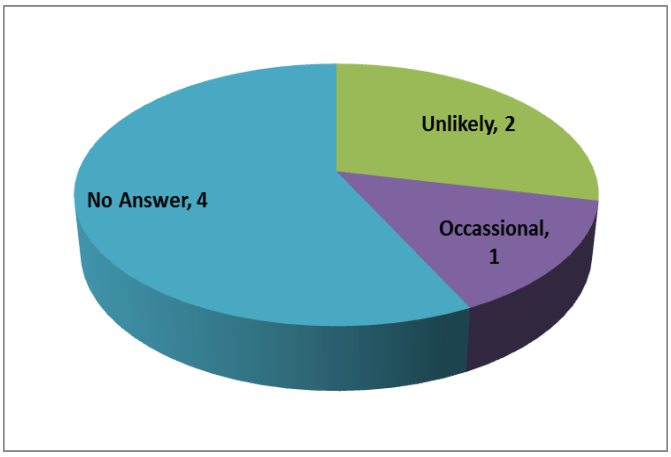
i. Dam Failure



j. Stream Bank Erosion

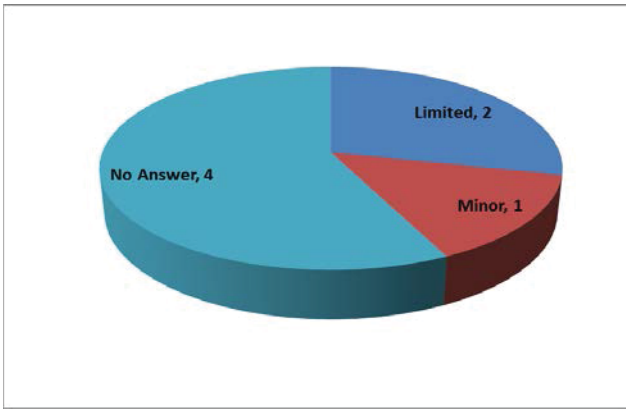


k. Levee Failure

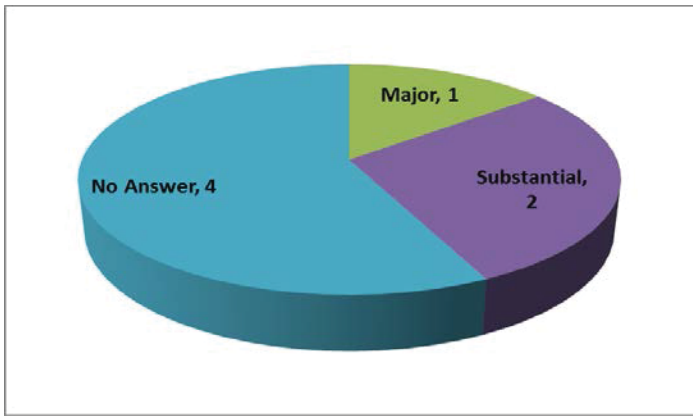


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

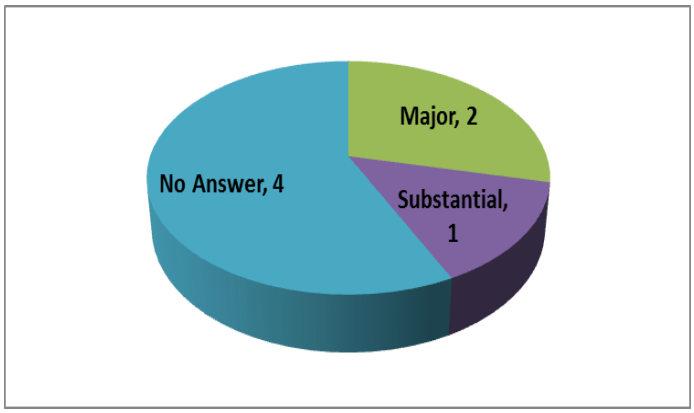
a. Earthquake



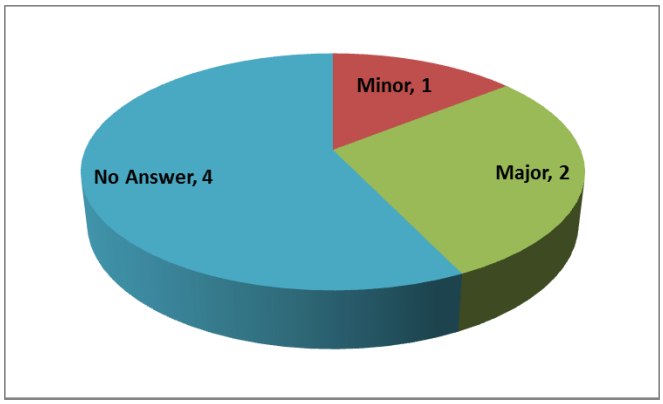
b. Tornado



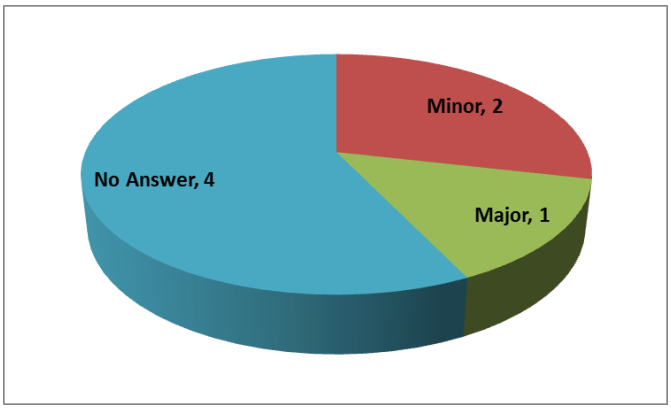
c. Hail



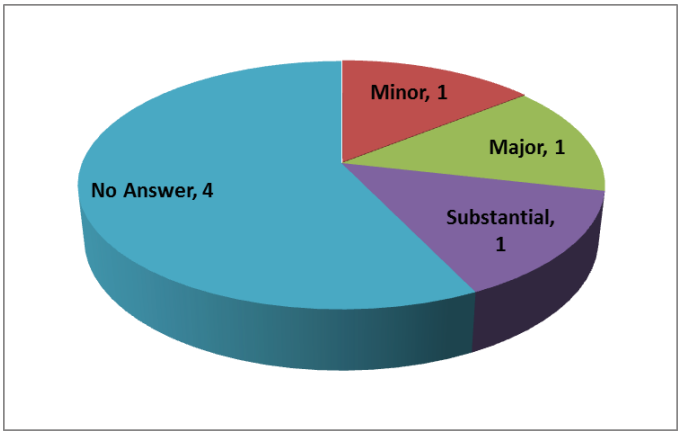
d. High Winds



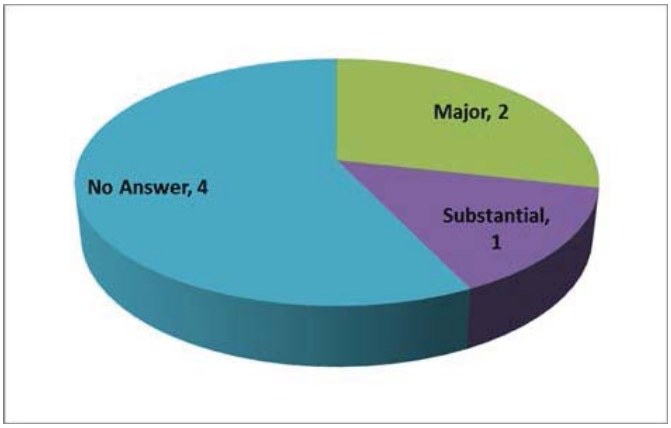
e. Winter Storms



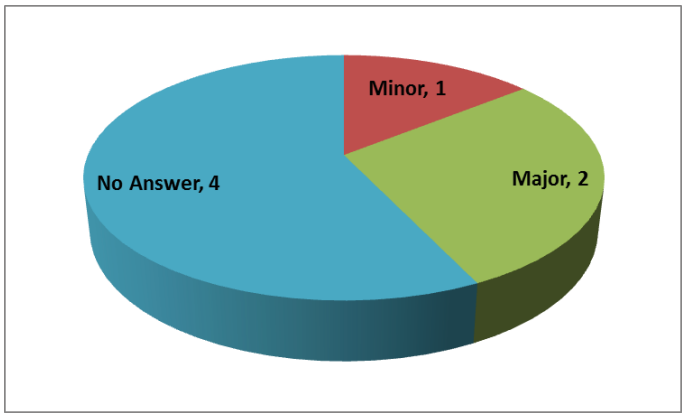
f. Extreme Heat



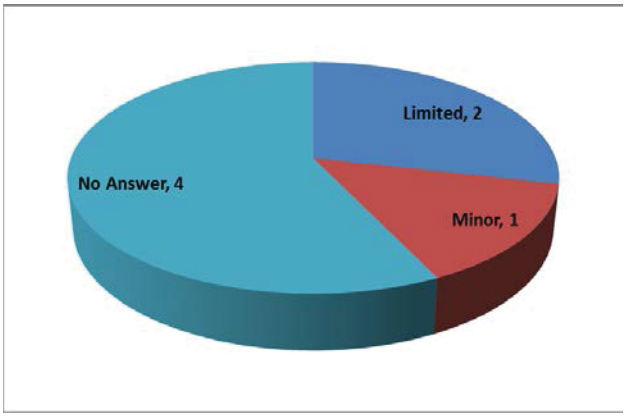
g. Drought



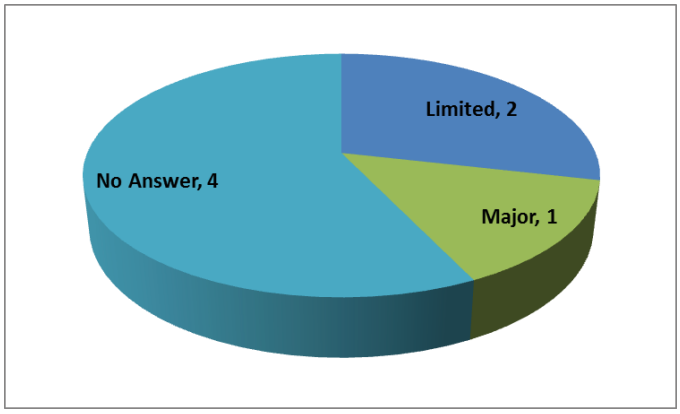
h. Flooding



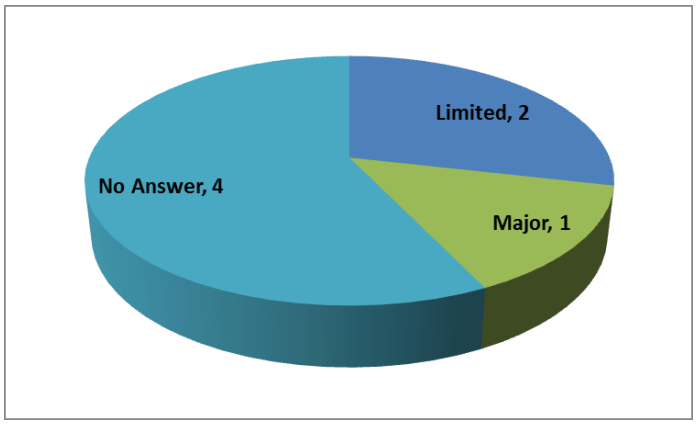
i. Dam Failure



j. Stream Bank Erosion

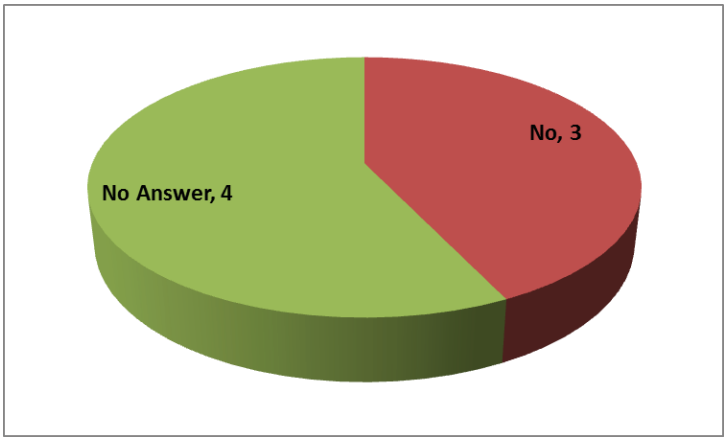


k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

- ✓ Yes (0)
- ✓ No (3)
- ✓ Skipped (4)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed

- ✓ Terrorism
- ✓ Civil Unrest
- ✓ Power Outages
- ✓ West Nile
- ✓ Air Pollution
- ✓ Bridges Breaking
- ✓ Chemical/ HazMat
- ✓ Climate Changes
- ✓ Epidemic/Pandemic
- ✓ Financial Crisis
- ✓ Fracking
- ✓ Gas Pipeline Explosion
- ✓ Water Contamination
- ✓ Water Main Breaks

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	1
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	2
Implement the Texas Individual Tornado Safe Room Rebate Program:	3
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	2
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	2
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	3
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	3
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	3
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	7

List any other strategies you think should be included in the plan:

- ✓ None Given

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ None Given

This page intentionally left blank.

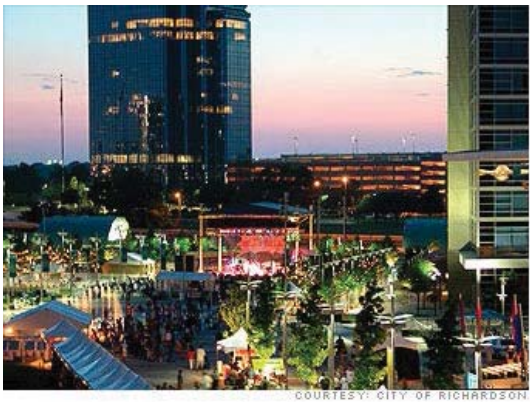
City of Richardson Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Richardson participated in the Countywide Dallas County HazMAP Working Group. The City of Richardson had previously submitted a stand-alone Hazard Mitigation Plan and this plan serves as an update to the city mitigation plan.

In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of Richardson. It contains information on the city's capabilities assessment, geographic and/or specific vulnerability assessments, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

The City of Richardson is located in the North Eastern Portion of Dallas County and the South Western portion of Collin County. W. Central Expressway (US75), the main artery of the City of Dallas, transverses the City. Interstate 635, also called LBJ Freeway, is to its immediate south and the Bush Turnpike spans the northern border of the City, giving Richardson resident's easy access to points east and west. Richardson hosts four DART light rail stations: at Spring Valley, Arapaho, Galatyn Park and Bush Turnpike.


COURTESY: CITY OF RICHARDSON

Settlers from Kentucky and Tennessee came to the Richardson area in the 1840s. After the Civil War, a railroad was built northwest of the original settlement. Richardson received its name after railroad contractor E.H. Richardson. Richardson was chartered in 1873. After the Texas Electric Railway and electric railway was finished in 1908, the population began to increase.

According to the 2010 U.S. Census Bureau, the population of Richardson is 99,223. The racial makeup of the city as 58.1% White, 8.3% African American, 0.3% Native American, 15% Asian, .2% from other races and 2% from two or more races. Hispanic or Latino of any race is 16%. Though population percentages are divided by general racial categories, there are many different dialects and written translations for each of these groups (Asian for example) including Traditional Chinese, Simplified Chinese, Taiwanese, Vietnamese, Korean, Farsi, Mandarin, Yue, and many more represented within the City of Richardson. Learning institutions within Richardson are also very diverse. For example, University of Texas at Dallas (UTD) ranks #23 on U.S. News and World Report's Campus Ethnic Diversity List.



International students comprise a large percentage of the student population. Thus, case management during disasters is essential in providing resources to our very diverse population.

Richardson has a total area of 28.6 square miles. There are approximately 40,630 housing units in the city consisting of single-family, multi-family and other semi-permanent structures (i.e. mobile homes, manufactured housing, boats and RVs).

The City of Richardson operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The City Manager is responsible for the day-to-day management of City activities. The Council sets policy for the City, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the City and for preparing and submitting an annual budget for Council review.

Richardson continues to be a vibrant community, kept current by the Richardson City Council's emphasis on economic development and neighborhood integrity. Voter-approved bond programs in 2006 and 2010 have contributed to the maintenance and improvement of the City's infrastructure as well as its quality of life.

The City also has a statewide reputation as a great place to play, with the nationally recognized Wildflower! Festival held each May and the highly regarded Cottonwood Arts Festival held the first weekend of each May and October. The City of Richardson is the envy of its suburban neighbors with its state-of-the-art Eisemann Center for Performing Arts which opened to high acclaim in 2002 and continues to bring nationally recognized entertainers and shows to the area each year through its Eisemann Center Presents series while offering a first-rate facility for local arts groups and corporations.



The City of Richardson has been recognized for its economic stability and strong fiscal management by credit rating agencies, with both Standard and Poor's and Moody's giving the City their highest ratings.

Internal Planning Process

The City of Richardson assembled the Hazard Mitigation Planning Team utilizing a wide cross section of personnel from various departments to review and update our existing Hazard Mitigation Plan. The first meeting held was to discuss our roles, project scope, and the planning process to update our Hazard Mitigation Plan.

The table below and continued on the next page lists members of the City of Richardson Hazard Mitigation Planning Team (HMPT).

Name	Title / Department or Agency	Role
Mariah Armitage	Director of Emergency Management and Continuity Planning, Environmental Health and Safety, University of Texas at Dallas	Hazard & Plan development, Hazard Identification, capabilities assessment
Gaye Belles	Senior GIS Analyst, Information Technology, City of Richardson	Provided data on GIS and mapping needs. Hazard & Plan development, Hazard Identification, capabilities assessment
Angela Dees	Emergency Management Specialist, Environmental Health and Safety, University of Texas at Dallas	Hazard & Plan development, Hazard Identification, capabilities assessment
Mistie Gardner	Emergency Management Coordinator, Office of Emergency Management, City of Richardson	HMPT Coordinator, provided leadership and coordination. Hazard & Plan development, Hazard Identification, capabilities assessment
Alisha Gimbel	Preparedness and Mitigation Coordinator, Office of Emergency Management, City of Richardson	Provided overall leadership to the planning efforts for the City. Hazard & Plan development, Hazard Identification, capabilities assessment
Scott Greeson	Response and Recovery Coordinator, Office of Emergency Management, City of Richardson	Hazard & Plan development, Hazard Identification, capabilities assessment
Jim Lockhart	Assistant Director of Engineering, Capital Projects, City of Richardson	Provided data on critical infrastructure and capital projects. Hazard & Plan development, Hazard Identification, capabilities assessment
Don Magner	Assistant City Manager- Community Services, City of Richardson	Assisted in Hazard & Plan development, Hazard Identification, capabilities assessment
David McFadden	Project Engineer, Capital Projects, City of Richardson	Provided data on critical infrastructure and capital projects. Hazard & Plan development, Hazard Identification, capabilities assessment
Curtis Poovey	Battalion Chief- EMS, Fire Department, City of Richardson	Hazard & Plan development, Hazard Identification, capabilities assessment
Greg Sowell	Director, Communication Department, City of Richardson	Provided direction on community outreach and communication. Assisted in Hazard & Plan development, Hazard Identification, capabilities assessment
Brent Tignor	Chief Building Official, Building Inspection, City of Richardson	Provided data on building codes and requirements. Assisted in Hazard & Plan development, Hazard Identification, capabilities assessment

The Hazard Mitigation Planning Team (HMPT) members provided input regularly throughout the planning process using the FEMA guidance to help direct our activities. One on one discussion between the Office of Emergency Management, the HMPT leader, and individual team members was employed as necessary and provided additional plan data and input. Data needs, data sources, past and potential hazards, and past and potential critical facilities were reviewed and organized at these meetings. The table below provides dates and a brief summary of correspondence.

Meeting Dates	Summary of Discussions
5/20/2013	Office of Emergency Management review of items due to Dallas County and previous *City of Richardson Hazard Mitigation Action Plan (2004 – 2009)*
6/10/2013	Sought public involvement for risk and local hazard information (via local newspapers, public notice posting, website and social media platforms)
6/11/2013	Review and update of hazard vulnerability assessment data and documentation
6/17/2013	Reviewed hazard information including public input and past hazard profiles
7/7/2013	Letter to state official Gregory Pekar detailing City of Richardson's Hazard Mitigation Plan status, expectations, and timeline for the next mitigation plan update submission
7/30/2013	Hazard risk assessment discussion regarding formula and local hazards
8/1/2013, 8/7/2013, & 8/8/2013	Update and coordination of action items
8/21/2013	Review and strategic planning for improvement
8/26/2013	Promotion of public survey review and feedback
9/24/2013	Promotion of public survey deadline and documentation
10/4/2013	Close of public survey
10/24/2013	Building inspection discussion with Community Services
10/30/2013	Building code effectiveness discussion with Community Services
10/30/2013	GIS mapping and civil engineering input
11/26/2013	Building official section review
12/17/2013	Letter to state official Ivan Ortiz requested updated NFIP data for the City of Richardson
12/30/2013	Reminder of final review and opportunity for input from all HMPT members
1/7/2014	Inclusion of all comments received during the review period
2/4/2014	Plan updates based on regional review and comments
4/2/2015	Plan updates based on Federal review and comments
4/3/2015	Planning team leader and the University of Texas at Dallas (UTD) discussion to include UTD specifics and information as a partner organization and as part of the Hazard Mitigation Planning Team
4/3/2015	Discussion of Federal comments and review with Dallas County and jurisdictions on the Dallas County Hazard Mitigation Plan
4/13/2015	Sought input and participation from Collin County to improve the Richardson Annex based on neighboring jurisdictions within Collin County and Collin County portions of Richardson including Plano Independent School District
4/13/2015	Sought input and participation from the City of Plano to improve the Richardson Annex as a neighboring community
4/13/2015	Sought input and participation from the City of Garland to improve the Richardson Annex as a neighboring community
4/13/2015	Sought input and participation from the Richardson Independent School District to improve the Richardson Annex
4/13/2015	Sought input and participation from Dallas Area Rapid Transit as a transportation entity within Richardson

External stakeholders invited via email to participate and provide input in the planning and review process of the City of Richardson Hazard Mitigation Action Plan annex included:

Agency / Organization	Name	Position
City of Garland	Joshua Kelly	Senior Emergency Management Specialist
City of Garland	Savannah Martin	Senior Emergency Management Specialist
City of Garland	Mollie Rivas	Emergency Management Coordinator
City of Plano	Carrie Little	Emergency Management Coordinator
Collin County	Jason Lane	Assistant Emergency Management Coordinator
Collin County	Kelley Stone	Director of Homeland Security

Agency/Organization	Name	Position
Dallas Area Rapid Transit (DART)	Jill Shaw	Emergency Preparedness Manager
Plano Independent School District (PISD)	Joseph Parks	Safety and Security Executive Director
Richardson Independent School District (RISD)	Luther Robertson	Safety and Security Coordinator

Sources of information and data used in the Richardson Hazard Mitigation Action Plan annex are as follows:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard Occurrences	Mapping for all hazards except wildfire
National Dam Inventory	Dam Information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones
Retail Street Advisors and Richardson Chamber of Commerce	City Line Development Information	Development changes affecting both Urban Wildfire and Tornado risk profiles

Public Involvement

Public involvement is a necessity and a challenge. Richardson sought good public participation to ensure a robust and functional mitigation plan. The challenge is that in the past public involvement is hindered by lack of participation. Public meetings held at council meetings do not provide a robust platform of interaction. The formality of such meetings seems to deter public participation rather than fostering it. It was for this reason the HMPT decided to utilize a different strategy to involve the public and invite participation.

The HMPT worked with Dallas County and other partnering cities to find a creative solution. During one of the planning meetings such a solution was developed to provide constant access to the public in our mitigation efforts, thus fostering involvement. The HMPT worked to post a copy of the current plan onto the city and county website. The postings of our mitigation plans would allow the public access 24/7 and provide the public the ability to review at their leisure. Another benefit from this approach was the ability to educate the public regarding mitigation and encouraging the public to provide direct input into the plans updates. Notations were inserted that copies of the plan were able to be provided to the public in printed form if needed. The website was updated with information regarding the plan to include meeting dates and times by the City of Richardson, in coordination with Dallas County.

The HMPT then discussed utilizing a public survey to help foster input in addition to the options already created. In April 2013, an online survey was distributed county-wide to

solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Richardson notified residents and businesses in the county about the opportunity to participate or provide input during the development of the mitigation plan. This was accomplished through the City's website and social media platforms. The city also made a public notice through the Dallas Morning News directing the public to the online survey. Public notices were posted outside City Hall in accordance with all City and Texas public meeting requirements. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix C -1 of this annex.

Public Review Period and Results

In addition to the survey input garnered in April 2013, the City of Richardson actively sought input and comments on the final draft of the Dallas County Hazard Mitigation Action Plan and the Richardson Annex. Both documents were posted on the City of Richardson's website, input was requested through the Richardson *Week in Review*, and an official notice was posted outside City Hall in accordance with regular public meeting/notice practices from December 23, 2013 to January 7, 2014. All comments from HMPT members and the public were incorporated as revisions into the final version.

Survey results received are outlined below:
1. 61 survey responses were received from City of Richardson residents
2. Response to the survey indicated the following hazards:

Hazard	Unlikely	Occasional	Likely	Highly Likely
Earthquake	39	8	0	1
Tornado	0	11	20	18
Hail	0	0	9	37
High Winds	0	3	11	35
Winter Storms	4	21	15	9
Summer Heat	0	2	3	44
Drought	0	3	7	39
Flooding	14	21	11	3
Dam Failure	42	7	0	0
Stream Bank Erosion	16	21	8	4
Levee Failure	35	11	2	0

Survey responses reflect that tornado, hail, high winds, summer heat, drought, and winter storms are considered most likely and were rated significantly higher by residents in the City of Richardson. These responses in addition to the Hazard Identification and Risk Assessment Matrix (HIRA) completed by the City of Richardson Hazard Mitigation Planning Team (HMPT) were combined to determine the risk levels and the most common hazards that affect City of Richardson. Survey responses and identified hazard concerns listed above will also be used to improve messaging and outreach efforts regarding both perceived and calculated risk of these hazards. A significant number of respondents in Richardson indicated they would like to see an increase in Individual Tornado Safe Room Rebate Program awards, public outreach programs (like Volunteers in Police Service and Fire Corps), and expanded use of mass notification systems.

Capability Assessment:

The City of Richardson identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments in Hazard Mitigation Planning are:

Richardson City Council consists of the Mayor, two at-large seats and four place, or district, seats. The Council provides vision, adopts policies and regulations, facilitates programs, and approves funding requests/budgets over all aspects of City government.

Richardson City Manager's Office provides the leadership and supervision that, in turn, implements the policies and decisions of the Richardson City Council, thereby ensuring the delivery of services to the community.

Building Inspection is committed to ensuring code compliance for all residential and commercial properties as outlined by the International Codes, and recognizes the importance of maintaining life safety and building standards for the residents and business occupants within the City of Richardson.

Capital Projects (Engineering Department) is responsible for:

- ✓ Planning, preparing, and administering current and future bond programs
- ✓ Providing project management for various Capital Improvement Projects
- ✓ Stormwater & Floodplain Management
- ✓ Construction & Right-of-Way Improvements
- ✓ Other Engineering & Technical Services

Communications Department consists of two (2) main areas: Citizens Information Services and Citizen Information Television; primary objectives include the timely dissemination of information about the City of Richardson and its policies, programs, services and neighborhoods to the news media and community.

Community Services includes divisions for code enforcement, environmental services, community programs, and reinvestment strategies. Community Services enforces local, state, and federal requirements for land development, building construction, and specific uses.

Finance Department will have a role in the implementation of the actions identified in this plan:

- ✓ Provides services associated with cost tracking and financial management of Grant Funded and capital improvement projects.
- ✓ Ensures all aspects of City financing, funding, and expenditures are within legal, prescribed guidelines and regulations. The Department also tracks and audits expenditures.

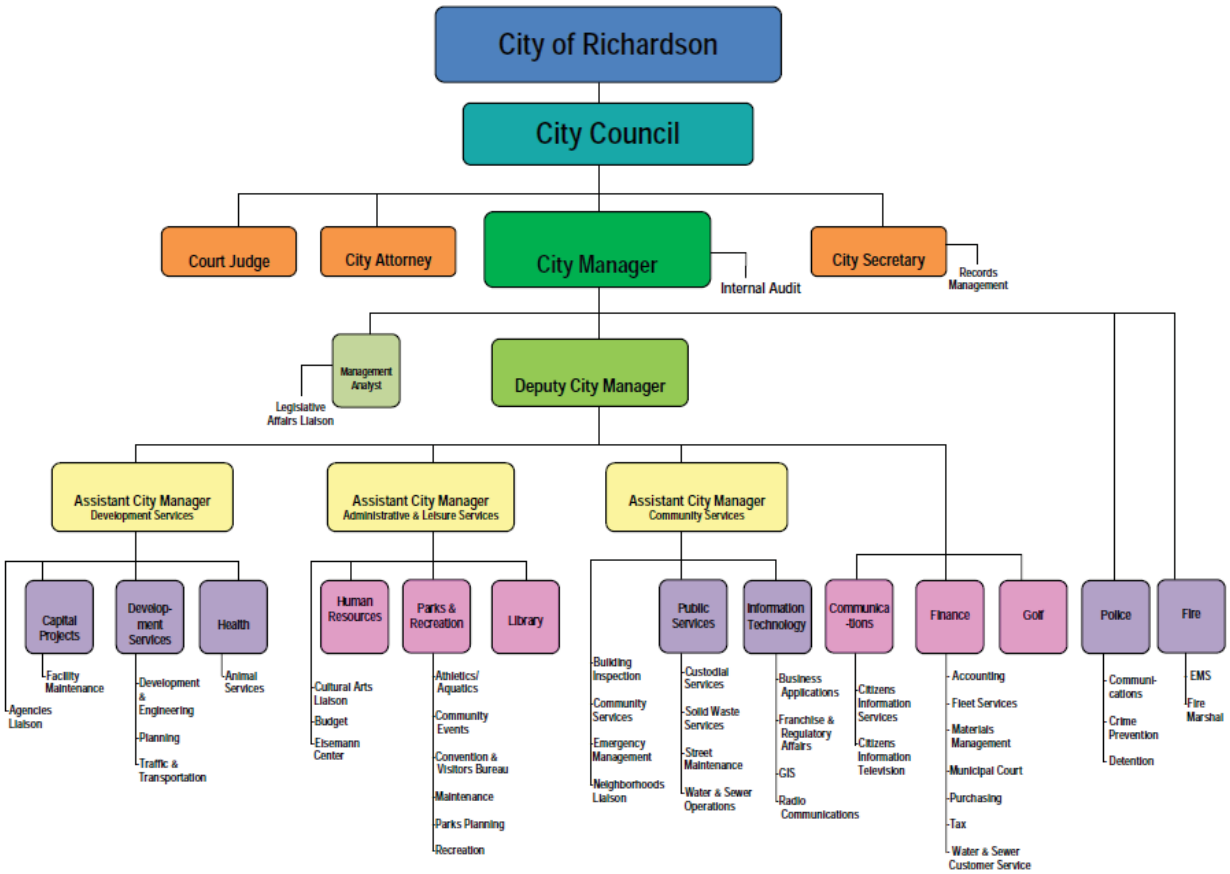
Fire Department is organized into two (2) divisions: Administration and Operations. The functions of the Fire Department are fire prevention through public education and code enforcement, fire control and extinguishment, hazardous materials response, rescue operations, and emergency medical service. Working together, these divisions ensure the citizens of Richardson quality services delivered in an efficient and effective manner.

Information Technology provided GIS mapping and expertise for the Hazard Mitigation Plan update.

Office of Emergency Management is responsible for preservation and/or reconstitution of civic government under the threat of occurrence of any emergency or major disaster that could disrupt normal daily operations.

Its primary day-to-day operation is to identify and to mitigate the effects of natural, technological, environmental emergencies in so far as possible by means of preparing for and responding and recovering from their effects on the community. Richardson Emergency Management staff members have numerous professional affiliations which directly increases the addition and implementation of new or best practice mitigation ideas through information dissemination, regular meetings, seminar opportunities, and training opportunities.

Figure COR 1: City of Richardson Organizational Chart and Key Departments



Summary of Capabilities

The tables below identify the current capabilities in the City of Richardson.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2009	**1.** No **2.** No **3.** Yes
Capital Improvements Plan	Yes	**1.** No **2.** No **3.** Yes
Economic Development Plan	Yes	**1.** No **2.** No **3.** Yes
Local Emergency Operations Plan	Yes Varies by Annex	**1.** Yes **2.** No **3.** Yes
Continuity of Operations Plan	Yes 2013	**1.** Yes **2.** No **3.** Yes
Transportation Plan	Yes	**1.** Yes **2.** No **3.** Yes
Stormwater Management Plan	No	N/A City has a prioritized list of prioritized list of repairs/improvements with respective cost estimates and comparisons for future improvements.
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N/A	N/A

Building Code, Permitting, and Inspections	Yes/No	
Building Code	Yes	Version/Year: 2012 International with Amendments
Building Code Effectiveness Grading Schedule (BGEGS) Score	Yes	Score: Class 3 – for commercial and industrial properties Class 3 – for 1 and 2 family residential property
Fire Department ISO rating	Yes	Rating: 1
Site Plan review requirements	Yes	
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Yes Yes
Subdivision ordinance	Yes	Yes Yes
Floodplain ordinance	Yes	Revised
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	No
Flood insurance rate maps	Yes 2010	Dallas County 48113 Collin County 48085
Acquisition of land for open space and public recreation uses	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Utilize mitigation goals and action items to address for example drainage issues and implement future capital projects plans citywide. Continue to enforce and further enhance building codes and requirements. Continue regular assessments to address storm drain system capacities and flood risks.		

Administrative and Technical

Administration	Yes/No	Describe capability Is coordination effective?
Planning Commission	Yes	High Yes
Mitigation Planning Committee	Yes	Yes
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	City does maintenance on drainage ditches and trees
Mutual aid agreements	Yes	City of Dallas is a hub for mutual aid response in coordination within Dallas County
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes; FT	Yes; Yes; Yes
Floodplain Administrator	Yes; FT	Yes; Yes; Yes
Emergency Manager	Yes; FT	Yes; Yes; Yes
Community Planner	Yes; FT	Yes; Yes; Yes
Civil Engineer	Yes; FT	Yes; Yes; Yes
GIS Coordinator	Yes; FT	Yes; Yes; Yes
Other	N/A	N/A
Technical	**Yes/No**	**Describe capability Has capability been used to assess/mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Citizens can sign up for phone notification Yes
Hazard data and information	Yes	Yes
Grant writing	Yes	Yes
Hazus analysis	Yes	Yes
Other	N/A	N/A

Legal and Regulatory

All ordinances, resolutions, rules and regulations of the City of Richardson remain in full force and effect until altered, amended or repealed by the City Council. In addition to other acts required by law or by specific provision within Charters to be done by ordinance, those acts of the City Council shall be by ordinance which:

- ✓ Adopt or amend an administrative code or establish, alter or abolish any city department, office or agency;
- ✓ Provide for a fine or other penalty or establish a rule or regulation for violation of which a fine or other penalty is imposed;
- ✓ Levy taxes, except as otherwise provided with respect to the property tax levied by adoption of the budget;
- ✓ Grant, renew or extend a franchise;
- ✓ Authorize the borrowing of money;
- ✓ Convey or lease or authorize the conveyance or lease of any lands of the city.

The City Council for the City of Richardson, including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

The City of Richardson has adopted the 2012 Edition of the International Building, Residential, Energy Conservation, Fuel Gas, Mechanical, Plumbing, Fire, and Electrical Codes thereby guaranteeing the city will receive the strongest ISO rating, which in turn reduces insurance rates for our community.

As these codes were adopted, administrative amendments were made to include:

- ✓ Permits
- ✓ Penalties
- ✓ Fine amounts
- ✓ Re-inspection perimeters and fees
- ✓ Effective dates
- ✓ Construction timeframes
- ✓ Changes in ownership
- ✓ Certificates of occupancy
- ✓ Declaration of unsafe structures as illegal (and can be rehabilitated or demolished)
- ✓ Increasing sewer depth to at a minimum of 12 inches below grade
- ✓ Basing storm drain size on the 100-year hourly rainfall rate of 5 inches
- ✓ Requiring compliance with the Texas Commission on environmental quality

Amended section numbers include:

- ✓ Building: Amending sections 6-27 and 6-28 together with Appendix D
- ✓ Residential: Amending sections 6-30 & 6-31
- ✓ Energy Conservation: Amending sections 6-33 and 6-34

- ✓ Fuel Gas: Amending sections 6-237 and 6-268
- ✓ Mechanical: Amending sections 6-262 and 6-263
- ✓ Plumbing: Amending sections 6-287 and 6-288

Fiscal Resources

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1. Used in the past to fund infrastructure improvements 2. Yes
Authority to levy taxes for specific purposes	Yes	1. Used annually to fund ongoing city operations 2. Yes
Fees for water, sewer, gas or electric services	Yes	1. Water and Sewer fees are charged to local customers 2. Yes
Impact fees for new development	No	N/A
Storm water utility fee	Yes	1. Instituted in FY2011-2012 2. Yes
Incur debt through general obligation bonds and/or special tax bonds	Yes	1. Used in the past to fund infrastructure improvements 2. Yes
Incur debt through private activities	No	N/A
Community Development Block Grant	No	N/A
Other federal funding programs	N/A	N/A
State funding programs	N/A	N/A
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Utilize mitigation goals and action items to address for example drainage issues and implement future capital projects plans citywide. Continue to enforce and further enhance building codes and requirements. Maximize the use of federal, state and local funding opportunities. Continue to provide property owners with protection opportunities by utilizing grants and incentives as available. Maintain the highest Community Rating System (CRS) rating in order to reduce the flood insurance rates of property owners.		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Churches to provide temporary shelters and access and functional needs inclusion through coordination.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Water wise irrigation seminars in coordination with Texas A&M AgriLife Extension and many public preparedness presentations throughout the year.
Natural disaster or safety related school programs	Yes	Information provided in partnership with RISD and local preparedness presentations.
StormReady certification	Yes	Yes
Firewise Communities certification	No	No
Public-private partnership initiatives addressing disaster-related issues	Yes	Yes
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Continue working with neighborhood associations and other groups within the city to garner support and build partnerships. Utilizing existing volunteer efforts and programs, give the public an opportunity to obtain specific preparedness training via targeted programs such as the Citizens Fire and Police Academies. Utilize existing and new social media platforms as they become available to stay connected and provide information to mitigate against local hazards such as extreme summer heat and winter weather conditions.		

Relevant Plans, Policies, and Ordinances

The City of Richardson has adopted the 2012 Edition of the International Building, Residential, Energy Conservation, Fuel Gas, Mechanical, Plumbing, Fire, and Electrical Codes thereby guaranteeing the city will receive the strongest ISO rating, which in turn reduces insurance rates for our community.

As these codes were adopted, administrative amendments were made to include:

- ✓ Permits
- ✓ Penalties
- ✓ Fine amounts
- ✓ Re-inspection perimeters and fees
- ✓ Effective dates
- ✓ Construction timeframes
- ✓ Changes in ownership
- ✓ Certificates of occupancy
- ✓ Declaration of unsafe structures as illegal (and can be rehabilitated or demolished)
- ✓ Increasing sewer depth to at a minimum of 12 inches below grade
- ✓ Basing storm drain size on the 100-year hourly rainfall rate of 5 inches
- ✓ Requiring compliance with the Texas Commission on environmental quality

Amended section numbers include:

- ✓ Building: Amending sections 6-27 and 6-28 together with Appendix D
- ✓ Residential: Amending sections 6-30 & 6-31
- ✓ Energy Conservation: Amending sections 6-33 and 6-34
- ✓ Fuel Gas: Amending sections 6-237 and 6-268
- ✓ Mechanical: Amending sections 6-262 and 6-263
- ✓ Plumbing: Amending sections 6-287 and 6-288

National Flood Insurance Program/ Municipal Codes for Flood Risk

Richardson is one of more than 20,000 communities now voluntarily participating in the National Flood Insurance Program (NFIP). Richardson also employees an ordinance with specific provisions for flood hazard reduction.

Richardson strives to integrate planning requirements and mechanisms. Thus, members and leadership from other planning efforts such as the Capital Improvement Plan (CIP) were invited and included in the Hazard Mitigation Planning Team (HMPT). Capital Projects will continue to maintain and revise the CIP with these members submitting actions, review, and formal approval.

Hazard Assessment and Risk Assessment

As was stated at the beginning of this annex, the City of Richardson had previously submitted a stand-alone Hazard Mitigation Plan. 10 natural hazards identified in the previous plan were expansive soils, tornadoes, hail, high winds, lightning, severe winter/ice storms, summer heat, poor air quality, flooding, and stream bank erosion.

Using the Hazard Identification and Risk Assessment Matrix (HIRA) provided by Dallas County Office of Homeland Security and Emergency Management, the City identified 13 natural hazards, which were ranked as follows:

- ✓ Tornado – 66.66%
- ✓ Winter Storms – 50%
- ✓ Drought – 50%
- ✓ Urban Fire – 40%
- ✓ Extreme Temperature – 40%
- ✓ High Winds – 40%
- ✓ Lightning – 33.33%
- ✓ Hail – 30%
- ✓ Stream Bank Erosion – 25%
- ✓ Flooding – 25%
- ✓ Wildfire – 25%
- ✓ Expansive Soils – 25%
- ✓ Earthquake – 20%
- ✓ Dam/Levee Failure – 20%

A copy of this assessment has been provided in Appendix A of this section.

Land subsidence, coastal erosion, and hurricane/tropical storms were not included for further review in the profiling step because they are not prevalent hazards within Dallas County, were found to pose only minor or very minor threats compared to the other hazards, or were generally linked to or covered by other selected hazards.

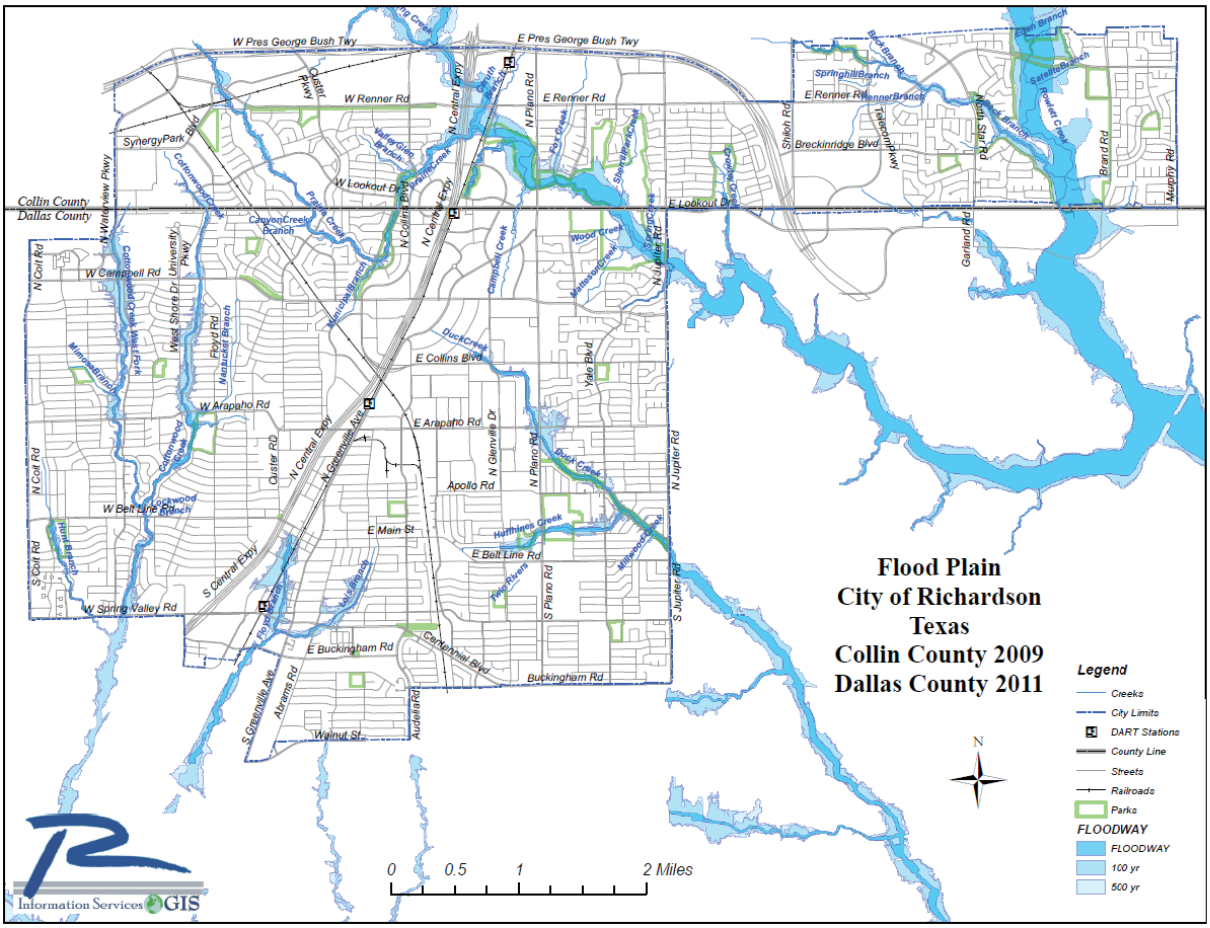
Flooding: Richardson is one of more than 20,000 communities now voluntarily participating in the National Flood Insurance Program (NFIP). Richardson also employees an ordinance with specific provisions for flood hazard reduction.

As a testament to previous planning and mitigation efforts, the City of Richardson does not have any repetitive loss claims utilizing the federal definition of at least 2 paid losses of more than $1,000 each in any 10 year period. Richardson will continue to assess storm drainage and culvert capacity while utilizing previous watershed master plans to identify flood concerns, stream bank erosion impacts due to water runoff or land development, and remediation options.

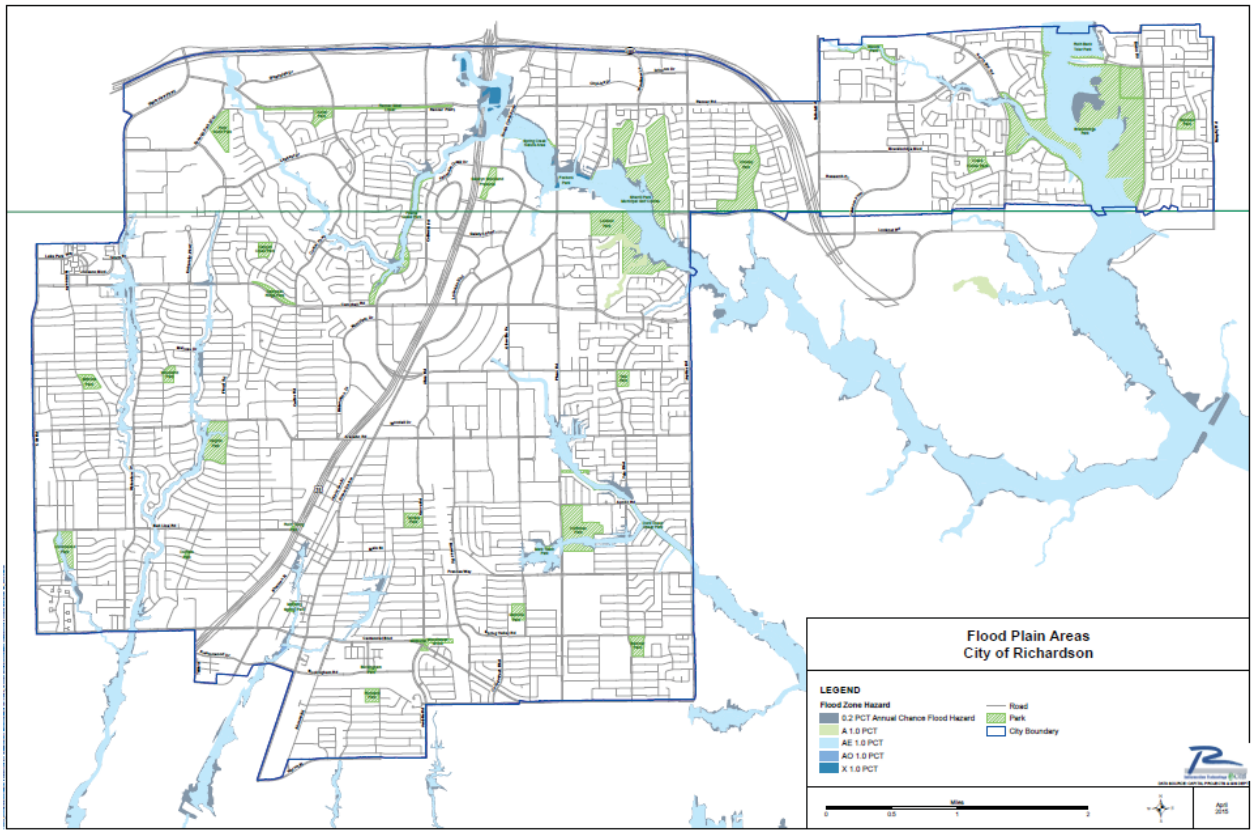
Areas susceptible to flooding and estimated project costs (using 2013 cost of materials and labor) are listed below. All flood prevention projects in the following list are currently unfunded:

UTD Regional Detention West Fork Cottonwood Creek	$5,210,000.00
UTD Regional Detention Pond Cottonwood Creek	$3,770,000.00
Lawnmeadow Drainage Improvements (Shady Creek to Cap Rock)	$900,000.00
Chippewa Drainage Improvements (Coit to Cottonwood)	$950,000.00
Lamp Post Drainage Improvements	$165,000.00
Summit Drive Drainage Improvements	$1,075,000.00
North Greenville Ave Storm Sewer Improvements	$1,450,000.00
Lois Channel Drainage Improvements (Spring Valley to Frances Way)	$10,000,000.00
Texas Channel Drainage Improvements (Phillips to Jackson)	$3,000,000.00
Custer Rd and Tyler Loop Storm Sewer Improvements (South of Arapaho)	$4,500,000.00
La Salle, Lois and Dorothy Drainage Improvements	$1,460,000.00
Polk Street Drainage Improvements Texas to Abrams	$720,000.00
Spring Valley Drainage Improvements (Oak St to Lois Channel)	$865,000.00
Woodland/ Westshore Storm Drainage Upgrade	$282,000.00
Northlake Drainage Improvements Phase II (St. Lukes and Waterview Storm Drains)	$200,000.00
Opal and Kirby Drainage Improvements	$140,000.00
Canyon Creek Drive Drainage Improvements Phase II	$200,000.00
Floyd Branch Drainage Improvements Greer to Jackson at US75 Frontage Rd	$1,400,000.00
Sherman Storm Sewer Improvements	$850,000.00
Tyler Street Drainage Improvements (Texas Channel East to Tyler St)	$520,000.00
Floyd Road Drainage Improvements (Nottingham South to US75 FR)	$700,000.00
Abrams Road Drainage Improvements (Centennial to Highland)	$1,500,000.00
Custer Road Flood Prevention	$2,555,000.00
Mimosa at Arapaho Flood Prevention	$580,000.00
Glenville Beltline Storm Sewer	$1,255,000.00

Map COR 1: City of Richardson- Flood Plain



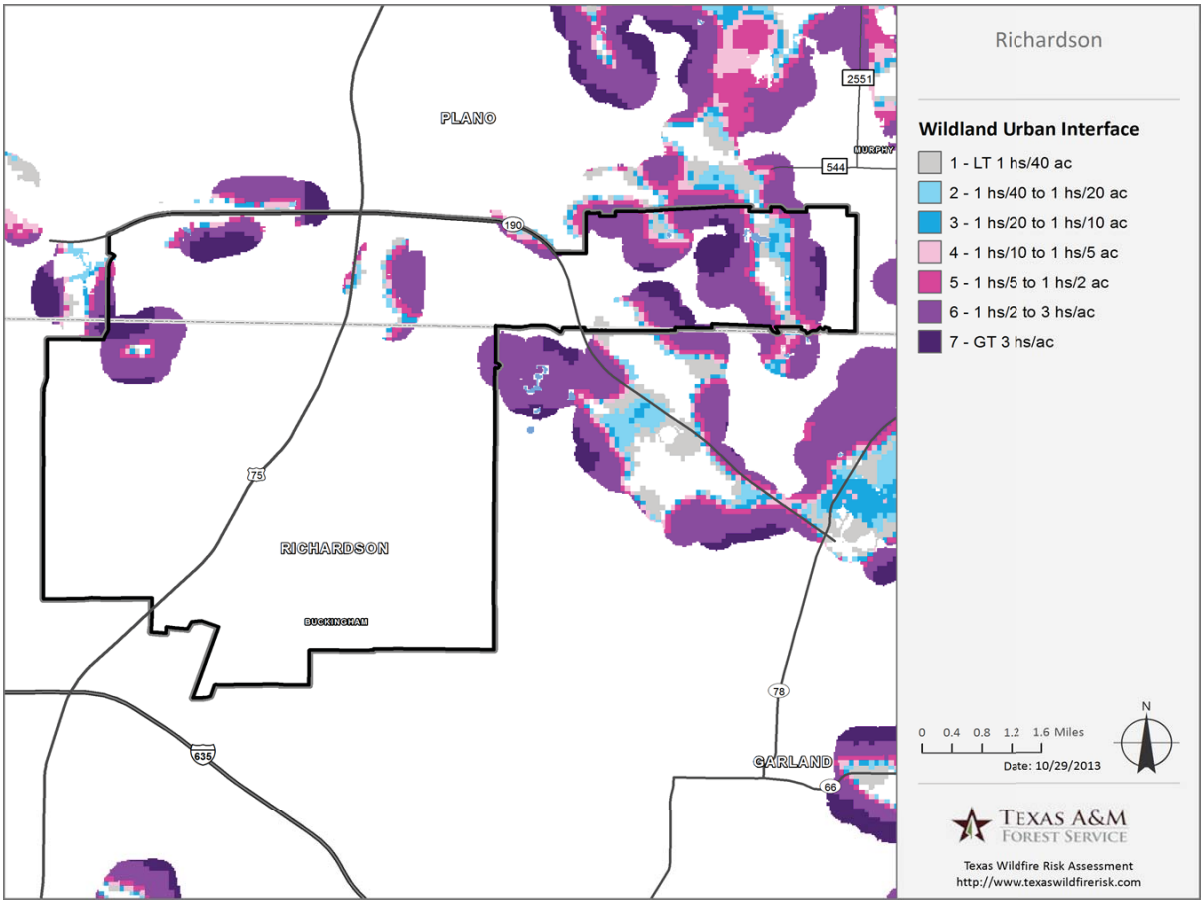
Further detail was provided in the new Flood Insurance Rate Map update for Dallas County which took effect on July 7, 2014 and reduced the flood plan high risk area by 18%. The map below is updated to reflect these Dallas County changes.



Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community. Map COR 2 depicts WUI for the City of Richardson.

Wildfire	
Population	According to the Texas A&M Forest Service an estimated 12,765 people or 12 percent of the total population of the City of Richardson live within the WUI.
Improved Properties	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved properties in the WUI area are exposed to this hazard.
Emergency Facilities	There are three fire station/public safety locations within or near areas identified as low risk from wildfire events based on current geographic information.
Schools	Based on geographic information there are nine schools (including day care centers and private institutions) at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are zero dams, two wastewater treatment facilities, and three water pump stations within or near areas at low risk from wildfire events.

Map COR 2: City of Richardson - Wildland Urban Interface



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the Wildfire Threat for the City of Richardson ranges from Non-Burnable to Low.

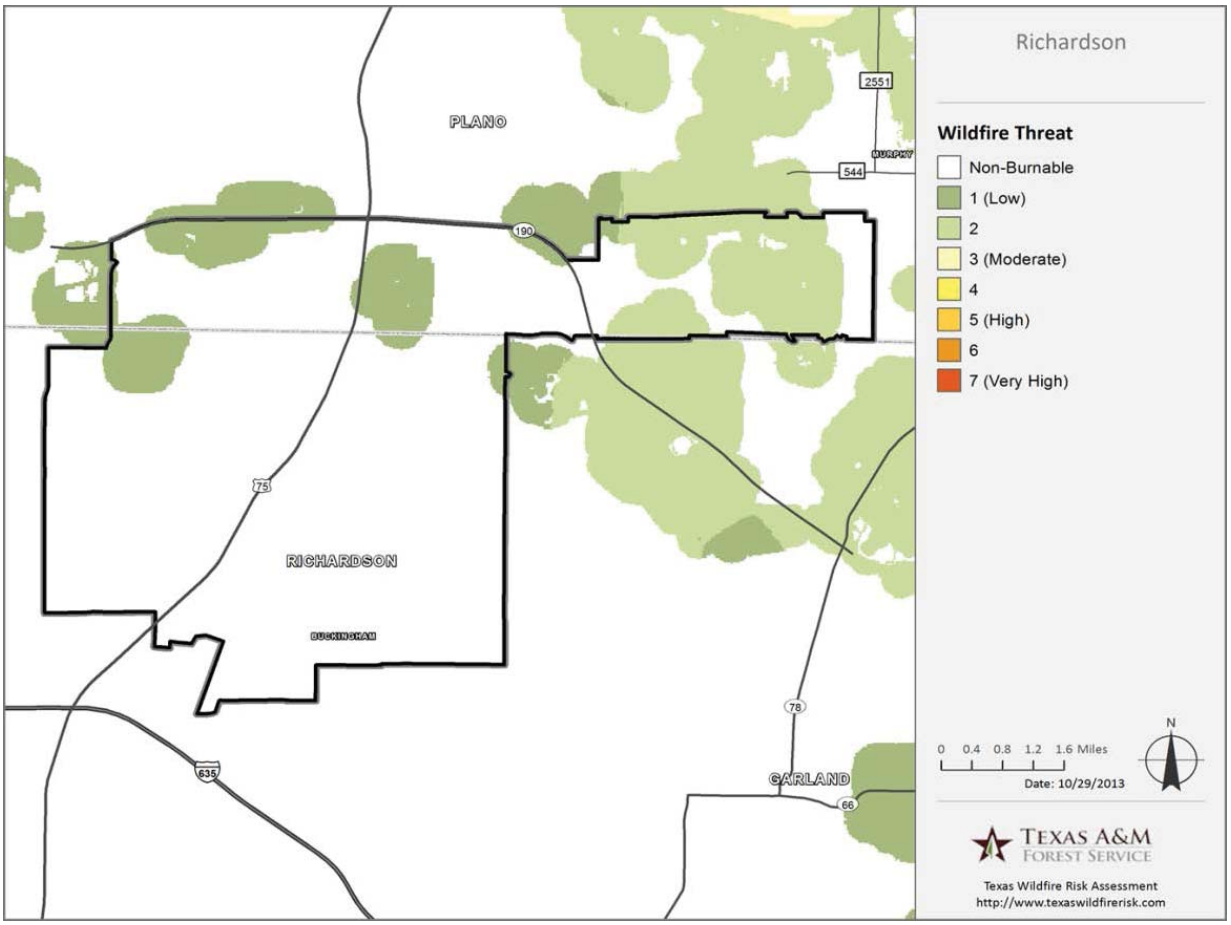
Wildfire Threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

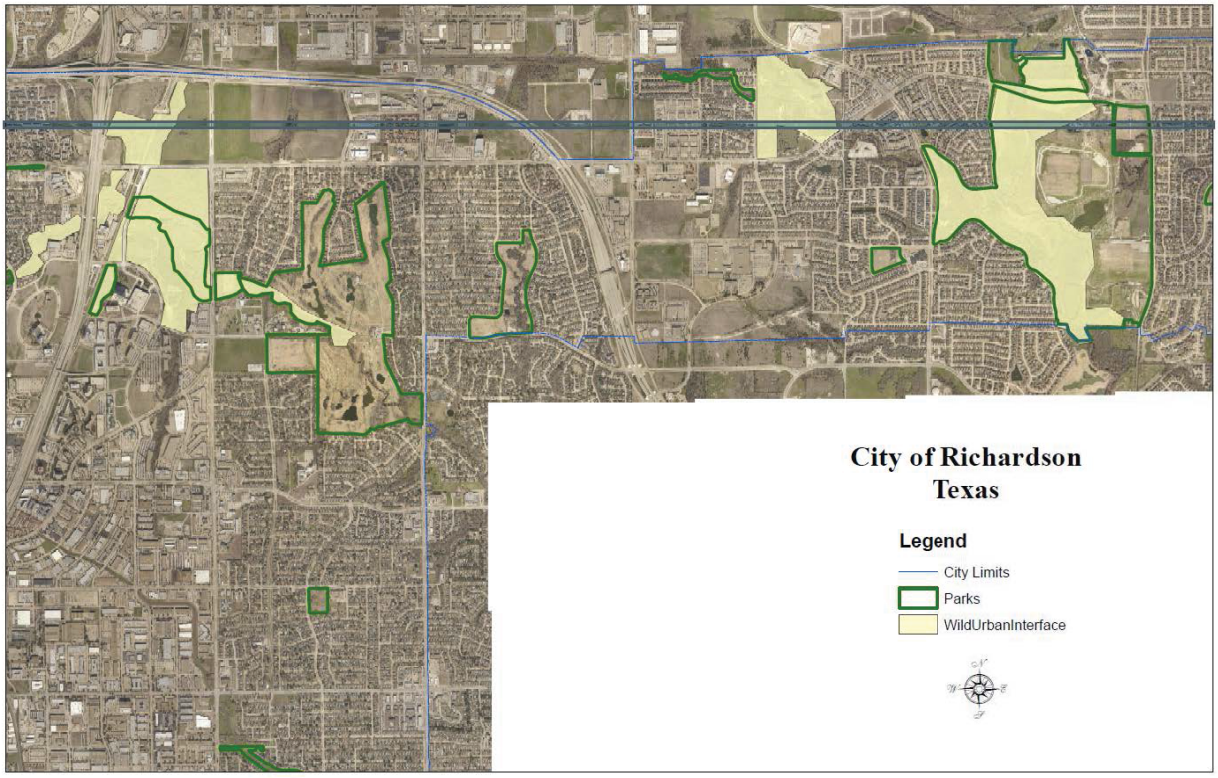
The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map COR 3: City of Richardson Wildfire Threat



City of Richardson has consulted with Fire Department and GIS experts to further evaluate the wildland urban interface and risk of fire. The map below provides additional insight regarding urban fire risk.

Map COR 4: City of Richardson Wild Land Urban Interface



This map affirms Texas A&M Forest Service data map 2 and 3 results regarding the areas of Richardson at risk of wild land fire. Fire experts noted that a Southern or Eastern wind would escalate the risk to the population and structures near Breckinridge Park should a wild fire occur. Additional areas at risk are structures near Sherrill Park Municipal Golf Course and the University of Texas at Dallas (UTD) apartment/campus area and surrounding homes. If impacted by a wildfire, damage to this area would be compounded by Westward or heavy winds out of the South. A high risk scenario would include the winds described above creating a fast moving fire, which would ultimately impact the UTD campus with a Fall 2014 enrollment of 27,000 students, faculty, and staff. The University of Texas at Dallas is a Tier II Research Institution located within the City of Richardson. As a research institution, there are several buildings that contain hazardous chemicals for experiments and research. A wildfire would pose a serious threat to the University and the City of Richardson due to the chemicals located within the campus. There would be a possibility of harsh chemical reactions that could severely affect the population.



Development Change: The recent CityLine development is a dynamic mixed-use project currently under-construction located along the DART Rail at the southeast corner of Highway 75 & the President George Bush Turnpike on approximately 186 acres thus further reducing the threat of urban fire risk in this area (shown near the center of the panhandle area in the map above). A recent rendering of the CityLine Plaza East Entrance is shown above.

UT Dallas has begun breaking ground on a new development project called Northside. This will be a 31-acre mixed-use development including apartments, businesses and plans for a DART Cotton Belt Station. This development will be located on the north side of Synergy Park Boulevard, near Rutford Avenue. The first phase is planned to open in Fall 2016.



Tornado: As detailed in the Dallas County summary of natural hazards, Richardson is located in tornado alley. Though no tornadoes have occurred directly in the City of Richardson, large scale storms such as the event on April 3, 2012 create multiple tornado events in the area and thus can occur within city limits. Additionally, the vast majority (over 90%) of the city is built out thus a tornado event within city limits would have a high likelihood of creating damage and greatly affecting the citizens of Richardson. Increased development such as the CityLine project detailed about continue to increase the population and risk of impact from tornado. The master plan for the CityLine project calls for over 5 million square feet of office space (including State Farm's regional headquarters with over 8,000 employees), over 300,000 square feet of retail space, 2 hotels, over 4,000 Residential Units, and multiple parks & gathering places. Upon completion there will be over 30,000 employees and residents within CityLine.

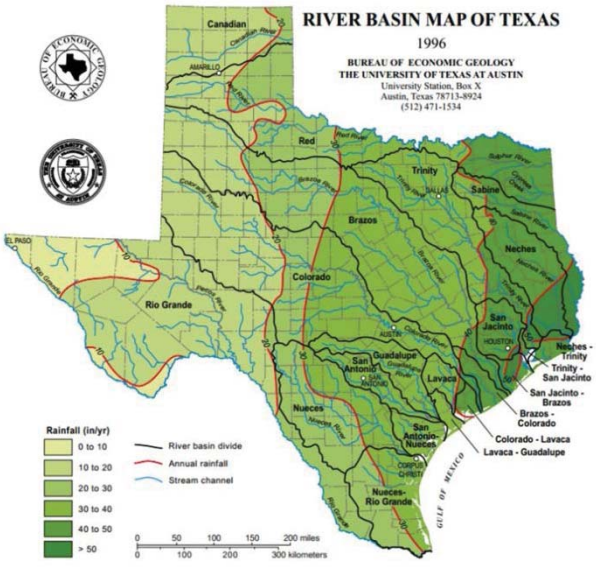
Additionally, UT Dallas houses over 5,000 students on campus in a condensed area. If a tornado event were to occur on campus, it could pose a serious threat to the health and safety of on-campus students.

Richardson is over 90% built out, so any tornado event within city limits has a high probability of affecting the population and causing structural damage.

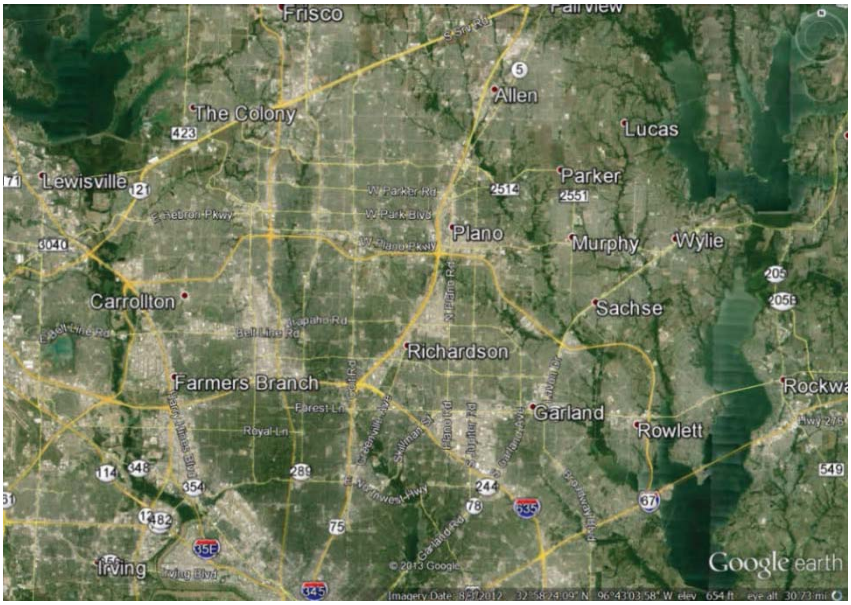
The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. Because of the expected geographical widespread nature of lightning all emergency and critical facilities and infrastructure in City are exposed to this hazard.

Dam and Levee Failure: River Basin Map of Texas shows Richardson to be in the Trinity River Basin. Richardson is not downstream of the major rivers shown.

The River Basin orthophoto from Google Earth is a closer in view, which shows the City of Richardson to be east of Lake Lewisville and west of Lake Lavon. Clearly Richardson is not downstream of either and contains no levees or dams. Additionally, high hazard dams within Dallas County are not located near



Richardson jurisdictional boundaries as shown in Map 5.11 of the Dallas County Hazard Mitigation Action Plan. Based on current data made available to and reviewed by both Dallas County and the City of Richardson, properties within Richardson are not within inundation areas and would not be affected by dam failure. However, Richardson will continue to request data from the U.S. Corps of Engineers and surrounding areas since these dams are not within city limits. Thus, Richardson has evaluated the risk of dam and levee failure to be not prevalent with no documented history or incidence.



Hail: Five hailstorm incidents have been reported .88 inches or greater in size since 2010. Thus, the risk of hail occurrences in the coming years is high. Storms that produce hail and/or high winds are most damaging and can result in numerous broken windows, damaged siding, and even death for those who do not seek shelter. Mitigation measures which have been included with regards to this hazard are warning sirens and public education to encourage action and precautionary measures during weather events which could produce hail. The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. Because of the expected geographical widespread nature of hail all emergency and critical facilities and infrastructure in City are exposed to this hazard.

Wind: Downbursts or microbursts are examples of damaging straight-line winds which can impact the City of Richardson. With respect to the Dallas County area, Richardson is equally vulnerable to the damage risks associated with high winds. Typically, damages associated with individual events are relatively limited. Destructive winds normally occur between October and March. The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. Because of the expected geographical widespread nature of lightning all emergency and critical facilities and infrastructure in City are exposed to this hazard.

Lightning: Richardson has significant exposure to thunderstorms and lightning. Overall, lightning is the most constant and widespread threat to our citizens and property during the

thunderstorm season. The recurrence of lightning is high. Thus, Richardson has included a lightning detection system for parks, pools, and other outdoor areas to mitigate this risk of this hazard. The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. Because of the expected geographical widespread nature of lightning all emergency and critical facilities and infrastructure in City are exposed to this hazard.

Winter Storm: Generally, the winter storm season in Richardson is from late November to mid-March. Residents who are disrupted more severely by severe winter storms include those without sufficient heating systems and those impacted by extended power outages due to falling trees or ice. Most residents do not have backup power sources. Richardson has included a mitigation action item to establish warming centers, which will ensure the safety of residents from extended extreme cold conditions and associated power outages. The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. Because of the expected geographical widespread nature of lightning all emergency and critical facilities and infrastructure in City are exposed to this hazard.

Extreme Heat: Extreme heat combined with high humidity can put Richardson in the Extreme Danger category on the National Weather Service Heat Index scale. Results of extreme heat can also include excessively dry hot conditions that contribute to a high risk of life-threatening heat related illnesses. These effects can be dangerous to those without air conditioners.

The greater effects from an extreme heat event will be felt in areas that have residents over the age of 65. According to 2010 census data, 21.1% of households in Richardson reported one or more people aged 65 or older. Thus, Richardson is more vulnerable to risks associated with extreme heat in comparison with the national average of 13.7% of people aged 65 or older. Elderly residents are more susceptible to heat induced illnesses and may be on a fixed income, creating economic constraints as a result of shortage of resources and high demand.

Drought: A prolonged drought can have a serious economic impact on a community. Increased demand for water and electricity may result in shortages of resources. Moreover, food shortages occur if agricultural production is damaged or destroyed by a loss of crops or livestock. Price increases due to shortages and increased demand would impact Richardson's low income populations and residents with fixed income sources. The entire population and improved properties in the City of Richardson are at risk and vulnerable to this hazard. There are no losses or direct impacts expected on emergency and critical facilities or infrastructure due to drought events.

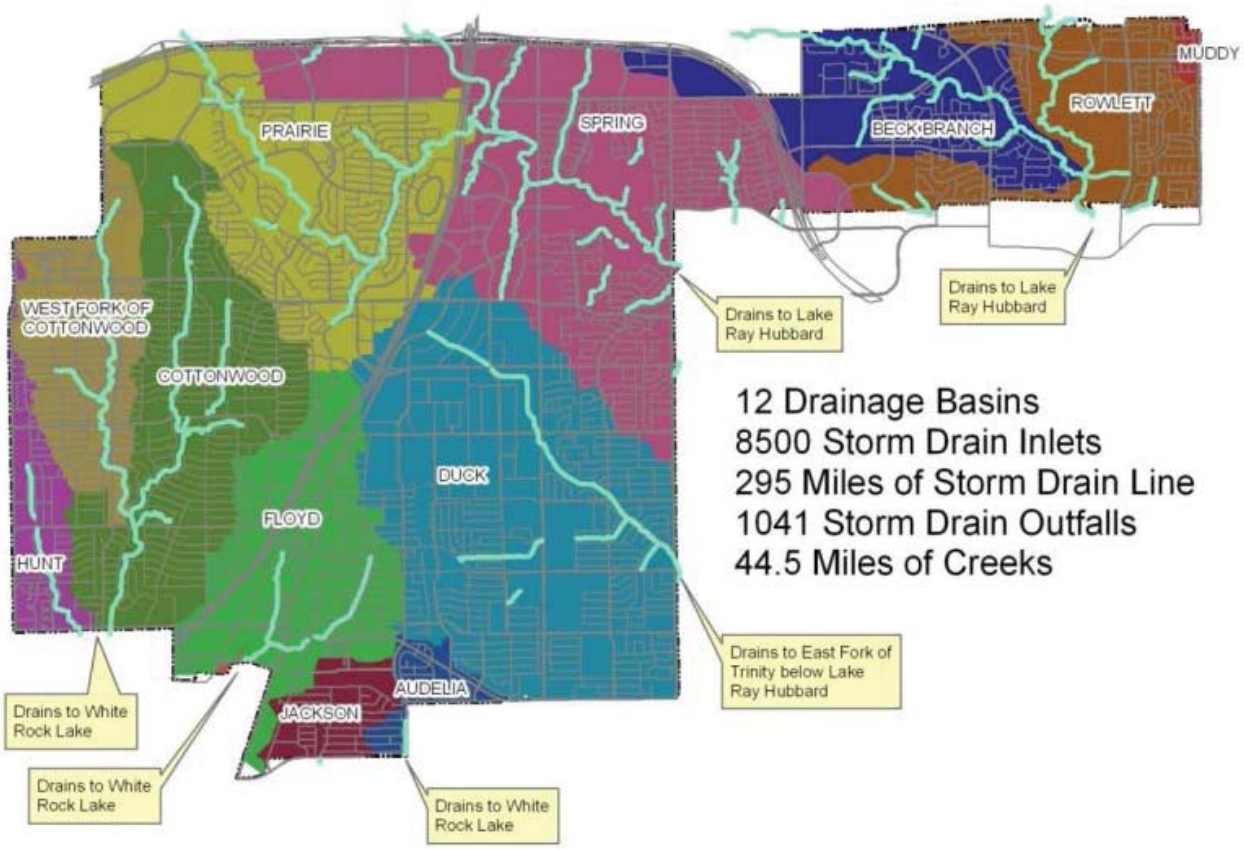
Expansive Soils: Changes in soil volume present a hazard primarily to structures (including roadways) built on top of expansive soils. Extreme wetting and drying cycles accentuate the shrinking and swelling effects in North Central Texas and the Richardson area. As a result, these soils are commonly deemed vertisols due to their distinctive vertical shrink-swell features. One of the best known and classic of these vertisols is the Houston Black, a Blackland Prairie soil that stretches over 2 million acres between the Dallas area and

Houston. Expansive soils may gain or lose up to 75% of its original volume. High plasticity soils are a concern as water can travel along the cracks for several feet in all directions and at the bottom of foundation grade beams. Losses can include structural damage, cracked roadways, and the disruption of pipe and sewer lines. The City of Richardson has a high soil plasticity index. As this hazard develops gradually and over time, data deficiency is a concern. There is a data deficiency on previous occurrences of expansive soil in the City of Richardson; continued research and study will improve data quality and ability to mitigate this hazard.

Earthquake: There are no known active geological faults within Richardson and high magnitude earthquakes are considered a low risk threat. No historical data of earthquakes in the City of Richardson exists.

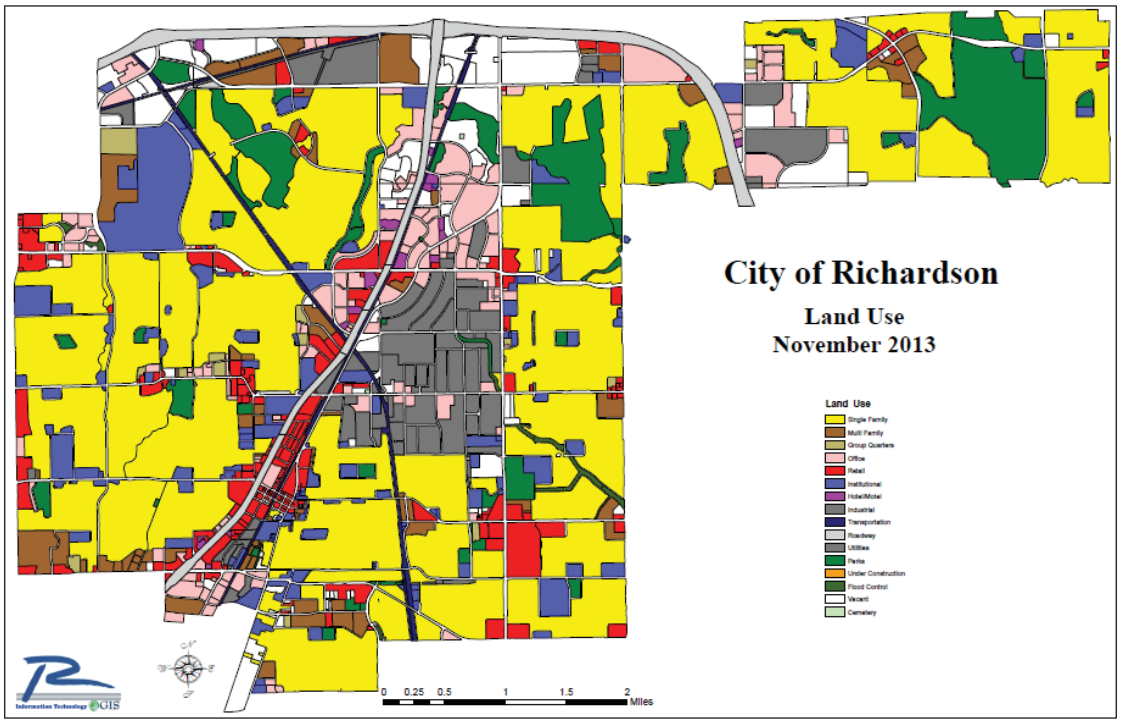
Earthquakes have only been recently recorded in Dallas County. Faults of the Balcones fault system occur in Dallas County and a recent series of earthquakes have occurred along a narrow two mile fault line extending from Lancaster into West Dallas. According to reports from Southern Methodist University (SMU), earthquakes have occurred below layers of sedimentary rock at depths between 4.5 and 7 kilometers. Those depths are considered relatively close to the surface (shallow depth), which helps explain why people as far away as Richardson and Plano feel even some smaller magnitude 2 earthquakes. Due to the recent occurrence, there is currently not a significant amount of data for earthquakes in Dallas County. A data deficiency is being cited for earthquake hazard. More research, data analysis, and study will be completed in the coming years. No injuries, fatalities, or major damage have been recorded as of 2014 within the county or surrounding areas. Refer to each jurisdictional annex for more information about earthquakes occurring in the cities of Dallas and/or Lancaster.

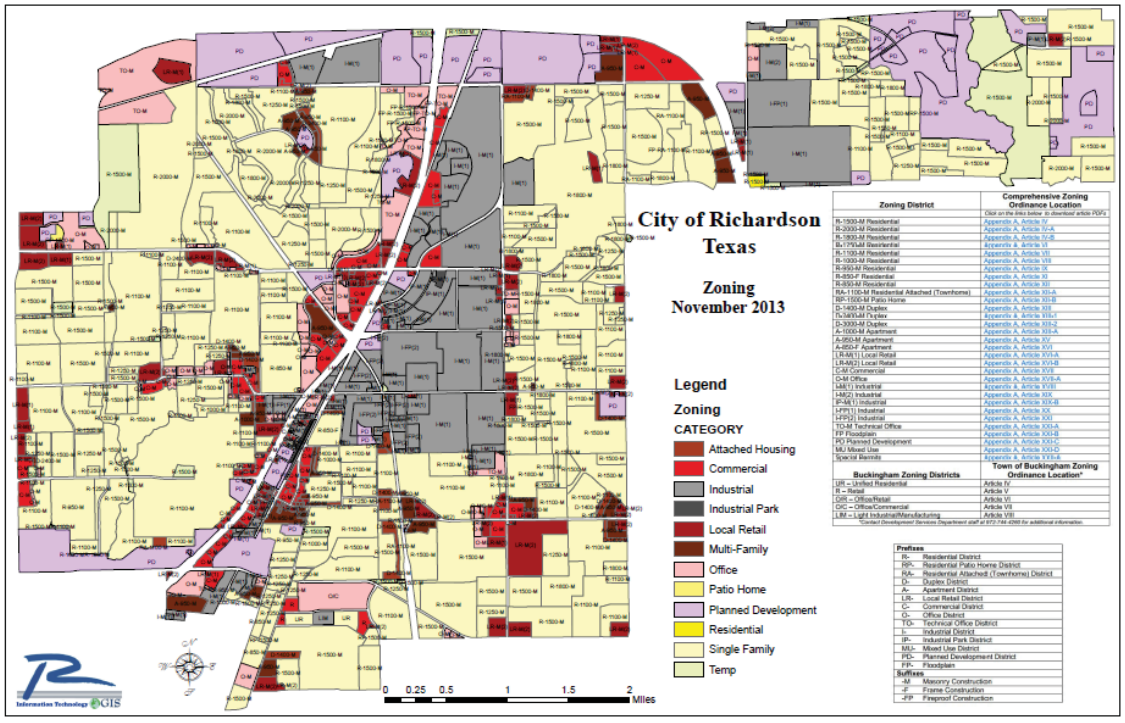
Stream Bank Erosion: The City of Richardson has 44.5 miles of creeks (of which 32 miles are considered streams) which are detailed in the map below. There is currently a data deficiency in Stream Bank Erosion in Dallas County including the City of Richardson. Richardson will conduct stream bank erosion studies and lake condition inventories in an effort to identify and prioritize future drainage utility needs. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.



Vulnerability Assessment

GIS analytics including land use and zoning provide a visual representation of local risk and proximity in the City of Richardson. Flood control, industrial, and areas under construction are all land use considerations and inputs of the City of Richardson.





Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan Update utilizing the results of both assessments as well as reviewing the goals and objectives that were included

in the 2009 HazMAP. These strategies are similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Improve early warning systems

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Richardson

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of action items identified for the HazMAP Update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items are as follows:

City of Richardson	**Implement the Texas Storm Safe Room Rebate Program to provide safe rooms for the residents of the City of Richardson**
Objective(s) Addressed	1-A, 1-B, and 5-B
Hazard(s) Addressed	Tornado, High Winds
Priority (High, Medium, Low):	High
Estimated Cost	50% of cost (up to $3,000) per shelter. Number of shelters to be determined by award.
Potential Funding Sources	State and Federal Grant Programs
Lead Agency/Department Responsible	Community Services and Office of Emergency Management
Implementation Schedule	2 years from the date of award

City of Richardson	**Lightning Detection System: Increase awareness and warning time for outdoor areas such as parks and pools**
Objective(s) Addressed	2-C and 5-B
Hazard(s) Addressed	Lightning
Priority (High, Medium, Low):	Medium
Estimated Cost	$11,000 per unit
Potential Funding Sources	State and Federal Grant Programs
Lead Agency/Department Responsible	Office of Emergency Management, Parks and Recreation, and Public Services
Implementation Schedule	2 years from the date of award

City of Richardson	**Purchase generators for critical facilities to mitigate against hazards that can affect the power grid**
Objective(s) Addressed	2-A, 2-B and 5-C
Hazard(s) Addressed	Tornado, Winter Storms, Extreme Temperature, High Winds, Lightning, Hail, wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	$30,000
Potential Funding Sources	State and Federal Grant Programs
Lead Agency/Department Responsible	Office of Emergency Management
Implementation Schedule	2 years from the date of award

City of Richardson	Natural Hazard Education Campaign: Create and distribute water bill mailers, magnet books, and printed materials which include mitigation techniques, hazard information, and the protection of property referencing recommended FEMA guidelines
Objective(s) Addressed	3-A, 3-B, 3-C, 3-D, 4-A, 5-A, and 5-B
Hazard(s) Addressed	Tornado, Winter Storms, Drought, Urban Fire, Extreme Temperature, High Winds, Lightning, Hail, Flooding, Wildfire, Expansive Soils, Earthquake, Stream, Bank Erosion
Priority (High, Medium, Low):	High
Estimated Cost	$13,000
Potential Funding Sources	Office of Emergency Management General Operating Budget
Lead Agency/Department Responsible	Office of Emergency Management
Implementation Schedule	2015 - 2020 Budget Years

City of Richardson	Procure Emergency Notification System that will provide the public with advance warning on a hazard as well as keep the public informed on the status of such a hazard to mitigate the loss of life and property damage.
Objective(s) Addressed	2-C and 5-B
Hazard(s) Addressed	Tornado, Winter Storms, Drought, Urban Fire, Extreme Temperature, High Winds, Lightning, Hail, Flooding, Wildfire
Priority (High, Medium, Low):	High
Estimated Cost	$1,650
Potential Funding Sources	City of Richardson General Operating Budget
Lead Agency/Department Responsible	Office of Emergency Management
Implementation Schedule	Annual procurement, 2015 – 2020 Budget Years

City of Richardson	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County & City Budget
Lead Agency/Department Responsible	Office of Emergency Management, Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.

City of Richardson	**Retrofit public and critical facilities and equipment to protect critical infrastructure and mitigate incidents. This can include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, window shutters, or interlocking roof shingles.**
Objective(s) Addressed	2-B and 5-B
Hazard(s) Addressed	Tornado, Winter Storms, Drought, Urban Fire, Extreme Temperature, High Winds, Lightning, Hail, Flooding, Wildfire, Expansive Soils, Earthquake
Priority (High, Medium, Low):	High
Estimated Cost	$210,000
Potential Funding Sources	State and Federal Grant Programs
Lead Agency/Department Responsible	Office of Emergency Management
Implementation Schedule	2 years from the date of award

City of Richardson	**Land Use Program: Develop and develop special use parks and green belt areas as flooding mitigation strategies, further prohibiting development in the flood plain**
Objective(s) Addressed	1-C, 2- A, and 5-C
Hazard(s) Addressed	Flooding and Stream Bank Erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	Staff Time
Potential Funding Sources	City of Richardson General Operating Budget
Lead Agency/Department Responsible	Development Services and Parks and Recreation
Implementation Schedule	Newly awarded projects are completed within each fiscal year (Annually beginning in October)

City of Richardson	**Richardson Stream Bank Erosion and Expansive Soils Study: Based on data deficiency identified in this annex conducting a study to identify the vulnerability to stream bank erosion identify cost-effective action items**
Objective(s) Addressed	1-A, 2-A 5-A, and 5-B
Hazard(s) Addressed	Stream Bank Erosion, Flooding, Expansive Soils
Priority (High, Medium, Low):	Low
Estimated Cost	$30,000
Potential Funding Sources	State and Federal Grant Programs
Lead Agency/Department Responsible	Development Services and Capital Projects
Implementation Schedule	2 years from the date of award

City of Richardson Action Item	Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities: The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire where applicable.
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective

Plan Maintenance

The City of Richardson's Office of Emergency Management (OEM) will be responsible for leading the Hazard Mitigation Planning Team and ensuring that this plan is monitored, evaluated, maintained and updated. OEM will continue coordination through the Richardson HMPT with annual meetings to review the mitigation actions set forth in this plan and discuss progress. Items to be updated/added in future revisions will be vetted, discussed, and implemented.

OEM will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Richardson City Council. Emergency Operations Center will also focus on evaluating the Plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Richardson, legal changes, and other events may trigger a meeting of the Richardson Hazard Mitigation Planning Team.

As required by the Disaster Mitigation Act of 2000, the City of Richardson is committed to reviewing this plan annually and updating the full plan annex with county, state, and federal partners at least once every five years. The public will continue to be involved as appropriate and required during the monitoring, evaluation, and update process, including opportunities for input prior to adoption of updates. Overall, the City of Richardson values our relationships with citizens, stakeholders, and private partnerships and will continue to grow and foster these efforts.

Plan Incorporation

In developing this plan, the City of Richardson referenced various city documents including the comprehensive plan, future land use, zoning, thoroughfare and emergency operations plans, city ordinances, policies and regulations during the mitigation planning process. The Hazard Mitigation Team will continue to use these documents as well as state and federal documents as guidance in determining gaps in the city's capabilities, as well as developing goals and mitigation action items in response to the vulnerability assessment for future updates. The table Planning Integration Table below demonstrates how this plan will be used along with other documents and meetings in the update process.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Richardson	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Jurisdiction Appendix

- **a.** Hazard Identification and Risk Assessment (HIRA) Matrix
- **b.** Support Documentation: Official Letters and Outreach Materials
- **c.** Survey Reponses

Appendix COR A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Richardson
Hazard Identification and Risk Assessment (HIRA)
Date: 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Tornado	4	4	1	4	2	1	1	4	66.66%
Winter Storms	2	2	1	2	2	1	1	4	50.00%
Drought	2	2	1	2	2	1	1	4	50.00%
High Winds	4	4	2	2	2	1	2	5	40.00%
Extreme Temperatures/Heat	4	4	2	2	2	1	2	5	40.00%
Urban Fire	4	4	2	2	2	1	2	5	40.00%
Lightning	4	4	1	1	1	1	1	3	33.33%
Hail	4	4	1	1	1	1	1	3	30.00%
Flooding	1	1	1	1	1	1	2	4	25.00%
Wildfire	1	1	1	1	1	1	2	4	25.00%
Stream Bank Erosion	1	1	1	1	1	1	2	4	25.00%
Expansive Soils	1	1	1	1	1	1	2	4	25.00%
Earthquake	1	1	1	1	1	2	2	5	20.00%
Levee/Dam Failure	1	1	1	1	1	2	2	5	20.00%

NB: This City of Richardson HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix COR B-1: Support Documentation

July 25, 2013

Texas Division of Emergency Management
Mitigation Division, Mitigation Section Administrator
1033 La Posada Drive
Austin, TX 78752-6832

Dear Mr. Pekar,

The City of Richardson, Office of Emergency Management (OEM) has begun updating our Hazard Mitigation Action Plan (HazMAP), which will expire on October 9, 2013 and encompasses only the City of Richardson. For the next mitigation plan update, Richardson OEM is partnering with Dallas County and 10 other participating jurisdictions to become part of the Dallas County Local Mitigation Strategy (DaLMS).

The timeline for the DaLMS will exceed the City of Richardson's HazMAP expiration and is scheduled for submission in December of 2013. Extending Richardson's planning time by this short period will promote coordination, advance cohesive planning efforts, foster communication between Richardson and participating jurisdictions, and ultimately result in an improved countywide mitigation plan.

If you have additional questions, concerns, or need additional documentation prior to the submission of the DaLMS, please contact me as soon as possible.

Sincerely,

Mistie D. Gardner

Mistie Gardner
Emergency Management Coordinator
mistie.gardner@cor.gov
214-808-6184 (mobile)

Office of Emergency Management
P.O. Box 831078
Richardson, TX
75083-1078
972-744-4215
Fax 972-744-5803
www.cor.net/em

December 17, 2013

Texas Water Development Board
Flood Mitigation Planning
1700 North Congress, P.O. Box 13231
Austin, Texas 78711-3231

Dear Mr. Ortiz,

The City of Richardson, Office of Emergency Management (OEM) is in the process of updating our confidential Hazard Mitigation Action Plan (HazMAP). A portion of the data that needed is raw National Flood Insurance Program (NFIP) for citizens who have flood insurance our area.

Applicable zip codes for the City of Richardson are 75081, 75082, and 75083. This data will be compiled and/or mapped and will ultimately result in an improved mitigation plan.

If you have additional questions or concerns, please contact me as soon as possible.

Sincerely,

Mistie D. Gardner

Mistie Gardner
Emergency Management Coordinator
mistie.gardner@cor.gov
214-808-6184 (mobile)

Office of Emergency Management
P.O. Box 831078
Richardson, TX
75083-1078
972-744-4215
Fax 972-744-5803
www.cor.net/em

PUBLIC NOTICE

CITY OF RICHARDSON
OFFICE OF EMERGENCY MANAGEMENT
LOCAL MITIGATION PLAN UPDATE

CITIZEN INPUT NEEDED

The Office of Emergency Management (OEM) is coordinating with Dallas County Office of Homeland Security and Emergency Management (HSEM) on an update to the Dallas County Hazard Mitigation Action Plan (HazMAP). The purpose of this Plan Update is to reduce the vulnerability of people and property in the planning area to the impacts of hazards and to become eligible for mitigation funding programs from FEMA.

A Hazard Mitigation Planning Team comprised of representatives from Dallas County and jurisdictions within Dallas County is currently developing an update to the comprehensive Dallas County Multi-jurisdictional Hazard Mitigation Action Plan with a strategy to meet the FEMA requirements to provide updated hazard mitigation plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants.

One of the key components of a hazard mitigation action plan is public input during the planning process. The Hazard Mitigation Planning Team is seeking your input and comments on hazards facing Richardson and requesting your opinions on the types of activities that should be considered to reduce future impacts.

SURVEY PARTICIPATION

If you would like to participate and provide your input to Dallas County and the City of Richardson, please go to http://www.surveymonkey.com/s/NC6G7ZD to complete a brief survey.

The City of Richardson Office of Emergency Management requests public input as the planning process continues and will post meeting information through available resources and on the City of Richardson, Office of Emergency Management website at: http://www.cor.net/hazard

POSTED JUNE 11, 2013 BY 5:00 P.M

Mistie D. Gardner

MISTIE GARDNER, EMERGENCY MANAGEMENT COORDINATOR

PLEASE CONTACT THE OFFICE OF EMERGENCY MANAGEMENT AT 972-744-4215 IF YOU HAVE ANY QUESTIONS.

NEWS LIST

Public Input Sought on Hazard Mitigation Action Plan Update

Posted Date: 6/12/2013 7:30 AM

Richardson's Office of Emergency Management and the Dallas County Office of Homeland Security and Emergency Management are seeking public input on an update to the Dallas County Hazard Mitigation Action Plan.

Residents may complete a brief online survey to provide input about the types of activities that should be considered to reduce future impacts of hazards.

The Federal Emergency Management Agency (FEMA) requires hazard mitigation plans to be updated every five years. The purpose of the plan update is to reduce the vulnerability of people and property in the planning area to the impacts of hazards. Maintaining a current plan also allows agencies to be eligible for mitigation funding programs from FEMA. Public input is a key component to the planning process.

More information about the Hazard Mitigation Action Plan Update may be found at www.cor.net/hazard. For additional information, contact the Office of Emergency Management at 972-744-4215.

City of Richardson Citizens Information Services – Newspaper Clippings

Date 6/13/13 Dallas Morning News X D.M.N./NeighborsGo ___ Collin County Business Press ___

Plano Star Courier ___ Dallas Business Journal ___ Wall Street Journal ___

RICHARDSON

Public input sought for hazard mitigation plan

The city's Office of Emergency Management, along with the Dallas County Office of Homeland Security and Emergency Management, is requesting public input on the Dallas County Hazard Mitigation Action Plan. An online survey at svy.mk/1I9JCIN is available for residents to discuss how to reduce future impacts of hazards.

Mitigation plans are required to be updated every five years to reduce the vulnerability of people and property in the planning area.

For more information on the update, visit cor.net/hazard, or call the Office of Emergency Management at 972-744-4215.

Taylor Adams

10/4/13 Public input sought for hazard mitigation plan in Richardson

US News

US News in real time

17:20:23 EDT

Home Business Politics Entertainment Lifestyle Sport World News Showbiz All... total news: 1,226,178

Search news Search + Filter

News Widget for Webmasters

Follow me on twitter

Public input sought for hazard mitigation plan in Richardson

Prepare for an Emergency
www.QuakeKare.com
Prepare for any emergency. Quality supplies at affordable prices. Buy!

Public input sought for hazard mitigation plan in Richardson Richardson's Office of Emergency Management, along with the Dallas County Office of Homeland Security and Emergency Management, are requesting public input on the Dallas County Hazard Mitigation Action Plan.
Residents can taken an online survey at svy.mk/119JC1N to discuss how to reduce future impacts of hazards.
Mitigation plans are required to be updated every five years. The purpose is to reduce the vulnerability of people and... read more

10 July 2013 in Regional, Views: 3
Source: Dallas News

Most read news

- 18:12 Camarena-Williams accepts 6-month ban
- 18:06 Friday Night Live Week 6: South Florida high school football,...
- 18:00 MLS Preview from The Sports Network (ET)
- 18:01 Shutdown poses political problems for some California Republicans
- 18:01 Brazil electoral court rules against new party
- 17:58 Canned good sculptures at NorthPark Center to benefit food bank
- 17:56 Marshall adds spark to Deacons' chances
- 17:53 Falcons trying to fill LB holes against the Jets
- 17:47 Helena Bonham Carter steps out, slams Tim Burton cheating claims:...
- 17:30 Patrick, Stenhouse join up for country music video

10/4/13 Public input sought for hazard mitigation plan in Richardson | Dallas Morning News - The Dallas Morning News

Ison

The Dallas Morning News

By TAYLOR ADAMS
DANSER
NEIGHBORSGO

Published: July 10, 2013 12:28 PM

Richardson's Office of Emergency Management, along with the Dallas County Office of Homeland Security and Emergency Management, are requesting public input on the Dallas County Hazard Mitigation Action Plan.

Residents can taken an online survey at svy.mk/119JC1N to discuss how to reduce future impacts of hazards.

Mitigation plans are required to be updated every five years. The purpose is to reduce the vulnerability of people and property in the planning area to the impacts of hazards.

For more information on the update, visit cor.net/hazard, or call the city's Office of Emergency Management at 972-744-4215.



10/4/13 City of Richardson, TX : Hazard Mitigation Plan

HAZARD MITIGATION PLAN

The Office of Emergency Management (OEM) is coordinating with Dallas County Office of Homeland Security and Emergency Management (HSEM) on an update to the Dallas County Hazard Mitigation Action Plan (HazMAP). The purpose of this Plan Update is to reduce the vulnerability of people and property in the planning area to the impacts of hazards and to become eligible for mitigation funding programs from FEMA.

A Hazard Mitigation Planning Team comprised of representatives from Dallas County and jurisdictions within Dallas County is currently developing an update to the comprehensive Dallas County Multi-jurisdictional Hazard Mitigation Action Plan with a strategy to meet the FEMA requirements to provide updated hazard mitigation plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants.

One of the key components of a hazard mitigation action plan is public input during the planning process.



The Hazard Mitigation Planning Team is seeking your input and comments on hazards facing Richardson and requesting your opinions on the types of activities that should be considered to reduce future impacts.

Please take a few moments to complete a survey.

Public Announcements:

- Request for Public Input for Emergency Management Hazard Mitigation Plan

HAZARD MITIGATION PLAN

The Office of Emergency Management (OEM) is coordinating with Dallas County Office of Homeland Security and Emergency Management (HSEM) on an update to the Dallas County Hazard Mitigation Action Plan (HazMAP). The purpose of this Plan Update is to reduce the vulnerability of people and property in the planning area to the impacts of hazards and to become eligible for mitigation funding programs from FEMA.

A Hazard Mitigation Planning Team comprised of representatives from Dallas County and jurisdictions within Dallas County is currently developing an update to the comprehensive Dallas County Multi-jurisdictional Hazard Mitigation Action Plan with a strategy to meet the FEMA requirements to provide updated hazard mitigation plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants.

A of the key component of a hazard mitigation action plan update is public input throughout the planning process.

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.



Click the links below to review these documents:

Draft- Dallas County Hazard Mitigation Action Plan (HazMAP) Update 2013

Draft- City of Richardson Annex

This review period will give the public the opportunity to review the draft and make comments regarding the draft plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft plan. Any comments or suggestions can be emailed to Michael Gaciri at OSEMPlanning@dallascounty.org

You may also print, fill out and forward below document to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202
Public Comment Form

The plans will be available for public comment until January 6, 2014. All comments received by this date will be reviewed and considered.

OFFICE OF EMERGENCY MANAGEMENT

Hazard Mitigation Plan Update

Richardson's Office of Emergency Management and the Dallas County Office of Homeland Security and Emergency Management are seeking public input on the final draft of an update to the Dallas County Hazard Mitigation Plan.

The Federal Emergency Management Agency (FEMA) requires hazard mitigation plans to be updated every five years and public input is a key component to the planning process. The purpose of the plan update is to reduce the vulnerability of people and property in the community to the impacts of hazards. Maintaining a current plan also allows agencies to be eligible for grant funding from FEMA.

The Dallas County Hazard Mitigation Plan and City of Richardson Annex will be available for public comment until January 6, 2014.

To view the plan and to submit comments, go to cor.net/hazard.

Winter Weather Safety Tips

Plan for extremely cold weather every winter- it's always a possibility. Be prepared for winter weather before it strikes!

- TURN OFF SPRINKLER SYSTEMS, not only will this prevent damage to your system from freezing water, it can prevent hazardous travel on roadways.
- Check your heating source, make sure it's working properly and well ventilated.
- Test smoke and carbon monoxide detectors and replace batteries.
- Keep supplies of water and food on hand.
- Avoid driving on overpasses and bridges- they often freeze more quickly than roads.
- Create a Winter Weather Kit by visiting: www.ready.gov/winter-weather
- Winterize your pipes. Keep faucets dripping when the temperature drops below freezing.
- Ensure the well-being of your pets by providing plenty of food, water, and shelter. Move outdoor cages and pet enclosures away from windows when possible.
- Keep trees and other foliage trimmed and away from power lines.
- DURING POWER OUTAGES, leave on your porch light to let working crews know when power has been restored and only one light inside to help reduce initial demand once power is restored.
- Contact ONCOR to report a power outage by phone at 888-313-4747 or visit the ONCOR website.

Build a Kit, Make a Plan, Get Involved

Hazard Mitigation Plan Update

Richardson's Office of Emergency Management and the Dallas County Office of Homeland Security and Emergency Management are seeking public input on the final draft of an update to the Dallas County Hazard Mitigation Plan.

The Federal Emergency Management Agency (FEMA) requires hazard mitigation plans to be updated every five years and public input is a key component to the planning process. The purpose of the plan update is to reduce the vulnerability of people and property in the community to the impacts of hazards. Maintaining a current plan also allows agencies to be eligible for grant funding from FEMA.

The Dallas County Hazard Mitigation Plan and City of Richardson Annex will be available for public comment until Jan. 6, 2014.

To view the plan and to submit comments, go to cor.net/hazard.

PUBLIC NOTICE

CITY OF RICHARDSON
OFFICE OF EMERGENCY MANAGEMENT
LOCAL MIGITATION PLAN UPDATE

CITIZEN INPUT NEEDED

The Office of Emergency Management (OEM) is coordinating with the Dallas County Office of Homeland Security and Emergency Management (HSEM) on an update to the Dallas County Hazard Mitigation Plan. The purpose of this Plan Update is to reduce the vulnerability of people and property in the planning area to the impacts of hazards and to become eligible for mitigation funding programs from FEMA.

A Hazard Mitigation Planning Team comprised of representatives from Dallas County and jurisdiction subject matter experts within Dallas County is currently developing an update to the comprehensive Dallas County Multi-jurisdictional Hazard Mitigation Plan with a strategy to meet the FEMA requirements to provide updated hazard mitigation plans every 5 years in order to maintain eligibility for certain types of federal Hazard Mitigation Assistance Grants.

One of the key components of a hazard mitigation plan is public input during the planning process. The Hazard Mitigation Planning Team is seeking your input and comments on the latest plan draft prior to submission to the state and FEMA.

SURVEY PARTICIPATION

To participate and provide your input to Dallas County and the City of Richardson, please go to http://www.cor.net/hazard. Plans will be available for public comment until January 6, 2014.

POSTED DECEMBER 23, 2013 BY 5:00PM

Mistie D. Gardner

MISTIE GARDNER, EMERGENCY MANAGEMENT COORDINATOR

PLEASE CONTACT THE OFFICE OF EMERGENCY MANAGEMENT AT 972-744-4215 IF YOU HAVE ANY QUESTIONS.

Dallas County Mitigation Plan- Richardson Annex
Alisha Gimbel to: carriel, joseph.parks, jlane, kstone, jshaw 04/13/2015 06:24 PM
Cc: Mistie Gardner, Scott Greeson

Hello All,

Richardson is seeking input from local partners, transportation entities, and independent school districts on the Richardson Annex of the Dallas County Hazard Mitigation Action Plan. As our neighbors, partners, and since PISD represents the Collin County portion of Richardson, we would love to have your input and feedback on this plan.

Though the overall Dallas County plan is over 1,400 pages, in consideration of your time I have enclosed the Richardson Annex portion as an attachment below.

NEW EDITS_City of Richardson- DaLMS Annex_April 2015_v3.docx
To view the full Dallas County plan, feel free to visit our website at:
http://www.cor.net/index.aspx?page=1821

Please provide your comments for improvement by close of business **Monday, April 20, 2015**. Thank you for your consideration and have a great week!

Alisha Gimbel, ABCP
Preparedness and Mitigation Coordinator
City of Richardson
1621 E. Lookout Drive
Richardson, TX 75082
(972)744-0902
(214)544-5879 (c)

Dallas County Mitigation Plan- Richardson Annex
Alisha Gimbel to: luther.robertson 04/13/2015 06:27 PM
Cc: Mistie Gardner, Scott Greeson

Luther,

Richardson is seeking input from local partners and independent school districts on the Richardson Annex of the Dallas County Hazard Mitigation Action Plan. We would love to have your input and feedback on this plan.

Though the overall Dallas County plan is over 1,400 pages, in consideration of your time I have enclosed the Richardson Annex portion as an attachment below.

NEW EDITS_City of Richardson- DaLMS Annex_April 2015_v3.docx
To view the full Dallas County plan, feel free to visit our website at:
http://www.cor.net/index.aspx?page=1821

Please provide your comments for improvement by close of business **Monday, April 20, 2015**. Thank you for your consideration and have a great week!

Alisha Gimbel, ABCP
Preparedness and Mitigation Coordinator
City of Richardson
1621 E. Lookout Drive
Richardson, TX 75082
(972)744-0902
(214)544-5879 (c)

Dallas County Mitigation Plan- Richardson Annex
Alisha Gimbel to: mrivas, smartin, jkelly 04/13/2015 06:30 PM
Cc: Mistie Gardner, Scott Greeson

Garland Friends,

Richardson is seeking input from local partners on the Richardson Annex of the Dallas County Hazard Mitigation Action Plan. We would love to have your input and feedback on this plan.

Though the overall Dallas County plan is over 1,400 pages, in consideration of your time I have enclosed the Richardson Annex portion as an attachment below.

NEW EDITS_City of Richardson- DaLMS Annex_April 2015_v3.docx
To view the full Dallas County plan, feel free to visit our website at:
http://www.cor.net/index.aspx?page=1821

Please provide your comments for improvement by close of business **Monday, April 20, 2015**. Thank you for your consideration and have a great week!

Alisha Gimbel, ABCP
Preparedness and Mitigation Coordinator
City of Richardson
1621 E. Lookout Drive
Richardson, TX 75082
(972)744-0902
(214)544-5879 (c)

Dallas County Mitigation Plan- Richardson Annex
Alisha Gimbel to: Mariah.Armitage, Angela.Dees 04/14/2015 09:38 AM

Mariah and Angela,

Richardson is seeking input from local partners on the Richardson Annex of the Dallas County Hazard Mitigation Action Plan. We would love to have your input and feedback on this plan.

Though the overall Dallas County plan is over 1,400 pages, in consideration of your time I have enclosed the Richardson Annex portion as an attachment below.

NEW EDITS_City of Richardson- DaLMS Annex_April 2015_v3.docx
To view the full Dallas County plan, feel free to visit our website at:
http://www.cor.net/index.aspx?page=1821

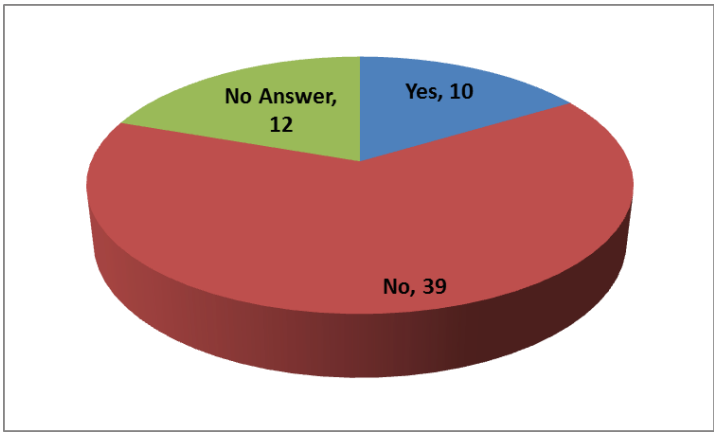
Let me know if you need any additional language or can add more specifics from UTD as part of our HMPT. Please provide your comments for improvement by close of business **Monday, April 20, 2015.** Thank you for your consideration and have a great week!

Alisha Gimbel, ABCP
Preparedness and Mitigation Coordinator
City of Richardson
1621 E. Lookout Drive
Richardson, TX 75082
(972)744-0902
(214)544-5879 (c)

Appendix C-1: City of Richardson Survey Responses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ City of Richardson (61 responses)

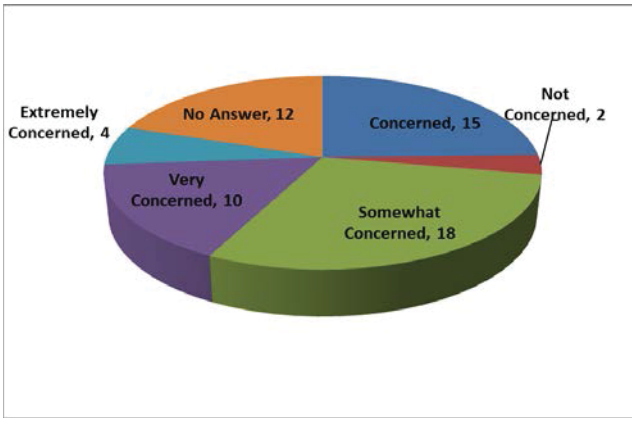
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

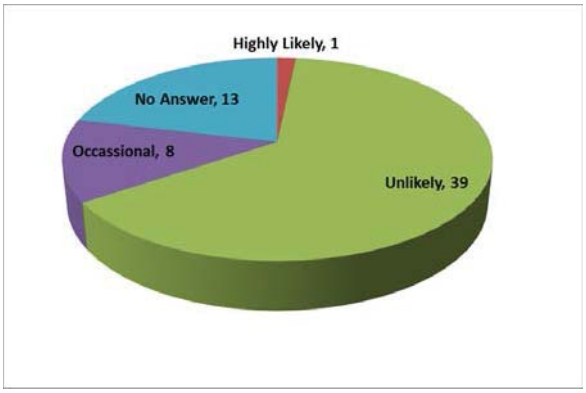
- ✓ 4 ft. snow in 24hrs, 1 mile wide tornado, hurricane and baseball sized hail
- ✓ Hail; 4/3/2003
- ✓ Hurricane - Florida, Tornado - Texas, Earthquake - Hawaii
- ✓ Hurricane Ike Hurricane Katrina Ridgecrest, CA Earthquake (1995) 9/11 (New York)
- ✓ Large hail Amarillo 1970s
- ✓ Tornado went through Topeka, Kansas, 1966
- ✓ Toxic aerial sprayings from the government on my backyard.

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

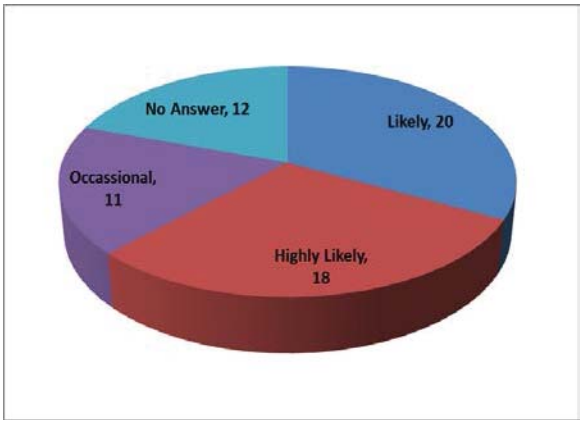


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

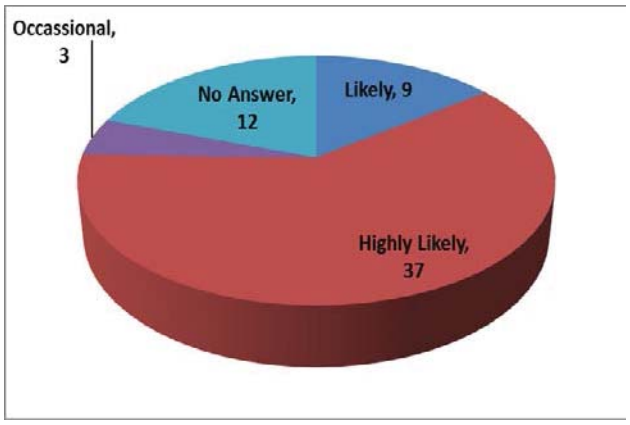
   a. Earthquake



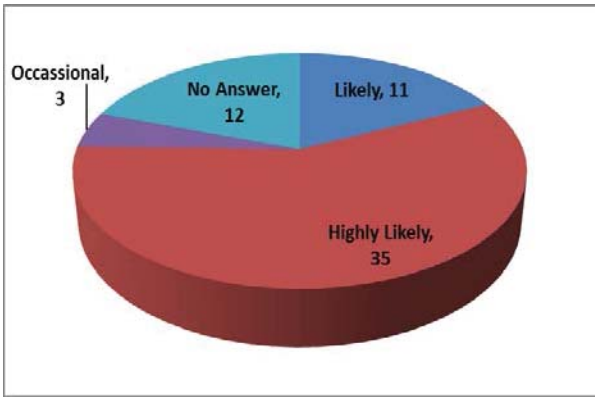
   b. Tornado



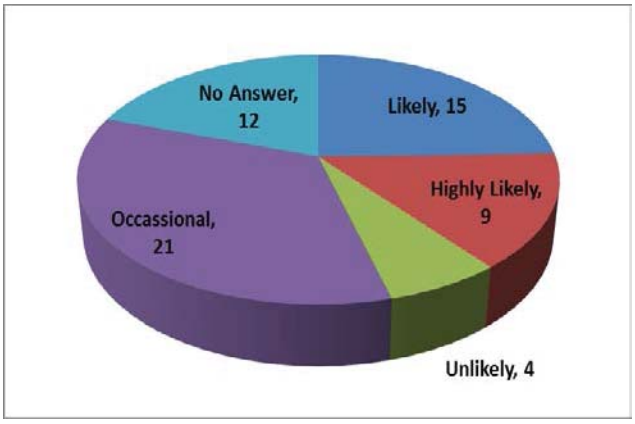
c. Hail



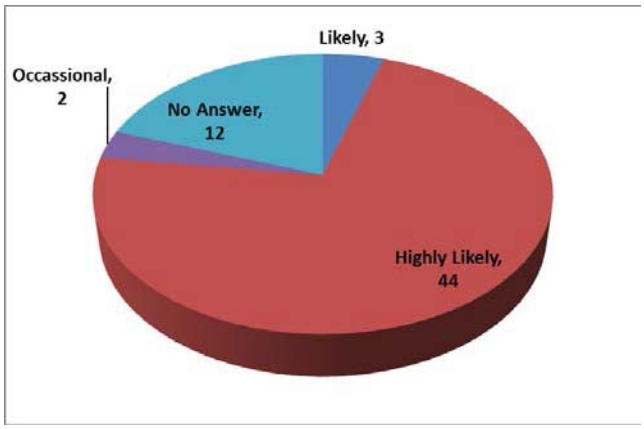
d. High Winds



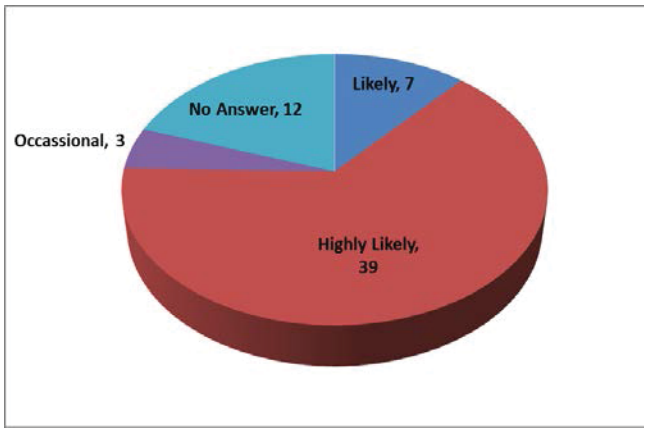
e. Winter Storms



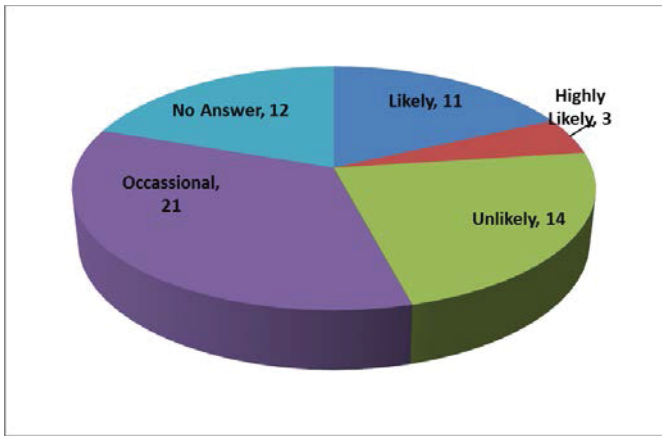
f. Summer Heat



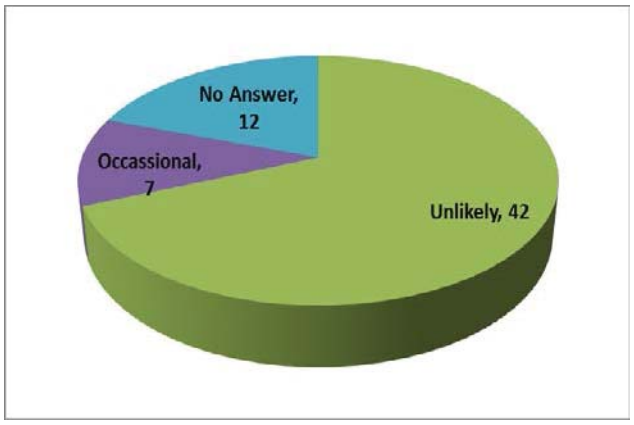
g. Drought



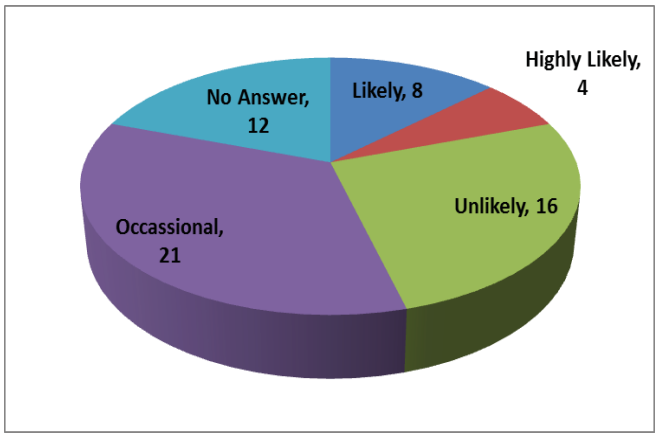
h. Flooding



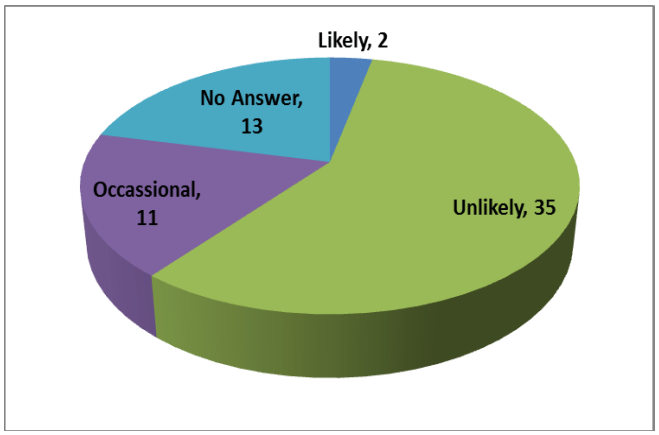
i. Dam Failure



j. Stream Bank Erosion

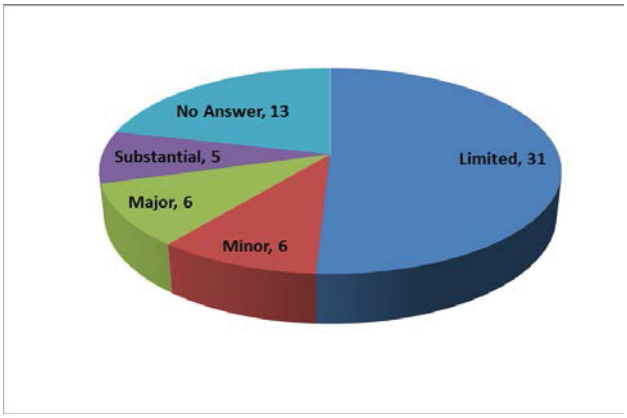


k. Levee Failure

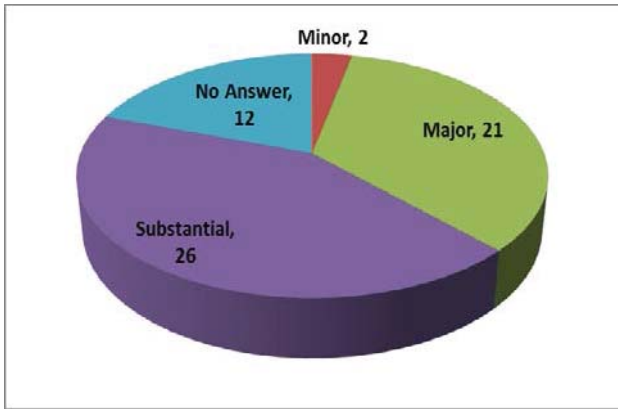


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on the City of Richardson. Please rate EACH hazard as follows.

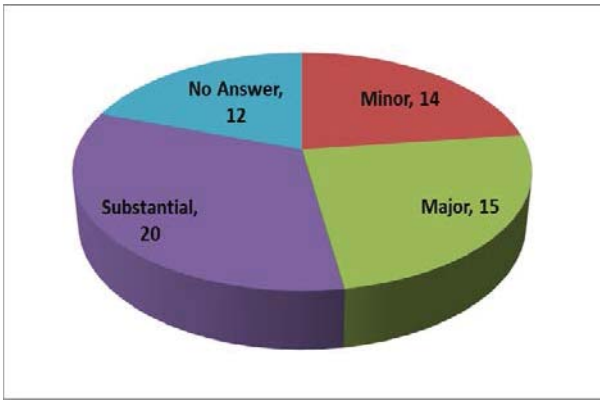
   a. Earthquakes



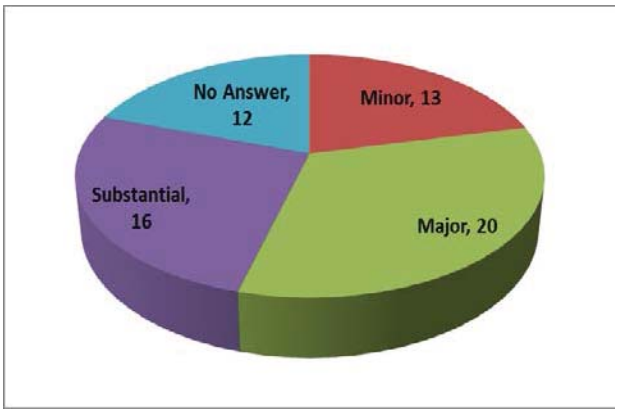
   b. Tornado



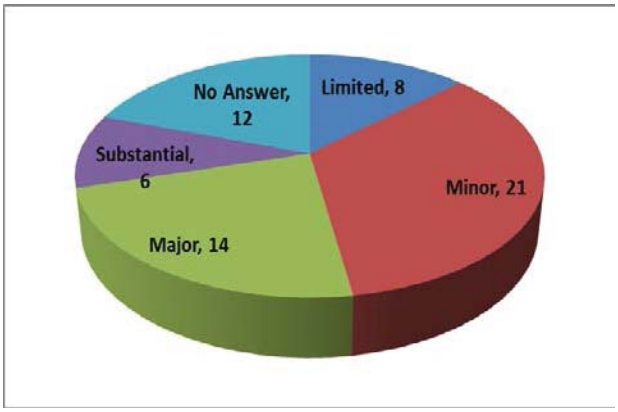
   c. Hail



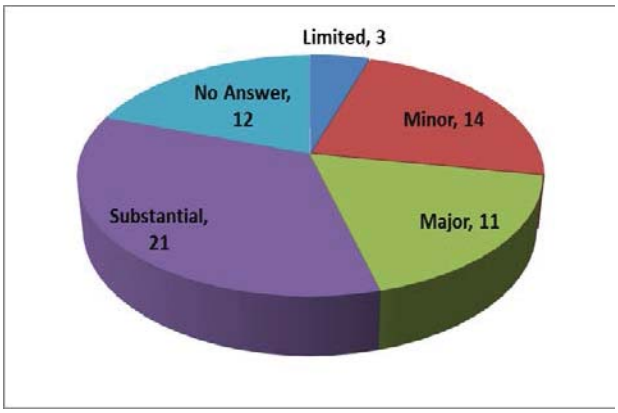
d. High Winds



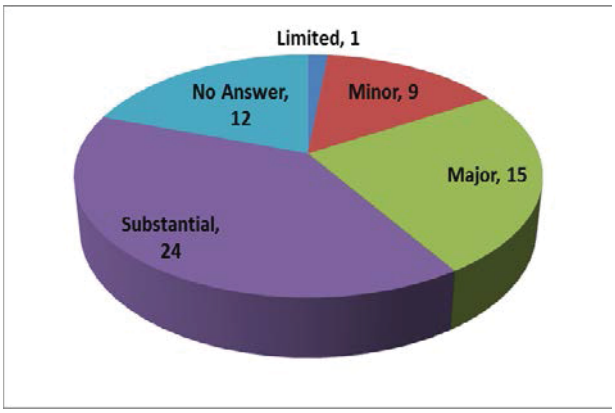
e. Winter Storms



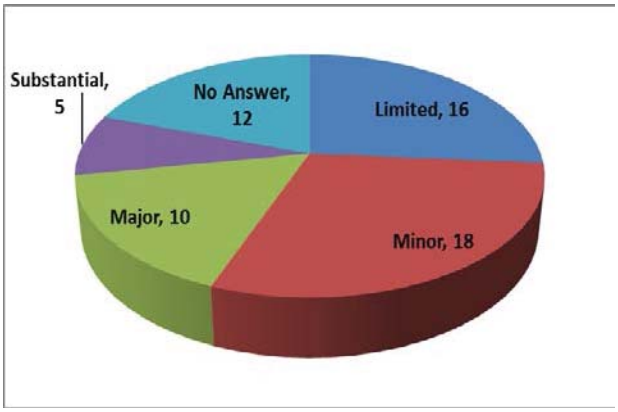
f. Summer Heat



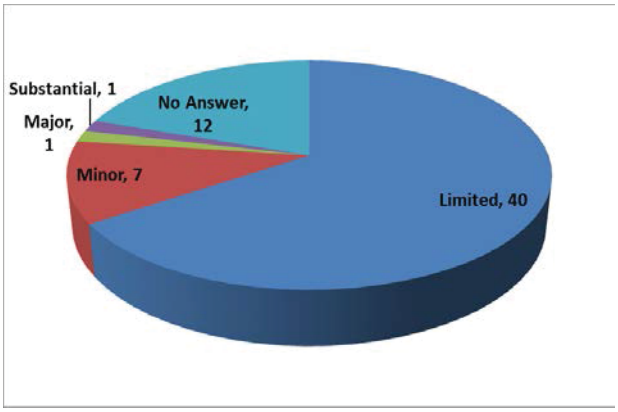
g. Drought



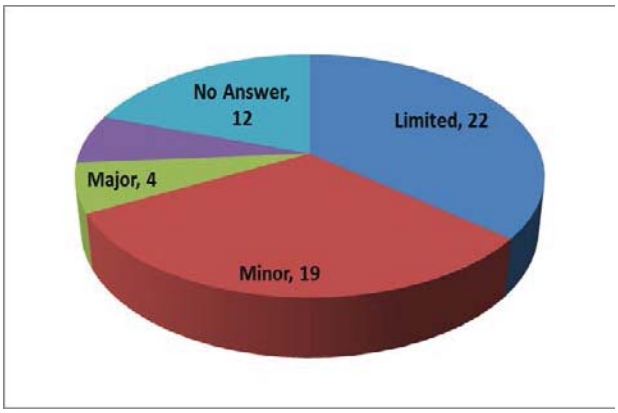
h. Flooding



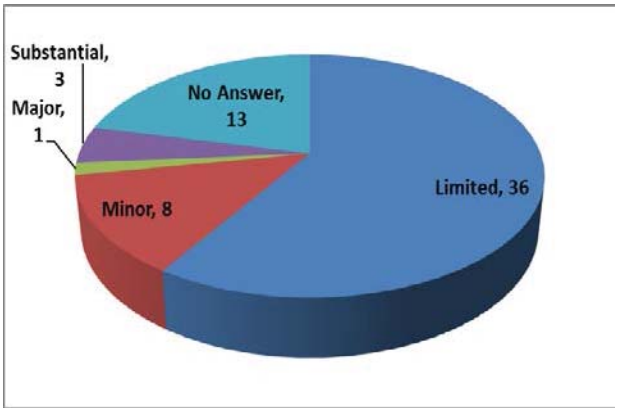
i. Dam Failure



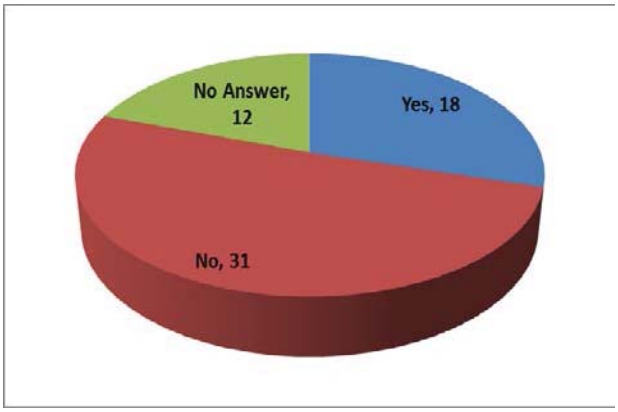
j. Stream Bank Erosion



k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ✓ Yes (18)
   - ✓ No (31)
   - ✓ Skipped (12)



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed.

- ✓ Terrorism Chemical spills/leaks
- ✓ Public health emergencies: highly likely, high impact, and high extent
- ✓ Stop spraying for mosquitos. It's a waste of money and you are killing all the other bugs and birds that are natural predators to mosquitos. All the birds in Richardson look sick because of government trying to fix a problem by creating twelve other problems. Let nature run its course.
- ✓ Viral occasional medium
- ✓ Power Plant breakdown: occurrence likely, severity medium and extent Nuclear reactor failure: occurrence unlikely, severity high, extent medium
- ✓ Man-made disasters such as technological (Power outage, cell phone/telephone outage, etc.), terrorism (bomb), biological (pandemic, WMD, etc.). Technology would be medium occurrence and high impact. Terrorism/biological would be low occurrence and high impact and high extent.
- ✓ Chemical and Radiation -- both are considered occasional occurrence and Impact could be Catastrophic with extend as High
- ✓ Chemical-related risks like spills, explosions, fires, etc.
- ✓ Chemicals from trains and trucks coming through. Chemicals nearby factories/plants. Power plants and power stations in the surrounding areas. Ratings for all of the above Occurrence likely Severity high Extent medium
- ✓ Terrorist threat - Likely, High, Catastrophic Biohazard threat - Likely, High Catastrophic Radiation threat - Unlikely, Catastrophic, Catastrophic
- ✓ Terrorism--American grown, as well as Foreign bred... I would rate it to be between medium to high, as I would rate it to be anywhere within the US.
- ✓ Interruption of services through technological terrorist attacks. Occasional high
- ✓ Terrorist actions, chemical accidents
- ✓ Gas pipeline explosion Occur- occasional Severity- medium Extent- low
- ✓ Power Grid failure or stress occurrence: Highly likely Severity: High Extent: high Air quality occurrence: Highly likely Severity: High Extent: high
- ✓ Health / Illness epidemics - Occasional occurrence, medium severity, medium extent Cyber-attacks - unlikely occurrence, high severity, high extent
- ✓ Fires during high heat and drought. West Nile.
- ✓ Chemical warfare/chemical leak or explosion.

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	13
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	17
Improve, adopt and enforce building codes:	21
Implement the Texas Individual Tornado Safe Room Rebate Program:	33

Answer Choices	Responses
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	32
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	15
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	33
Coordinate with Dam owners to conduct inundation studies of dams:	5
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	31
Purchase and improve on the Weatherization Assistance Program (WAP):	22
Conduct an earthquake vulnerability study:	7
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	20
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	14
Structural Retrofitting of Existing Buildings:	10
Total Respondents:	61

List any other strategies you think should be included in the plan:

- ✓ Incorporate amateur radio notification and assembly during emergencies for private sector businesses
- ✓ Ensure local businesses have information necessary to implement a chemical or radiation situation.
- ✓ Good evacuation routes. Traffic here is horrible. In case of disaster it would be difficult to flee quickly
- ✓ Engage business community for business continuity planning. Drop code red and strengthen instant media systems use - twitter, WEA, low cost weather radios, etc.
- ✓ Mapping and examination of all gas pipelines to determine condition and replacement schedule. Burning all utility lines in city. Determining amount of ammonium nitrate and other explosive chemicals stored within city, conditions of storage, security and safety of surrounding area.
- ✓ Mandated Energy and water efficiency in new buildings can lower stress to these systems especially as new building occurs over several decades. Require structurally tornado resistant interior areas in new homes. Given that the odds of a tornado disaster at an individual home are very low, then resistance by design would be sufficient for up to EF3 and some EF4s. EF5s are unlikely to an individual home despite recent big news events. Safe rooms are unnecessary and "overkill."

- ✓ Make it easier to build and use water collection systems. Provide information and training on such systems.
- ✓ Educate and inform citizens on facts of the matter (not propaganda) Continue, and increase, social media updates

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ Better flash flood alerting systems for individual crossings and the smallest low areas.
   - ✓ Bridges - improve recording system for bridge safety and integrity Parks - needs to be a way to notify people at parks of imminent danger. Library - have available/improve availability of preparation education on the most likely events (such as tornado, hail)
   - ✓ Chemical storage, safety and security
   - ✓ Monitor and track the dangerous materials and chemicals that come through here on trucks and trains. It is a miracle nothing has happened already.
   - ✓ More Funding
   - ✓ Please expand the Metro Safe Room Rebate Program.
   - ✓ Terrorist activities

City of Rowlett Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Rowlett has a FEMA approved hazard mitigation plan. The city was one of the 11 jurisdictions that participated in the Dallas County Hazard Mitigation Action Plan that was adopted in 2009.

The City of Rowlett was represented at the 2013 Countywide Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan Working Group meetings. In addition to the countywide hazards and strategies discussed in the previous sections, this annex serves as a complete hazard mitigation planning tool for the City of Rowlett. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Rowlett is located at 32.5425 N and 96.3251 W. It sits directly east of Garland, northeast of Dallas, west of Rockwall and south of Rowlett. It is also surrounded by nearly 30 miles of shoreline by Lake Ray Hubbard. The Lake Ray Hubbard Reservoir was completed in 1971 and is owned by the City of Dallas and serves as one of their sources of drinking water. Recreational activities are popular on the lake. With the interstate nearby and the lake, growth became inevitable. Rowlett went from a population of 5,100 in 1978, to approximately 56,000 today.



Photo Credit Justin Cozart

Rowlett derives its name from Rowlett Creek, which flows into Lake Ray Hubbard and is a major tributary of the east fork of the Trinity River. The creek was named for a waterway running through the property of Daniel Rowlett who moved from Kentucky to Bonham, Texas, in 1835. The town was incorporated in 1952 after its population reached 250.

According to the 2010 U.S. Census Bureau, the population for Rowlett is 56,199. The racial makeup is 78.24% White, 9.48% African American, 0.49% Native American, 3.93% Asian, 0.20% Pacific Islander, 7.75% from other races, and 1.78% from two or more races. Hispanic or Latino of any race is 12.31% of the population. The city has a total area of 19.89 square miles with all of it being land. There are approximately 18,969 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

The City of Rowlett operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The City Manager is responsible for the day-to-day management of city activities. The City Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible

for all personnel matters in the City and for preparing and submitting an annual budget for Council review.

Given that Rowlett is located on the shore of Lake Ray Hubbard, real estate development is a major contributor to its economic growth. Downtown Rowlett is growing with several retail and commercial development opportunities due to the recently completed George Bush turnpike eastern extension. Rowlett is currently in the process of implementing their "Rowlett 2020" plan that focuses on the direction for future decisions on land use policy and capital improvement projects.

Internal Planning Process

The table below lists members of the City of Rowlett Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Rowlett.

Name	Title / Department or Agency	Role
Brian Funderburk	City Manager	Hazard Identification, capabilities assessment
Jim Proce	Director of Development Services/ Public Works	Hazard & Plan development, Hazard Identification, capabilities assessment, Hazard Identification, City Critical Infrastructure; Provided of Flood Plain information
Alan Guard	Director of Finance and Administration/IT	Hazard & Plan development, Hazard Identification, capabilities assessment
Doug Kendrick Neil Howard	Interim Fire Chief Fire Chief	Hazard Identification, capabilities assessment
Mike Brodnax	Police Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Lee Shaw	Office of Emergency Management (OEM)	HMPT Coordinator, Hazard Identification, capabilities assessment
May Valbuena	Administrative Assistant – Rowlett Fire Rescue	Hazard & Plan development, Hazard Identification, capabilities assessment
Ed Balderas	Intern Volunteer - Office of Emergency Management (OEM)	Hazard & Plan development, Hazard Identification, capabilities assessment
Jermel Stevenson	Parks & Recreation	Hazard & Plan development, Hazard Identification, capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Invitations were also made to various external stakeholders via email. These included:

Representing	Position / Department	Role
Lake Pointe Medical Center	Emergency Management Director	Review HIRA
Rockwall County	Office of Emergency Management	Review Annex

Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
August 08, 2013	Initial meeting to define the purpose of the team
August 13, 2013	Assigned and defined lists of risks by department
August 30, 2013	Completed potential rankings of risks
September 13, 2013	Discussed mitigating factors
September 30, 2013	Discussed risk assessment
October 1, 2013	Submitted data to Dallas County OEM

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. The City of Rowlett notified its residents and businesses of the opportunity to participate and provide input during the development of the plan, through the city's website, Rowlett Citizens Corps members, the city's employee newsletter, 70 HOAs, Crime Watch groups, and the Senior Citizen Group. Additionally, the city utilized social media to increase participation; specifically, it posted notices on its Facebook and Twitter accounts. The notices directed the public to the online survey, which was available in both English and Spanish. The city also reached out to other organizations for information, including the National Weather Service and Allstate Insurance. Copies of some of the city's outreach materials are included in Appendix C of this annex.

Survey Results

The City of Rowlett made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The

survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 145 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The survey respondents from the City of Rowlett identified extreme heat and drought as the two hazards of primary concern. Second, were hazards often associate with severe thunderstorms (i.e. tornadoes, hail, and high winds).Overall, the City of Rowlett HMPT's HIRA deemed all of these hazards at moderate to high risk. These responses, which align with the official risk assessment, will help guide future risk communication strategies and also help to identify projects that are more likely to be support for long-term mitigation. Similarly, most respondents indicated a desire to see an increased focus on the use of Tornado Safe Room Rebate programs and engaging public outreach/training programs such as CERT.

The information collected from the survey responses were used in developing the City's mitigation action items and will be used as a benchmark for how the City addresses these hazards in the long term (i.e. how public perception changes based on actions taken by the City to mitigate hazards of greatest concern).

Not addressed specifically by the City's strategies, are concerns over chemical/hazmat risks that the City faces. These concerns are increasingly valid as major transportation infrastructure, including the region's designated hazmat route, cuts through major parts of the City. Efforts at mitigating this technological category of hazards will be expanded through increased partnerships with the Dallas County LEPC and other external public and private stakeholders meant to identify, train, and equip the City with the capacity to both respond to and mitigate these hazards.

Hazard	Occasional	Unlikely	Likely	Highly Likely
Earthquake	21	86	3	0
Tornado	22	0	33	59
Hail	8	2	27	81
High Winds	11	1	29	75
Winter Storms	52	13	31	20
Extreme Heat	3	0	13	102
Drought	3	1	17	96
Flooding	48	22	29	15
Dam Failure	16	3	3	90
Stream Bank Erosion	28	62	14	9
Levee Failure	17	92	3	1

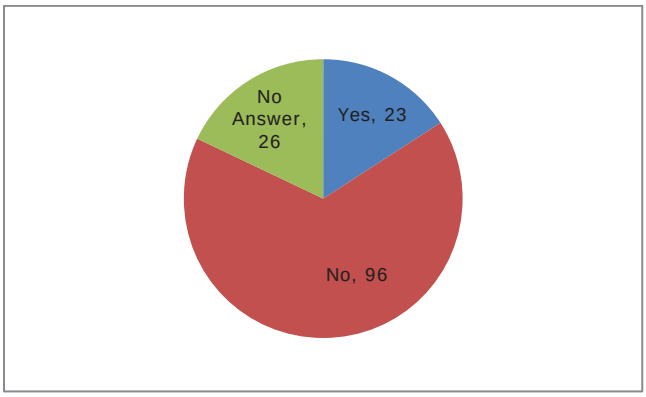
A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix ROW C-2 of this annex.

Survey Overview

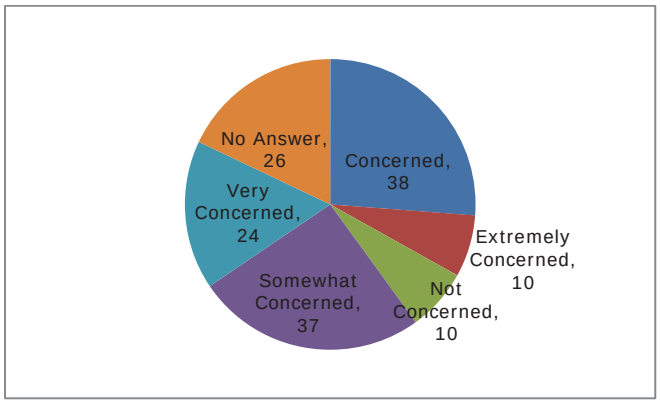
1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

- ✓ 145 total responses submitted from City of Rowlett residents and businesses

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

- ✓ Unlikely
- ✓ Occasional
- ✓ Likely
- ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	No Answer	Total	Average Rating
Earthquake	86	21	3	0	35	110	1.25
Tornado	2	22	33	59	29	116	3.28
Hail	2	8	27	81	27	118	3.53
High Winds	1	1	29	75	29	116	3.53

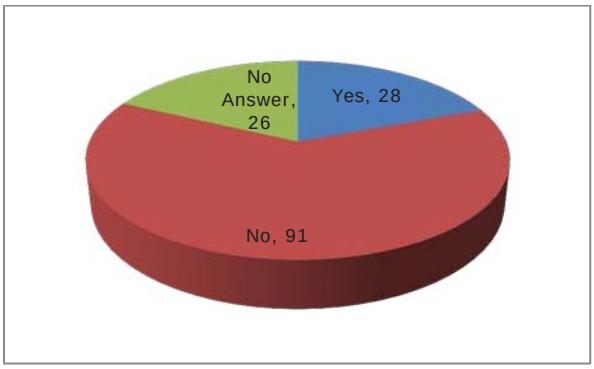
Winter Storms	13	52	31	20	29	116	2.5
Extreme Heat	0	3	13	102	27	118	3.84
Drought	1	3	17	96	28	117	3.78
Flooding	22	48	29	15	31	114	2.32
Dam Failure	90	16	3	3	33	112	1.28
Stream Bank Erosion	62	28	14	9	32	113	1.73
Levee Failure	92	17	3	1	32	113	1.23

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows:

- ✓ Unlikely
- ✓ Occasional
- ✓ Likely
- ✓ Highly Likely

	Limited	Minor	Major	Substantial	No Answer	Total
Earthquake	86	21	3	0	35	110
Tornado	2	22	33	59	29	116
Hail	2	8	27	81	27	118
High Winds	1	1	29	75	29	116
Winter Storms	13	52	31	20	29	116
Extreme Heat	0	3	13	102	27	118
Drought	1	3	17	96	28	117
Flooding	22	48	29	15	31	114
Dam Failure	90	16	3	3	33	112
Stream Bank Erosion	62	28	14	9	32	113
Levee Failure	92	17	3	1	32	113

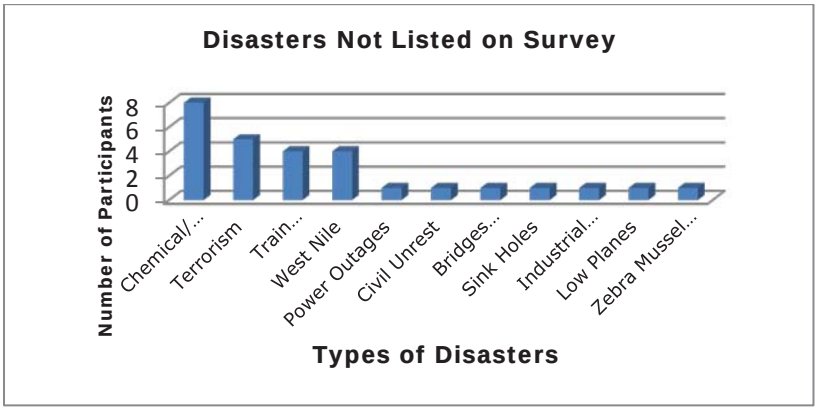
6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)*

Type of Hazard	Amount
Chemical/ HazMat	8
Terrorism	5
Train Derailment	4
West Nile	4
Power Outages	1
Civil Unrest	1
Bridges Breaking	1
Sink Holes	1
Industrial Accident	1

NB: The rankings for Occurrence, Severity and Extent are provided in Appendix ROW C-1.



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the

plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program	36
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	40
Improve, adopt and enforce building codes:	52
Implement the Texas Individual Tornado Safe Room Rebate Program:	90
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	89
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	27
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	90
Coordinate with Dam owners to conduct inundation studies of dams:	15
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low flow devices to property owners:	69
Purchase and improve on the Weatherization Assistance Program (WAP):	48
Conduct an earthquake vulnerability study:	30
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	58
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	36
Structural Retrofitting of Existing Buildings:	25
Total Respondents:	117

NB: 28 respondents skipped this question

List any other strategies you think should be included in the plan (themed responses)

- ✓ "Provide for and list more public storm shelters."
- ✓ "Water preservation"
- ✓ "Public education to increase public awareness"
- ✓ "Monitor Hazard Chemical sites and routes"
- ✓ "Implement a plan in case of a nuclear bomb or other terrorist acts."

8. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction: - List any other strategies you think should be included in the plan.

- ✓ "Continued monitoring, exercising of emergency plans so as to improve on them"
- ✓ "Mitigation grants for roads/bridges/ overpass, emergency response to Lake Ray Hubbard/ working with businesses to improve emergency planning."
- ✓ "Continued public education and awareness."
- ✓ "Provide broadcast shelter areas for each precinct within a county in case of disaster with protection in these areas allowing for power, water etc. backup for emergency use."
- ✓ "Traffic flow management in the event of a hazard event."

Public Review Period

On January 6, 2014 the City of Rowlett announced the availability of the Rowlett Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through Rockwall-Rowlett local newspaper, City of Rowlett official web-site. Further the Mayor made public announcement on Rowlett RTN Channel 16 reaching out to our employees and HOA's. The public was invited to provide input into both the Dallas County Base Plan and the City of Rowlett Annex Draft Plan.

The announcement provided a ten (10) day public review and comment period. The public were encouraged to submit comments prior starting with a survey dated April 25, 2013 and then we officially published draft for consideration and possible incorporation into this draft.

The public comments were directed to the Lee Shaw, Emergency Management Division with the City of Rowlett.

Any comments received after the review process will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Capability Assessment:

The administrative and technical capacity sections include a summary of departments and their responsibilities for hazard mitigation planning. In addition, current codes, ordinances and plans associated with hazard mitigation plan are included.

Key Departments

City Manager's Office

The City of Rowlett operates under a system of local government called the Council/Manager form.



The elected officials (Mayor and City Council) are the community leaders and policy makers who establish a vision for their city, town, or county, and who hire the City Manager to carry out that policy and ensure that all residents are being equitably served. The City Manager leads, directs and coordinates all City operations and staff. This position is the Chief Executive Officer, who answers to the Mayor and City Council.

The responsibilities of the City Manager include:

- ✓ Implements City Council policy
- ✓ Encourages and provides for citizen input regarding city operations, services and programs
- ✓ Engages in special studies and projects to ensure productive operations
- ✓ Serves as a liaison to other governmental entities
- ✓ Prepares the annual budget, submits it to elected officials for approval and implements it once it is approved
- ✓ Manages the day-to-day operations of the city

Rowlett Fire Rescue Department

Rowlett Fire Rescue department provides both emergency and non-emergency. The city has 72 firefighters with 23 on shift which staff four strategically located stations on a 24-hour basis. Rowlett Fire Rescue responds to over 5,000 incidents annually.

The Fire Marshal's Office provides fire education classes, home and business inspections and performs fire and arson investigations. A nationally recognized volunteer program staffed by your neighbors provides additional assistance through the Community Emergency Response Team (CERT), the Radio Amateur Civil Emergency Service (RACES), and the Rowlett Citizen Fire Corps. All work together with one goal to make your city a safer place to live and work.



Rowlett Fire Rescue's primary focus is commitment to delivering the highest quality and the most effective fire suppression, emergency medical services, and emergency management to the citizens of Rowlett.

The Rowlett Fire and Rescue Department has several functions and divisions that it is involved in. These include:

- ✓ Administration – The administrative responsibilities involve ensure the RFR has a professionally staffed and well equipped department that provides a wide range of services and programs that not only respond to emergencies but also proactively engages the community. Community involvement reaches all of the diverse groups within the city, especially the young and the elderly, those most vulnerable to fire and Emergency Medical Services (EMS) emergencies.
- ✓ Community Education - Rowlett Fire Rescue offers several different classes. Browse the classes and citizen services offered by the department. Classes include:
  - CERT Classes
  - Safe Sitter Class
  - Fire Station Tours
  - Block Parties
  - Citizens Fire Academy



- ✓ Community Emergency Response Team (CERT) - The Rowlett Community Emergency Response Team (CERT) is a volunteer group of citizens trained to be self-sufficient for up to 72 hours after a large-scale disaster or emergency. Volunteers (135 members) receive training based on the FEMA curriculum in topics such as:
  - Light search and rescue
  - Medical operations
  - Triage
  - Fire suppression
  - Utility control

  The City of Rowlett has set the pace for communities around Texas as one of the first cities to implement the federal government's initiative for Community Emergency Response Teams (CERT). The program has trained more than 300 CERT volunteers and has been recognized by the Federal Emergency Management Agency for its excellence and program management.
- ✓ Emergency Medical Services (EMS) - Rowlett Fire Rescue ambulances are staffed with paramedics and are ready to respond to a variety of incidents 24 hours a day, 7 days a week. Each ambulance carries the Texas Department of State Health Services provider license as a Mobile Intensive Care Unit (MICU). A Mobile Intensive Care Unit (MICU) is an ambulance staffed by certified or licensed paramedics who provide advance life support.



- ✓ Emergency Management - The Coordinator for the Emergency Management Division is the Fire Chief. This division is responsible for having in place an updated comprehensive emergency operating plan that identifies roles and responsibilities of all our city departments for the purpose of a defined framework for disaster response, small or large, scalable to the event. It also identifies our regional partners for the purpose of a coordinated response. We have a volunteer on staff that specializes in emergency management and liaisons with FEMA (Federal Emergency Management Agency) to provide guidance in planning, training, and technology.
- ✓ Fire Marshal - The Fire Marshal is committed to making Rowlett the most fire-safe community possible through proactive fire education, fire protection and fire prevention and by the compliance and enforcement of codes and ordinances to prevent injury and loss of life or property.
  The Mission Statement of the Fire Marshal's Office strives to consistently increase awareness and knowledge of fire safety and prevention to all citizens and businesses. We also strive to meet and exceed customer service needs in all areas, including:
  - Expediting development
  - Enforcing codes and ordinances
  - Conducting safety inspections
  - Investigating fires and hazard complaints
- ✓ Honor Guard - The Rowlett Fire Rescue Honor Guard exists to provide honor and dignity to its members and their families through the recognition of ceremony and tradition.
- ✓ Rowlett Radio Amateur Civil Emergency Service - The Rowlett Radio Amateur Civil Emergency Service (RACES) is an organization of volunteers who work together to support our city. It was founded in January 2001 and is sponsored by Rowlett Fire Rescue and the Office of Emergency Management. The group is administered by local, county and state emergency management agencies and supported by FEMA. Services offered by this organization include:
  - Supporting federal, state, and local agencies with supplemental emergency communications during a disaster
  - Providing SKYWARN during severe weather
  - Supporting public service events
  - Supporting any event at the request of the city
- ✓ Special Weapons and Tactics Medic Unit - The Rowlett Fire Rescue Department's Special Weapons and Tactics (SWAT) Medic Unit increases the level of protection the department provides to the citizens, employees and visitors of the City of Rowlett. This special operations unit consists of four Rowlett Fire Rescue paramedics who are assigned to the Rowlett Police Department SWAT Team. The SWAT medics respond to all incidents involving the Police Department SWAT Team.

Public Works

The Public Works & Development Department provides many of the basic services that affect the daily lives of everyone living and working in the City of Rowlett. The primary responsibility of the public works department is the operation and maintenance of the city's infrastructure.

The Eight Divisions of the department include:

- ✓ Building Inspections – Facilitates with obtaining permits for both residential and commercial construction. The division works with several other departments including planning, engineering, fire, and health to provide inspections services for all building construction projects as well as development plan review within the community
- ✓ Engineering - The Engineering Division implements projects related to the design and construction of the infrastructure that includes streets, alleys, water lines, sanitary sewer lines, and storm sewer lines. The primary function of the engineers is to ensure the safety and welfare of the citizens in addition to providing efficient services. The division has a core group of projects that include:
    - Capital Improvement Program (CIP) - Infrastructure projects that are funded by bonds.
    - Development - Projects that are funded by developers wanting to build commercial or residential infrastructure.
    - Flood Plain Management - To ensure that people are safe and do not build in the flood plain area according to the Federal Emergency Management Agency (FEMA) and city ordinances.

  The functions performed by the Engineering Division include:
    - Working with our customers that include citizens, businesses and city departments to solve infrastructure related issues.
    - Oversee design and construction of infrastructure improvements of CIP and development.
    - Manage project budgets, schedules and time tables by analyzing the engineered requirements of the project, area workload and manpower availability.
    - Monitor projects to ensure timetables are met.
    - Administer the Storm Water Management Program, Right-of-Way and Easements within the city.
    - GIS/Maps - The GIS Department provides access to the City of Rowlett's dynamic mapping site information, including but not limited to city GIS data

  The primary objective of our online GIS information is to improve communication, data sharing and coordination among our staff members that must coordinate among various departments to efficiently and effectively deliver services both internally and to our citizens.
- ✓ Planning and Zoning - The Planning Division works closely with all divisions of the Public Works & Development Department, including Building Inspections and Engineering. The Planning Division manages land use development through the administration of the Rowlett Development Code and the implementation of the comprehensive plan, other plans, ordinances, policies and procedures of the city. This division also prepares plans and/or studies that serve to guide future target development in the community.

- ✓ Storm Water Management - The City is an active participant in the Municipal Separate Storm Sewer Systems (MS4) program of Texas Commission on Environmental Quality (TCEQ). MS4 is a conveyance or system of conveyances that is:
    - Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.
    - Designed or used to collect or convey storm water (including storm drains, pipes, ditches, etc.)
    - Not a combined sewer and not part of a publicly owned treatment works (sewage treatment plant).

  The responsibilities of the Storm Water Management division include:
    - Maintaining natural and man-made drainage ways in free-flowing condition
    - Reducing the risk of localized storm water flooding
    - Reducing storm water pollution as required by federal law
    - Managing flood plain development
    - Managing the municipal drainage utility system.
- ✓ Street/Traffic - The Street Division is responsible for the repair and maintenance of the streets, alleys and drainage systems. The Street Department:
    - Rehabilitates asphalt streets
    - Makes minor concrete street and alley repairs
    - Clears drainage ditches and culverts
    - Sands driving surfaces during icy weather
    - Annual street and alley repairs are determined and scheduled according to the need, public safety issues and budget constraints.
    - Annual Crack Seal Program
    - Annual Concrete Street/Alley Repair Program

  The Traffic Division installs and maintains street and traffic signs, school zone lights, and traffic signals.
- ✓ Wastewater Utility - The Wastewater Division is responsible for maintaining the operations of the wastewater collection system by minimizing wastewater service interruptions and improving the wastewater system. The Wastewater Division is responsible for the proper collection of residential, commercial, and industrial wastewater. Wastewater Collection Systems are closely managed through the Supervisory Control and Data Acquisition (SCADA) central monitoring system in order to meet all Federal and State regulatory requirements issued by Texas Commission on Environmental Quality. This system monitors the city's lift stations 24 hours a day.
- ✓ Water Utility - The Water Utility Division is responsible for providing safe drinking water to the citizens of Rowlett. The division stores and distributes water for the City of Rowlett.

Director of Finance and Administration / IT

The Finance and Administration Department comprises of the following divisions:

Accounting – The Accounting Division supports the following functions for the City of Rowlett.

- Grant Administration

- Capital Projects
- Financial Reporting

✓ Budget
✓ Purchasing

Rowlett Police Department

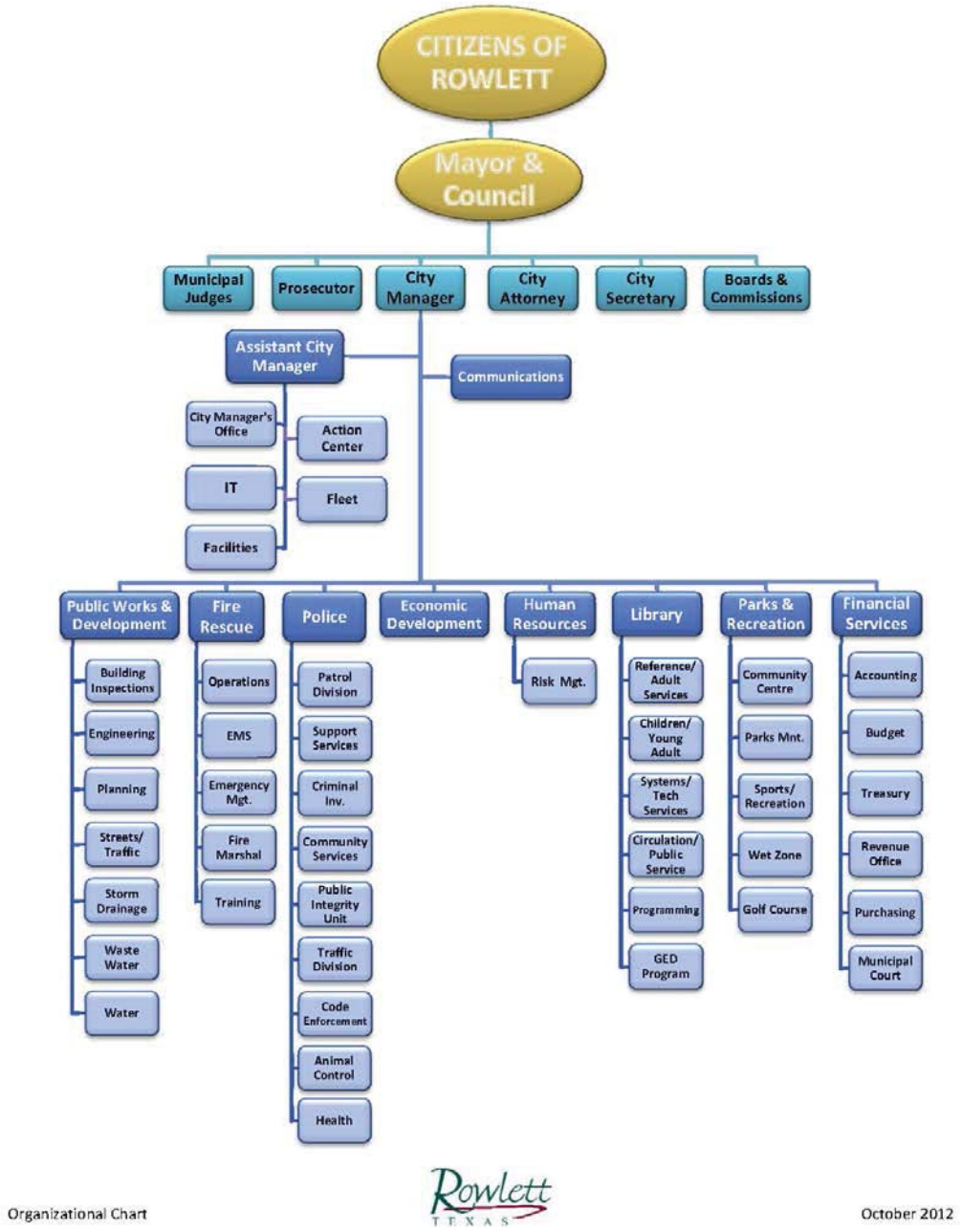
The City of Rowlett Police Department serves residents by deploying interlocking divisions and units, each of which is specially trained and equipped to provide assistance in a range of our community's issues. The Rowlett Police Department, established in 1971, has a current authorized strength of 128 employees:

✓ 75 sworn officers
✓ 42 full-time civilian personnel
✓ 11 part-time personnel
✓ Traffic and Warrants

Parks & Recreation

The department is composed of the Recreation and Parks Divisions. With thirty-one staff members and approximately 100 seasonal employees, our department is responsible for providing our citizens with opportunities for fun and relaxation. Parks and Recreation play an important role in the quality of life in Rowlett and also provides for a healthier environment, improves the well-being of its citizens and neighbors, and reduces the potential for crime.

Figure RW1: Organizational Chart for the City of Rowlett



Summary of Capabilities

The tables below identify the current capabilities in the City of Rowlett.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	YES	2005
Capital Improvements Plan	YES	
Economic Development Plan	YES	
Local Emergency Operations Plan	YES	DUE FOR UPDATE 2014
Continuity of Operations Plan	YES	2002
Transportation Plan	YES	TRAFFIC SIGNAL ADVANCE DUE 2014
Stormwater Management Plan	YES	2009
Community Wildfire Protection Plan	NO	CLOSE TO LAKE
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	YES	FLOOD INSURANCE – EOP

Building Code, Permitting, and Inspections	Yes/No	
Building Code	YES	**Version/Year:** 2009
Building Code Effectiveness Grading Schedule (BGEGS) Score	YES	**Score:** unknown - to be determined
Fire Department ISO rating	YES	**Rating:** 2
Site Plan review requirements	YES	CODE
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	YES	
Subdivision ordinance	YES	
Floodplain ordinance	YES	
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	YES	STEEP SLOPE WALLS
Flood insurance rate maps	YES	
Acquisition of land for open space and public recreation uses	YES	DONATIONS
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget		

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	YES	
Mitigation Planning Committee	YES	
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	YES	
Mutual aid agreements	YES	2012 UPDATE
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	YES	
Floodplain Administrator	YES	
Emergency Manager	YES	
Community Planner	YES	
Civil Engineer	YES	
GIS Coordinator	YES	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	YES	SCADA-BLACKBOARD
Hazard data and information	YES	MSDS – STORM WATER
Grant writing	NO	PARTNER WITH COG/UNT/CBDG
HAZUS analysis	NO	PLANNING IS DOING RESEARCH
Other		
How can these capabilities be expanded and improved to reduce risk?		
SUBJECT MATTER DRIVES GRANT SHARING AND PARTNERS WITH OTHERS DO NOT HAVE A GRANT WRITER ON STAFF		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	YES	
Authority to levy taxes for specific purposes	YES	
Fees for water, sewer, gas or electric services	YES	
Impact fees for new development	YES	
Storm water utility fee	YES	
Incur debt through general obligation bonds and/or special tax bonds	YES	
Incur debt through private activities	NO	
Community Development Block Grant	NO	
Other federal funding programs	NO	ROADS
State funding programs	NO	NTTA – MERRIT ROAD
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget		

The Administration is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	YES	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	YES	
Natural disaster or safety related school programs	YES	
StormReady certification	YES	
Firewise Communities certification	YES	
Public-private partnership initiatives addressing disaster-related issues	YES	
Other		
How can these capabilities be expanded and improved to reduce risk?		
OUR ORGANZATION IS ACTIVE IN FIRE PREVENTION PROGRAMS, CERT, FIRE CORPS, NON-PROFIT ORGANZATIONS, AND WASTE MANAGEMENT		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	YES	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	YES	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	YES	
Transportation		
1. Does the transportation plan limit access to hazard areas?	YES	
2. Is transportation policy used to guide growth to safe locations?	YES	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	YES	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	YES	
STORM SEWERS – RELATION TO HEALTH		
2. Do environmental policies maintain and restore protective ecosystems?	YES	
TCEQ		
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		NO

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	YES	
2. Is safety explicitly included in the plan's growth and development policies?	YES	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	YES	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	YES	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	YES	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	YES	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	YES	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	YES	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	YES	
3. Do the regulations allow density transfers where hazard areas exist?	YES	

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	YES	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	YES	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	YES	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigate natural hazards?	YES	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	YES	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	YES	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	YES	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: The City Council for the City of Rowlett, including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	87 POLICIES $21,709,900.00
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	11 Claims have been paid $111,814.10 UNKNOWN - To be determined
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	272
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	NO MAP SHOWING COVERAGE VS RISK
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	YES
Is floodplain management an auxiliary function?	Community FPA	YES
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	PERMIT REVIEW, SFHA VERIFICATION, GIS, INSPECTIONS, GUIDANCE, EDUCATION AND INFORMATION
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	NONE TO COMMENT ON AT THIS TIME
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	YES
Are there any outstanding compliance issues (i.e., current violations)?		NO
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		NO VISITS
Is a CAV or CAC scheduled or needed?		NO

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	09/01/1978
Are the FIRMs digital or paper?	Community FPA	BOTH
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	RECOMMENDED ORDINANCE ADOPTED, 2 FT. FREEBOARD REQUIRED, ETC
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	SFHA ZONE VERIFICATION BY FPA COMPLETED APPLICATION APPLICATION REVIEWED IF APPROVED, ISSUE PERMIT CONDUCT INSPECTIONS OBTAIN REQUIRED CERTIFICATIONS COMPLETE COMPLIANCE CERITFACTION PRIOOR TO FINAL OR C.O. ISSUANNCE
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	NO
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Rowlett HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Rowlett are as follows:

High Risk (over 65% on HIRA)	None
Moderate Risk (41%- 65% on HIRA)	High Winds Extreme Heat Tornado Hail Lightning Winter Storms Drought
Low Risk (12 %-40% on HIRA)	Wildfire Flooding Stream Bank Erosion Earthquake Dam/Levee Failure
No Risk (Below 12% on HIRA)	None

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Rowlett. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Rowlett**.**

A. Flooding: Flooding has been identified as one of the primary natural disaster to be faced by the City of Rowlett. Long Branch Creek, Rowlett Creek, and Muddy Creek, as its tributaries run through the city. The city continues to take measures to reduce the flooding incidents within the city, which were addressed by the previous plan.

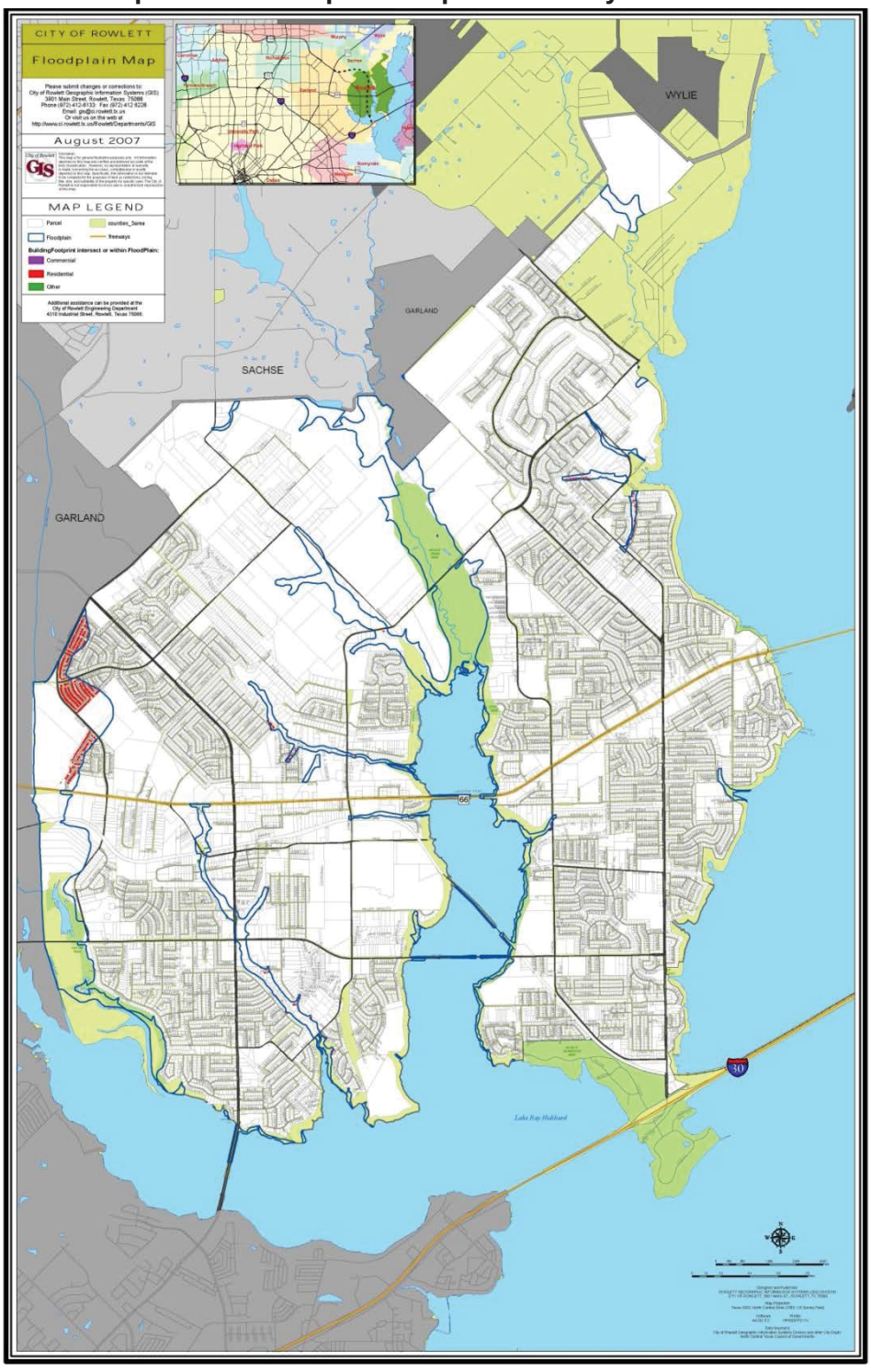
Locations: Areas that continue to be prone to flooding causing road closures, as opposed to danger to homes or business, include:

- ✓ Main Street
- ✓ Waterview Drive
- ✓ Liberty Grove Road
- ✓ Dalrock Road
- ✓ Schrade Road
- ✓ Chiesa Road
- ✓ Miller Road
- ✓ Scenic Road Bridge

These roadways are main arterials that would cause major problems if the city needed to be evacuated because of a natural disaster. Localized street flooding in residential areas is being addressed through our Capital Improvement Program. New construction cannot take

place in the floodway nor built on the floodplain and must be flood-proofed two feet above of the Base Flood Elevation (BFE). **Map RW1** depicts floodplains in the City of Rowlett.

Map RW1: Floodplain Map for the City of Rowlett



As indicated in this annex, the City of Rowlett participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues.

According to the Texas Water Development Board there is only one property that is considered repetitive loss or severely repetitive loss property in the City of Rowlett.

Rowlett	Years	Properties	Number of losses	Payments
Single Family	2007	1	2	**$38,844.88**
Other Residential	-	-	-	-
Non Residential	-	-	-	-
Total		**1**	**2**	**$38,844.88**

Using this plan the City of Rowlett Park will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

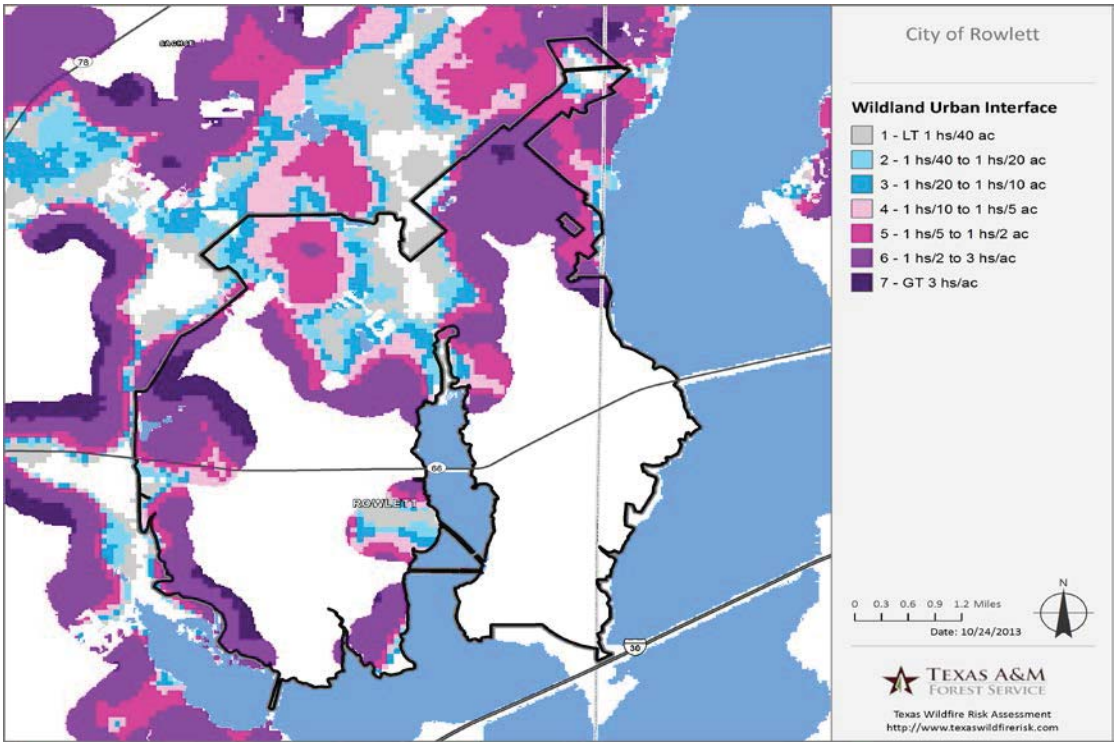
B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the WUI. The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas, nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service, an estimated 13,995 people or 25 percent of the total population of the City of Rowlett live within the WUI. **Map RW2** depicts WUI for the City of Rowlett.

A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the City of Rowlett ranges from Non-Burnable to Moderate.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analytical techniques based on established fire science.

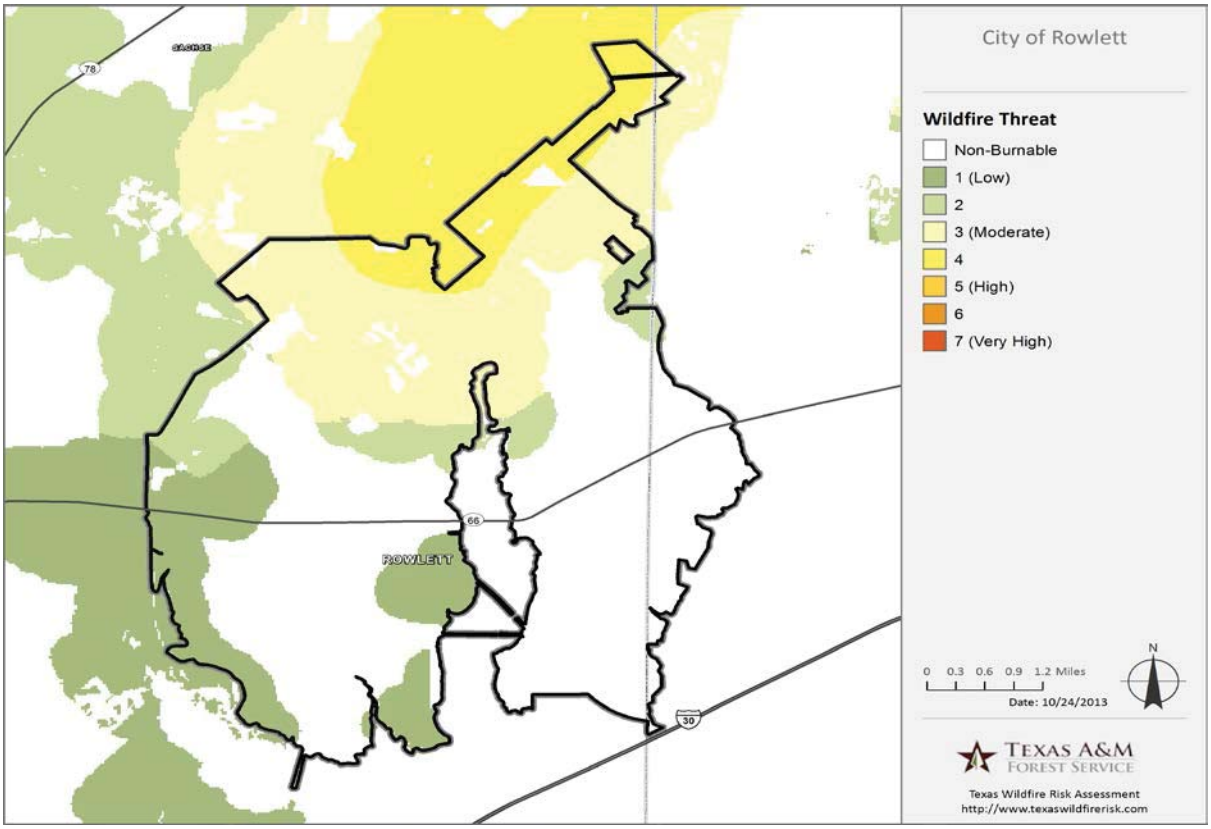
Map RW2: Wildland Urban Interface (WUI) for the City of Rowlett



The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since WFSI is consistently calculated for all areas in Texas, it is possible to compare and ordinate areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven classes. These are given general descriptions from Low to Very High threat. **Map RW3** depicts the wildfire threat for the City of Rowlett. (SEPARATE) The Wildfire threat map is derived at a 30 meter resolution, in order to maintain consistency with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site-specific analysis, this resolution is appropriate for regional, county or local mitigation or prevention planning.

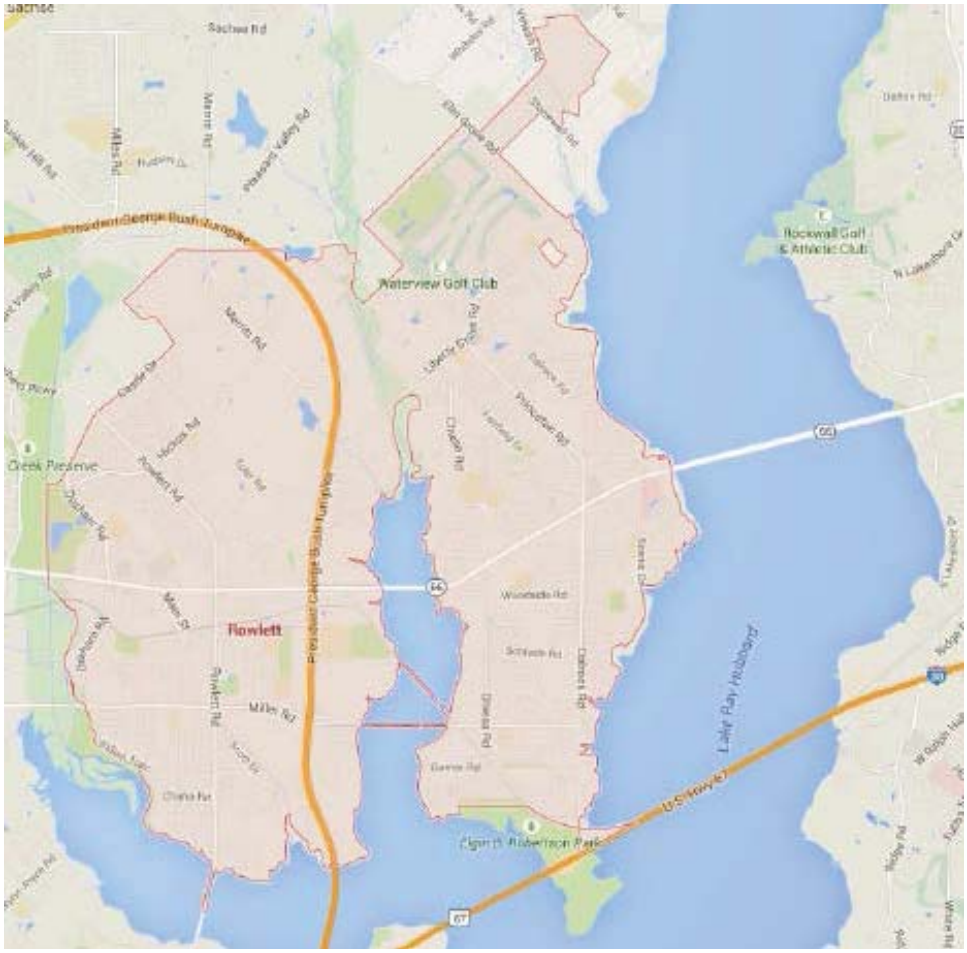
Map RW3: Wildfire Threat for the City of Rowlett



C. Dam and Levee Failure: Neither dams nor levees currently exist within the City of Rowlett and therefore not at risk of any dam failure. Rockwall-Forney Dam, also referred to as the Lake Ray Hubbard, is located Eastern and Southern boundaries of the City of Rowlett and is classified as a high hazard dam. The Dam extends into four counties of Dallas, Kaufman, Collin, and Rockwall, on the East Fork Trinity River, a tributary of the Trinity River. The dam is owned and maintained by the City of Dallas. **Map RW4**, depicts the location of Lake Ray Hubbard in relation to the City of Rowlett. The risk of flooding from this lake as a result of dam or levee failure is low since the dam spillway is located on the southern end of the lake and flows south down of the East Fork of the Trinity River

The extent of a failure of Lake Ray Hubbard Dam to the City of Rowlett has not been determined. As a result the city has cited a deficiency of data as there is no data on the inundation levels. The City of Rowlett does not own or maintain any data that would show the extent of a dam failure. The city has identified a mitigation action that involves conducting a study and working with the owner and operator of the dam to get a better understanding of the hazard and extent of inundation that it faces in the event of a dam failure.

MapRW4: Location of Lake Ray Hubbard



D. Stream Bank Erosion: Stream channels are eroded by the energy of flowing water. The two types of stream bank erosion are the surface erosion of channel bank material and mass wasting. Surface erosion is the removal of individual soil particles due to the tractive force of water. Mass wasting is defined as a structural failure of a section of the stream bank, which can be caused by undercutting due to surface erosion.

Stream bank erosion occurs when development of the contributing watershed results in increased impervious area, reduced infiltration, increased runoff, and increased flood frequencies. These subsequent higher peak flows and velocities impart a greater tractive force on the stream bank, which results in a higher erosion rate than the stable pre-development rate

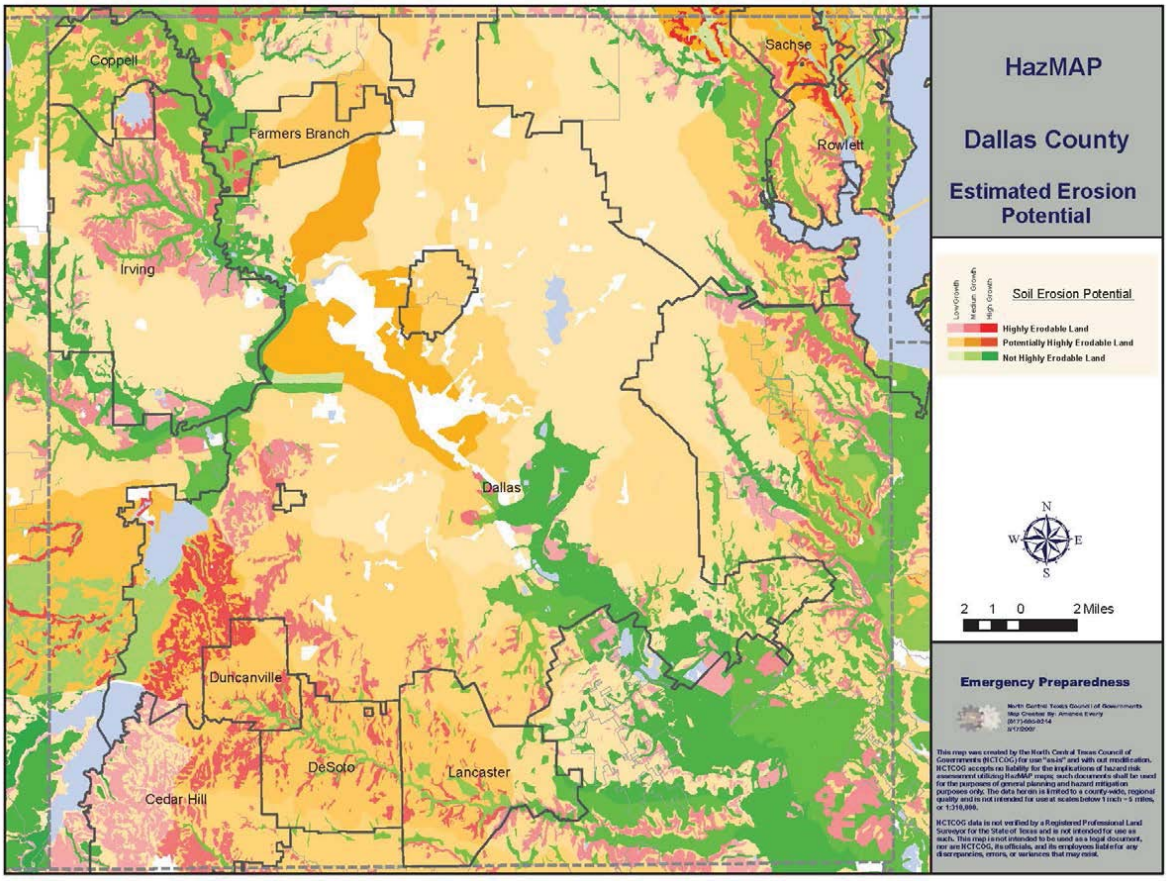
The City of Rowlett is affected by stream bank erosion and has areas that are classified as highly erodible land. The city has identified mitigation action items to address this issue. **Map RW5,** depicts estimated erosion potential in the City of Rowlett and Dallas County. However, it is noted that there a data deficiency in Stream Bank Erosion in Dallas County and the City of Rowlett.

Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs

would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

E. Earthquake: Earthquakes in the City of Rowlett is considered as a low risk threat. Earthquakes have only been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. Additionally there is currently not a significant amount of data for earthquakes in Dallas County and will need to be researched and studied. No data to support the change of building codes and engineering standards for high magnitude levels that can affect buildings, transportation routes, and pipelines. A data deficiency is being cited for earthquake hazard for the City of Rowlett.

MapRW5: Estimated Erosion Potential for Dallas County



Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Rowlett. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates.
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. All the population of City of Rowlett is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Rowlett. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Rowlett.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Rowlett.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Rowlett.
Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of City of Rowlett is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Rowlett due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Rowlett are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Rowlett are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Rowlett are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Rowlett is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $3,000 of property damage has been recorded due to high wind events in the City of Rowlett. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Rowlett are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Rowlett are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Rowlett are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Rowlett have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been reported as a result of lightning in the City of Rowlett. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Rowlett are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Rowlett are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Rowlett are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Rowlett. All the population of City of Rowlett is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Rowlett. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Rowlett are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Rowlett are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Rowlett are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Rowlett is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage was reported for City of Rowlett. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Rowlett indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Rowlett are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Rowlett are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Rowlett are exposed to this hazard.

Wildfire	
Population	Based on geographical data 25% of the population in City of Rowlett lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved properties within the WUI area of the City are exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	According to National Climatic Data Center (NCDC), $150,000 of property damage was reported as a result of flooding in the City of Rowlett.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event.

Changes in Population and Development

The City of Rowlett participated in the 2009 Dallas County Hazard Mitigation Action Plan. Table 3.1 shows that the population for the city grew from 56,199 to 56,450, an increase of 0.45%.

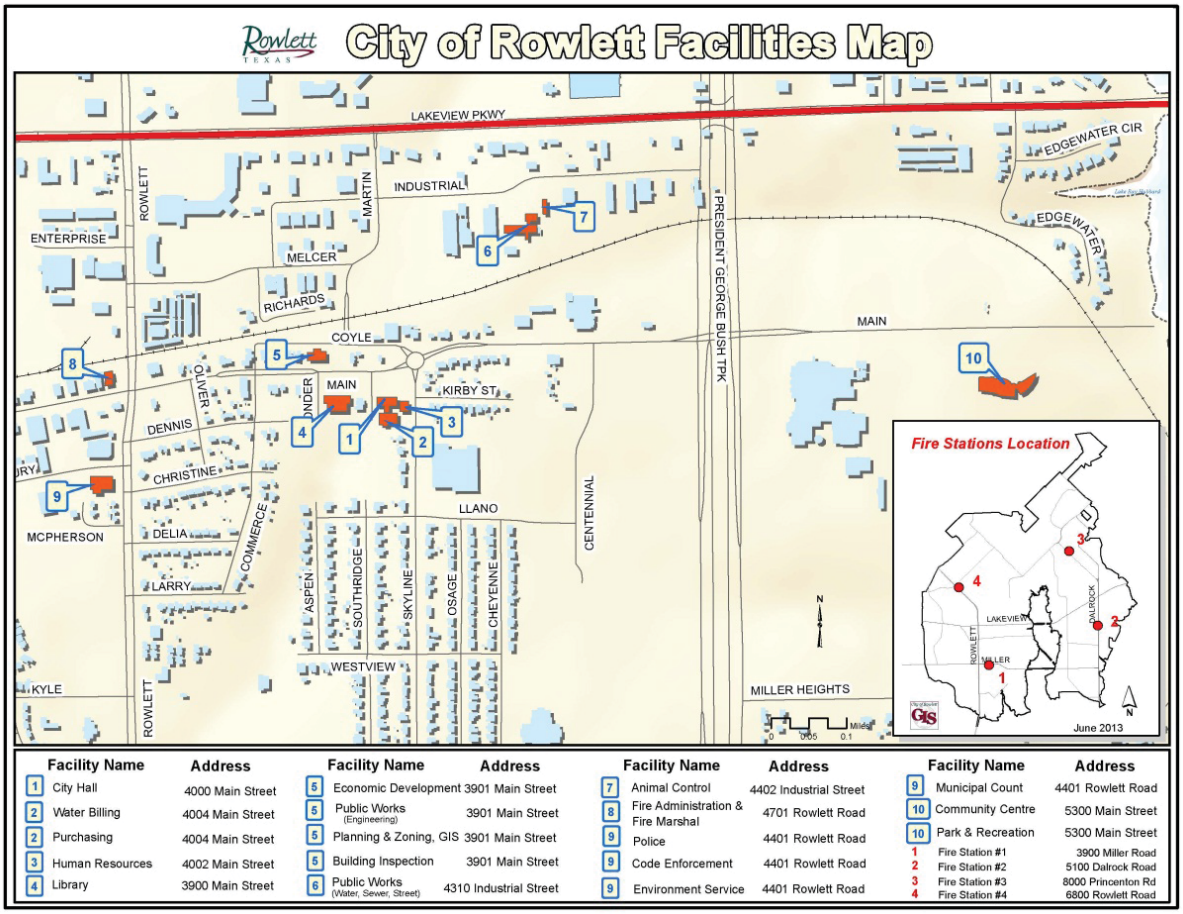
New housing developments increased by 457 new units between 2008 and 2014. Commercial developments also increase by 48 units. Major structural and economic development, include DART Train Station, Wal-Mart, and ExpoCenter and Plaza. No new developments have been built in floodplains.

To help mitigate the impacts of the hazards identified the City of Cedar Hill has identified varies mitigation strategies to lower the vulnerability on the population and property from the natural hazards identified. These include establishing additional natural system protection programs, adopted stricter rules and regulations such as the 2012 International Building and Fire Code Standards and expand education and awareness programs.

The following tables and maps below provide a summary inventory of essential infrastructure and facilities in the City of Rowlett.

Essential / Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	32.91827487 -96.50842376	1
Schools	32.89061337 -96.52347629 32.92657998 -96.51806493 32.90876511 -96.53192065 32.88626252 -96.51910070 32.89441928 -96.56029999 32.90705890 -96.57264774 32.91344100 -96.52508923 32.88230167 -96.56789467 32.91312352 -96.53049827 32.93468007 -96.53916665 32.89907507 -96.52229091 32.90441414 -96.55929970 32.93416181 -96.53735933 32.92300139 -96.57869119 32.91130320 -96.56899462	15
Police Stations	32.90089400 -96.57033000	1
Fire Stations	32.89344459 -96.56520629 32.90685674 -96.51843953 32.93362262 -96.53003076 32.92149205 -96.57744705	4
Emergency Operations Facilities		1

Map RW6: City of Rowlett Facilities Map



Facility Name	Address
1 City Hall	4000 Main Street
2 Water Billing	4004 Main Street
2 Purchasing	4004 Main Street
3 Human Resources	4002 Main Street
4 Library	3900 Main Street

Facility Name	Address
5 Economic Development	3901 Main Street
5 Public Works (Engineering)	3901 Main Street
5 Planning & Zoning, GIS	3901 Main Street
5 Building Inspection	3901 Main Street
6 Public Works (Water, Sewer, Street)	4310 Industrial Street

Facility Name	Address
7 Animal Control	4402 Industrial Street
8 Fire Administration & Fire Marshal	4701 Rowlett Road
9 Police	4401 Rowlett Road
9 Code Enforcement	4401 Rowlett Road
9 Environment Service	4401 Rowlett Road

Facility Name	Address
9 Municipal Count	4401 Rowlett Road
10 Community Centre	5300 Main Street
10 Park & Recreation	5300 Main Street
1 Fire Station #1	3900 Miller Road
2 Fire Station #2	5100 Dalrock Road
3 Fire Station #3	8000 Princenton Rd
4 Fire Station #4	6800 Rowlett Road

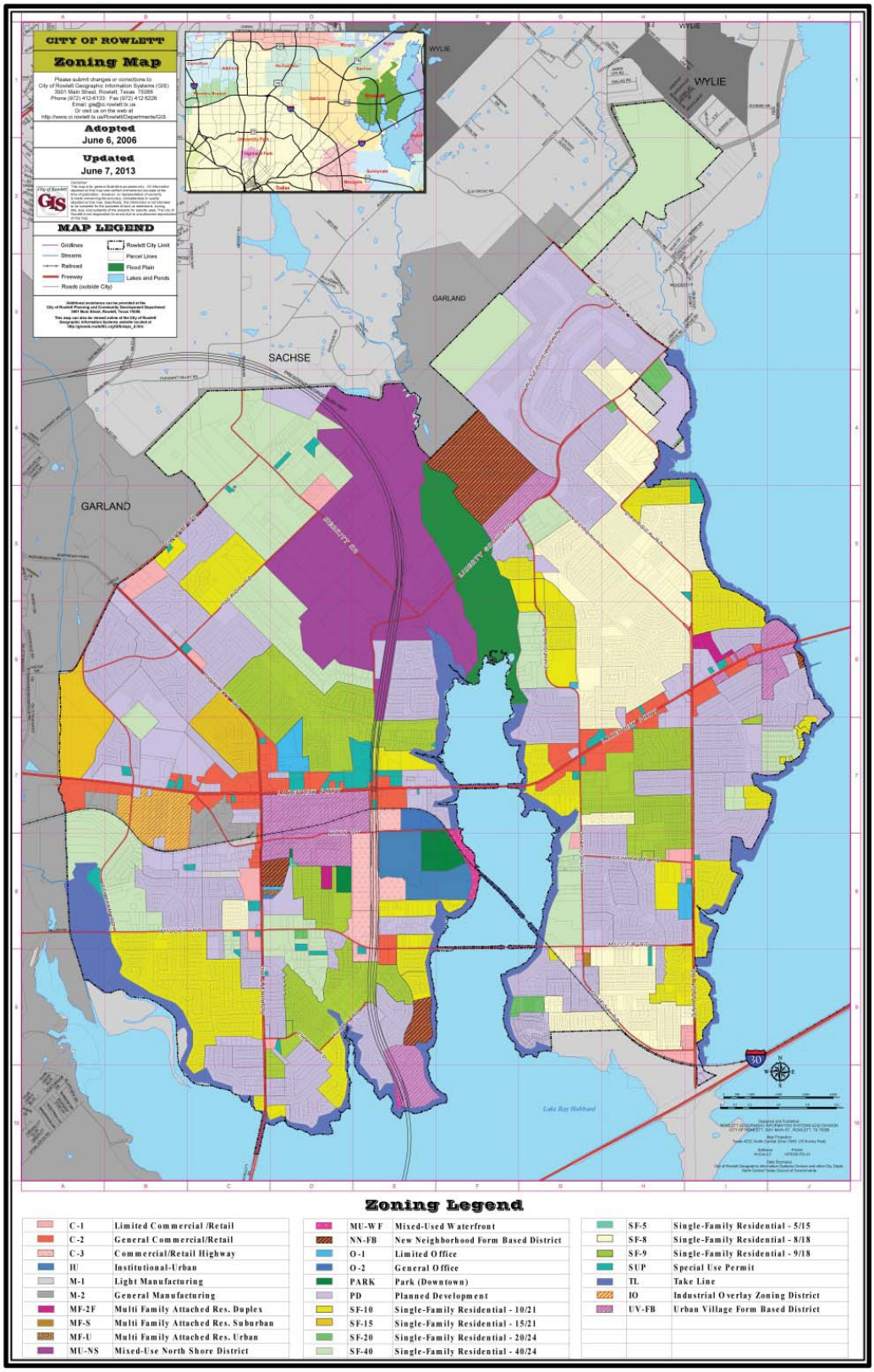
Structure / Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential (219)	$ 289,714,200.00	500	No
Commercial (44)	$ 630,535,000.00	500	No
Industrial	0	N/A	N/A
Government / Public	0	N/A	N/A

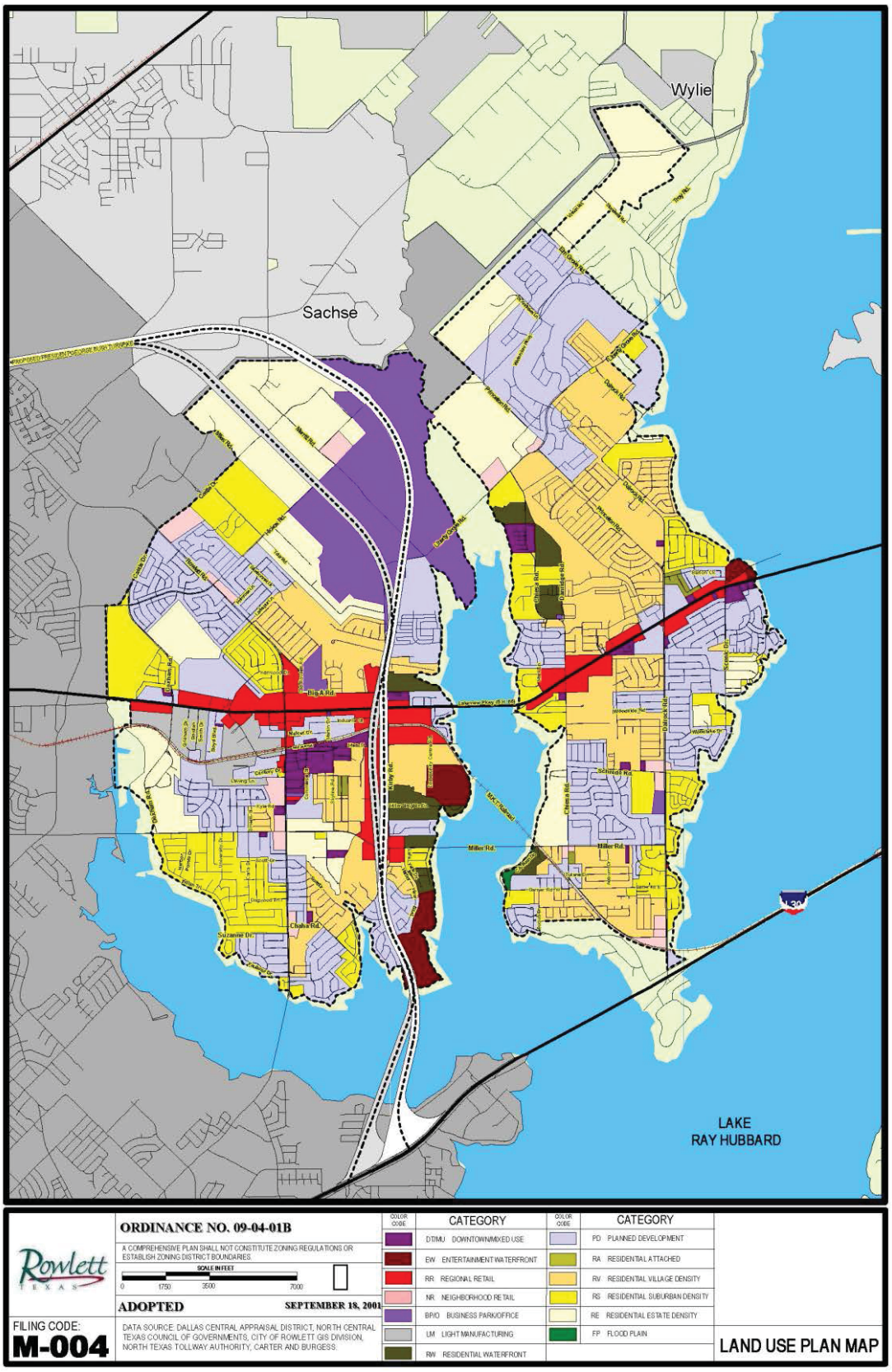
Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$636,567252.50	With	With	Low to Moderate
Commercial	$127,145,480.00	With	With	Low to Moderate
Government / Public	$6,382,954.00	Outside	With	Low

Map RW7: Zoning Map for the City of Rowlett



Map RW8: Land Use Map for the City of Rowlett



Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Rowlett.

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Rowlett

Rowlett Action Item	Retrofit Public Buildings and Critical Infrastructure: Improve wind engineering measures and construction techniques. This can include structural bracing, straps and clips, anchor bolts, laminated or impact-resistant glass, window shutters, or interlocking roof shingles. This can also include developing or installing water delivery systems to accommodate drought events
Hazard(s) Addressed	Tornado, high winds, hail, extreme heat, winter storm, drought, earthquake
Goal/Objective	3-A, 3-B
Priority	High
Estimated Cost	$5 Million
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	Within 2 years of funding
Effect on Old Buildings	Old buildings will be retrofitted to reduce future damage from severe weather
Effect on New Buildings	New buildings will meet the new requirements when being constructed
Cost Effectiveness	The cost of the is much less than the benefit
Discussion	Retrofitting public buildings and critical infrastructure to FEMA 361 standards will help mitigate the loss of life and property

Rowlett Action Item	Incorporate of drought tolerant, fire resistant and xeriscaping practices for existing and new city facilities
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire.

Rowlett Action Item	Establish city parks along low-lying adjacent to Lake Ray Hubbard. Capital Improvement Plan, City of Rowlett Park and Open Space Master Plan, and building restrictions to reduce losses and repetitive damage
Hazard(s) Addressed	Flooding
Goal/Objective	5-C
Priority	High
Estimated Cost	Unknown - To be determined
Potential Funding Sources	Currently some Capital Improvement Programs funding has been allocated to these projects
Lead Department	Public Works, Parks and Recreation and Emergency Management
Implementation Schedule	Within in two year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	Developing an open space reuse, and preservation plan provides the city with preserve the floodplain as an Open Space for recreational use

Rowlett Action Item	Increase drainage capacity and redirect storm drain systems at Gardner Road, Chiesa Stream, and Waynes Way (228). This will improve and redirect storm drain systems in these areas
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Goal/Objective	1-A
Priority	High
Estimated Cost	$1.1 Million
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	Within one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	Following heavy rainfall flooding and erosion occur in developed areas particular along the roadways. Stormwater management projects that can prevent this include dimensions of drainage culverts in flood-prone and stream restoration to ensure adequate drainage and diversion of stormwater

Rowlett Action Item	Implement the Texas Individual Tornado Safe Room Rebate Program
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Rowlett Fire Department, Department of Building and Code in conjunction with North Central Texas Council of Governments
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to 3,000 possible rebates, following the procedures in the Metro Safe Room Rebate Program lead by the North Central Texas Council of Governments

Rowlett Action Item	Installation of grouted rip rock and regaining of bank areas in Lakecrest II, Meadowlark, Blue Quail, and Bob White Streets along Chiesa Stream (227)
Hazard(s) Addressed	Flooding, Stream Bank Erosion
Goal/Objective	1-B
Priority	Medium
Estimated Cost	$700,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective

City of Rowlett	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Rowlett Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Rowlett Action Item	Conduct studies to develop dam inundation maps for Lake Ray Hubbard to determine the level of risk and extent of the hazard to the City of Rowlett. These studies will be done in coordination with the owners and operators of the dams. Data obtained from the studies will assist the city in developing the most appropriate mitigation actions to save lives and property.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levee's.
Discussion	As noted in this annex a data deficiency was identified for Lake Ray Hubbard. Such a study can include procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

City of Rowlett	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion and its effect on the community. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion for the City of Rowlett

Rowlett Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Rowlett Action Item	Purchase Lightning Prediction Systems for Wet Zone (water park), Community Park (baseball and golfing facilities), and Springfield Park
Hazard(s) Addressed	Lightning
Goal/Objective	2-D
Priority	High
Estimated Cost	$25,000
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Parks and Recreation
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during weather conditions that comes with lightning.

Rowlett Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	Currently in progress and will continue indefinitely
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Plan Maintenance

This section sets the intention for the City of Rowlett to monitor, evaluate, and update this plan on a regular basis.

The City of Rowlett's Emergency Management Division, through the Fire Rescue Department, will be responsible for ensuring that this annex section is monitored on an ongoing basis. The Emergency Management Coordinator will lead the monitoring, evaluation and update efforts of the plan.

The city will continue to actively participate in the Dallas County Emergency Management Coordinators (EMC) meetings, which will serve as a venue for revisiting the Dallas County HazMAP.

Rowlett Fire Rescue Department will call the Rowlett Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During these meetings, the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Rowlett Fire Department will report the outcomes of the HMPT meetings to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Rowlett City Council. The Rowlett Hazard Mitigation Team will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters, legal changes, and other events affecting the City of Rowlett may trigger a meeting of the Rowlett Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Rowlett is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Rowlett will be a strong advocate for jurisdictions within the Dallas County to continue working together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide an opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Rowlett will engage stakeholders in community emergency planning.

Plan Incorporation

In the 2009 HazMAP adopted by the City of Rowlett, the city indicated that it reviewed various plans and documents including the strategic plan, city ordinances, and Capital Improvements Plan 2005-2006 (CIP). These plans were again reviewed and used during the hazard mitigation planning process. More recently the city also conducted a Water, Wastewater & Roadway 2013 Impact Fee Study. The study referenced the CIP which identifies the city-funded transportation projects to accommodate the projected growth within the city. The CIP for roadway impact is made up of:

- ✓ Recently completed projects with excess capacity available to serve new growth;
- ✓ Projects currently under construction and;
- ✓ Remaining projects needed to complete the city's Master Thoroughfare Plan.

The report is detailed to include arterial and collector facilities. The report shows the length of each project as well as the facility's classification.

Reviewing all these plans provided city department coordination and hazard mitigation team direction as a city-wide comprehensive approach to mitigation planning. This provided a foundation for mitigation planners to guide direction towards goals and objectives and identifying action items.

The table below illustrates the integration process of this plan into other city documents and plans.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Rowlett	City Council, Budget and City Manager	Budget Meetings	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	City Engineer	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council, Capital Improvement Program, Planning and Community Development	Capital improvement plans	As needed	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Utilities/ Customer Service Department	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Meeting Documentation

c. Outreach Materials

d. References

Appendix RW A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Probability Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Impact Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Rowlett
Hazard Identification and Risk Assessment (HIRA)
Date: **September 5, 2013**

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	3	3	1	4	1	6	50.0%
Hail	4	4	3	3	1	4	1	6	50.0%
Lightning	4	4	2	2	1	3	1	5	40.0%
Winter Storms	3	2	2	3	2	3	1	6	50.0%
Tornado	2	1	2	4	3	4	2	9	44.0%
Flooding	4	4	1	1	2	3	2	7	14.0%
Pandemic/Public Health Emergency	4	3	1	1	4	1	3	8	13.0%
Extreme Temperatures/Heat	4	4	3	3	2	2	1	5	60.0%
Hazardous Materials Incidents Nuclear /Radiological	3	3	1	1	1	2	3	6	20.0%
Wildfire	2	2	2	2	1	2	3	6	33.0%
Utility Failure	2	2	3	3	1	2	3	6	100.0%
Energy/Fuel Shortage	1	1	1	1	2	1	2	5	20.0%
Terrorist Attack	1	1	1	1	1	2	1	4	30.0%
Urban Fire	2	1	2	4	1	1	1	3	130.0%
Earthquake	1	1	1	1	1	1	3	5	20.0%
Levee/Dam Failure	4	2	1	2	2	4	2	8	30.0%
Drought	4	4	4	4	3	3	2	8	50.0%
Aircraft Accident	1	1	4	4	4	2	2	8	50.0%
Stream Bank Erosion	4	2	1	2	2	4	2	8	30.0%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	2	1	1	2	2	2	2	6	30.0%
Civil Disorder	1	1	1	1	1	1	1	3	30.0%

NB: This City of Rowlett HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

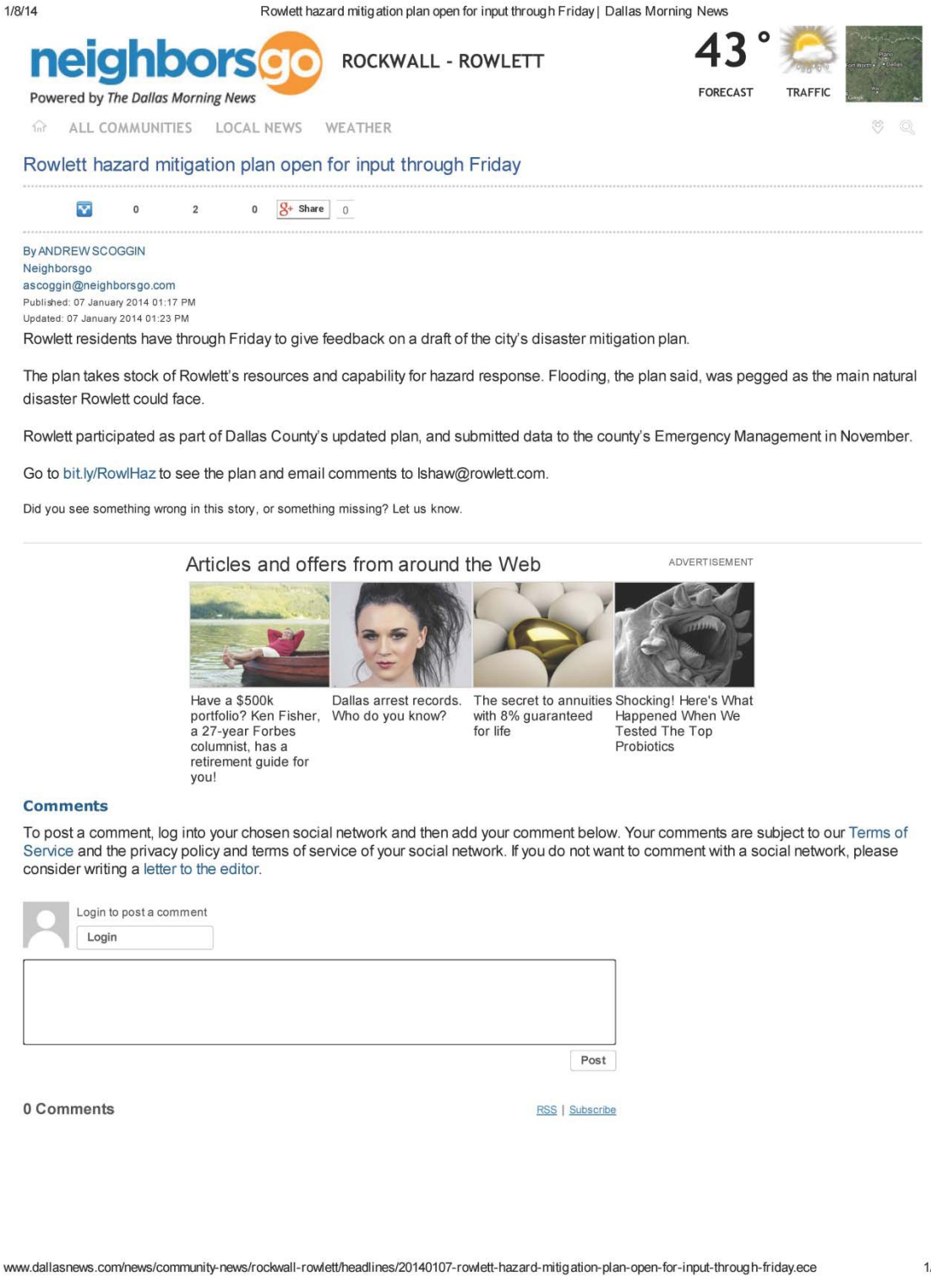
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3

Appendix RW B-1: Support Documentation & Outreach Materials



1/8/14 Rowlett hazard mitigation plan open for input through Friday | Dallas Morning News

neighborsgo Powered by The Dallas Morning News ROCKWALL - ROWLETT

43° FORECAST TRAFFIC

ALL COMMUNITIES LOCAL NEWS WEATHER

Rowlett hazard mitigation plan open for input through Friday

0 2 0 Share 0

By ANDREW SCOGGIN
Neighborsgo
ascoggin@neighborsgo.com
Published: 07 January 2014 01:17 PM
Updated: 07 January 2014 01:23 PM

Rowlett residents have through Friday to give feedback on a draft of the city's disaster mitigation plan.

The plan takes stock of Rowlett's resources and capability for hazard response. Flooding, the plan said, was pegged as the main natural disaster Rowlett could face.

Rowlett participated as part of Dallas County's updated plan, and submitted data to the county's Emergency Management in November.

Go to bit.ly/RowlHaz to see the plan and email comments to lshaw@rowlett.com.

Did you see something wrong in this story, or something missing? Let us know.

Articles and offers from around the Web ADVERTISEMENT

Have a $500k portfolio? Ken Fisher, a 27-year Forbes columnist, has a retirement guide for you!

Dallas arrest records. Who do you know?

The secret to annuities with 8% guaranteed for life

Shocking! Here's What Happened When We Tested The Top Probiotics

Comments

To post a comment, log into your chosen social network and then add your comment below. Your comments are subject to our Terms of Service and the privacy policy and terms of service of your social network. If you do not want to comment with a social network, please consider writing a letter to the editor.

Login to post a comment
Login

Post

0 Comments RSS | Subscribe

www.dallasnews.com/news/community-news/rockwall-rowlett/headlines/20140107-rowlett-hazard-mitigation-plan-open-for-input-through-friday.ece 1/1



'sgo
coverage,
l look for it
he Dallas

st, Riverside
e Trinity Riv-

h Shamburger

DALLAS

places
njured

e displaced by
sday evening,

ace communi-
ark Lane near
Webb Chapel
out 5:45 p.m.,
kesman Jason
irefighters re-

ed significant
vans said. The
ing on the sec-
through the at-

No injuries were reported. The American Red Cross was on scene to help those who were displaced.

Julie Fancher

PLEASANT GROVE

Police say man forced woman into prostitution

A Dallas man was arrested Tuesday after police say he forced a 28-year-old woman into prostitution.

KEVIN SHERWOOD

Kevin Sherwood, 38, is charged with compelling prostitution by force or threat. He was in the Dallas County Jail in lieu of $50,000 bail.

Undercover officers were investigating reports of prostitution around 2:40 p.m. Tuesday in the 300 block of St. Augustine Road in Pleasant Grove. A Killeen woman told officers Sherwood forced her to prostitute herself and give him the money she earned, according to a police report.

Sherwood, who has an extensive criminal record, was arrested shortly after. He previously pleaded guilty to a murder charge in 2007. He was sentenced to eight years in prison.

Tasha Tsiaperas

ROWLETT

Friday is last day to give input on city's disaster plan

Residents have through Friday to give feedback on a draft of the city's disaster mitigation plan. The plan is at bit.ly/RowlHaz. Send feedback to lshaw@rowlett.com.

Andrew Scoggin

SOUTH DALLAS

2-year-old in CPS custody after being found on street

A 2-year-old child was in Child Protective Services custody after a motorist discovered the toddler running down a street early Wednesday.

At 2:15 a.m., the driver saw the child near a convenience store in the 3500 block of Hatcher Street near South Second Avenue and Scyene Road. The driver picked up the child and called police.

Police said they searched the area for a guardian without success.

At 7:25 a.m., police received a call about a missing child in the same area. Officers talked to the caller, but the toddler was still in CPS custody Wednesday evening.

No arrests had been made.

Claire Z. Cardona

BRIEFS

Rockwall council initially OKs e-cigarette sales to minors ban

The Rockwall City Council moved forward Jan. 6 with a ban on e-cigarette sales to minors.

Council members voted 5-1, with Mayor Pro Tem David White the lone dissenting vote. Council member Jim Pruitt, who previously voiced concerns about potential restrictions, did not attend the Jan. 6 meeting.

The council is set to vote on final approval of the ban at its next meeting Jan. 21.

Rockwall would join other area cities in regulating e-cigarettes. Murphy prohibits sales to and possession by minors, while Richardson requires a special permit for e-cigarette businesses. Mansfield recently enacted a six-month moratorium on such shops.

Andrew Scoggin

Rowlett hazard mitigation plan open for input through Friday

Rowlett residents have through Friday to give feedback on a draft of the city's disaster mitigation plan.

The plan takes stock of Rowlett's resources and capability for hazard response. Flooding, the plan said, was pegged as the main natural disaster Rowlett could face.

Rowlett participated as part of Dallas County's updated plan, and submitted data to the county's emergency management in November.

Go to bit.ly/RowlHaz to see the plan and email comments to lshaw@rowlett.com.

A.S.

Wednesday, Saturday pickups added for winter storm debris

Waste Management will collect tree limbs and brush Wednesdays and Saturdays for Rowlett residents still cleaning up from last month's ice storm.

Scheduling is not required. Large brush piles can be put on the curb for pickup, while smaller piles can be collected in alleys with regular trash service.

The city said the extra services will continue until all storm debris has been collected.

A.S.

Rockwall parks department to host father-daughter dance

Registration is open for a father-daughter dance from 6 to 9 p.m. Jan. 25 hosted by the Rockwall parks department.

The dance, at the Hilton Dallas/ Rockwall Lakefront, costs $69, and $45

for residents, with a $15 fee f ditional child. Registration c pleted at The Center, 108 E. W St. in Rockwall.

Call 972-771-7761 to check a

Rowlett Mayor's State City address set for Jan

Rowlett Mayor Todd Gott his annual St City address a Jan. 21 befor Council.



Todd Gottel

The preser incides with t regular meeti Hall, 4000 M

The meeti aired live on Rowlett's cable a nel, RTN16, and streamed at ro

Rockwall trustees OKs ahead of IB program's

The Rockwall ISD Board recently approved changes to ferings for eighth through 1 next year as it prepares to en ternational Baccalaureate pro

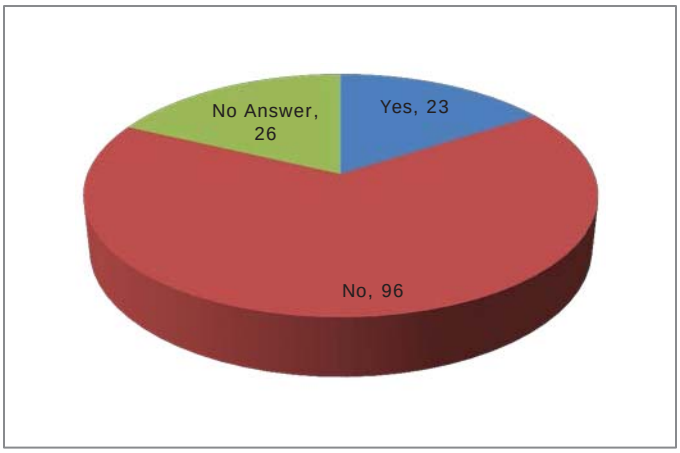
The nine IB courses will pending the district's accepta educational foundation. The proved five other new classe

Appendix RW C-1: City of Rowlett Survey Reponses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

- ✓ 145 total responses submitted from City of Rowlett residents and businesses

2. Have you ever experienced or been impacted by a disaster?

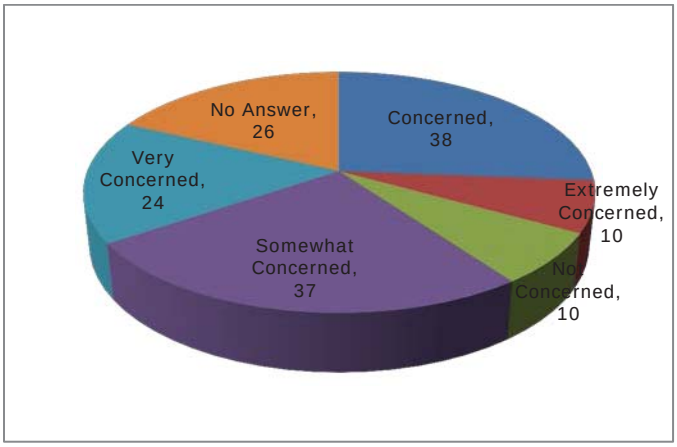


If yes, please indicate what the hazard you have endured and where and when it occurred.

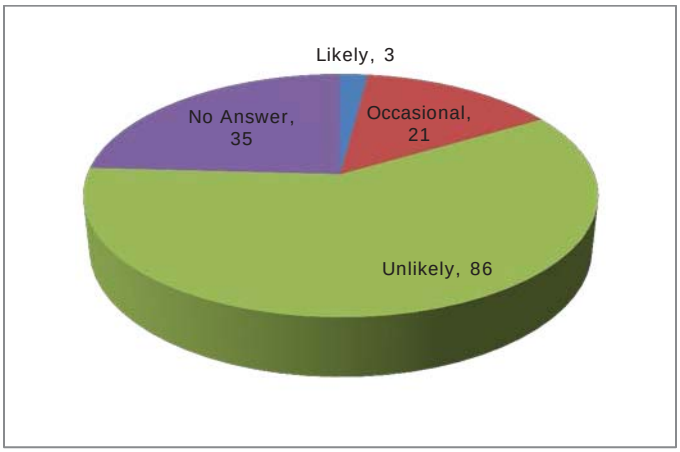
- ✓ *"1977 Johnstown, Pa. flood. Loss of two cars, household items, house damage from flood waters."*
- ✓ *"As a Chaplain, I have walked with people through various disasters."*
- ✓ *"blackout"*
- ✓ *"Drought conditions have affected the quality of recreational experiences on our lake, caused soil shifting (building foundation problems) and the loss of yards, gardens and trees in our area."*
- ✓ *"Fire next door"*
- ✓ *"Flooding approximately 10 years ago"*
- ✓ *"Flooding- Garland, Texas 1972"*
- ✓ *"Hail damage to personal property (Car, roof, fence) Wind damage during t-storm (fence, trees)"*
- ✓ *"Hurricane Katrina in Louisiana."*
- ✓ *"Hurricane- Puerto Rico, New Orleans, Florida Tornado- Lancaster, TX"*
- ✓ *"I responded as a CERT member to the tornadoes in Lancaster in 2012"*
- ✓ *"Multiple hurricanes in S Padre Island and aid for multiple tornadoes in N Texas"*
- ✓ *"Multiple storms, Rowlett"*
- ✓ *"Omaha NB 1976 Tornadoes and blizzards; Houston TX various hurricanes and flooding including Alisha in 1980s, others in 1990s and early 2000s; Memphis, TN straight line winds in 2004."*

- ✓ *"Snow/ Ice - Loss of utilities & Public services"*
- ✓ *"Straight line winds took down trees on high tension lines. City flooding due to 13 inches of rain in 24 hour period."*
- ✓ *"Street flooding"*
- ✓ *"Tornado"*
- ✓ *"Tornado - Lubbock, Texas"*
- ✓ *"Tornado, Prairie View, TX, 1983 Sand Storm, Death Valley, CA, 1973 Tornado, Wichita, KS, 1959"*
- ✓ *"Tornadoes around area 2012"*
- ✓ *"Wind Storm"*

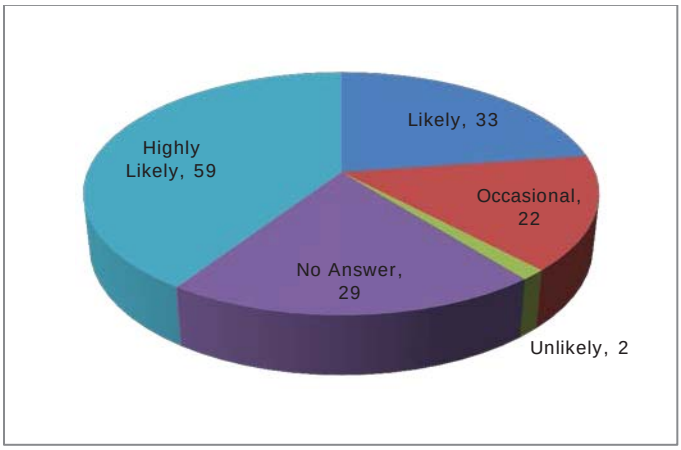
3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



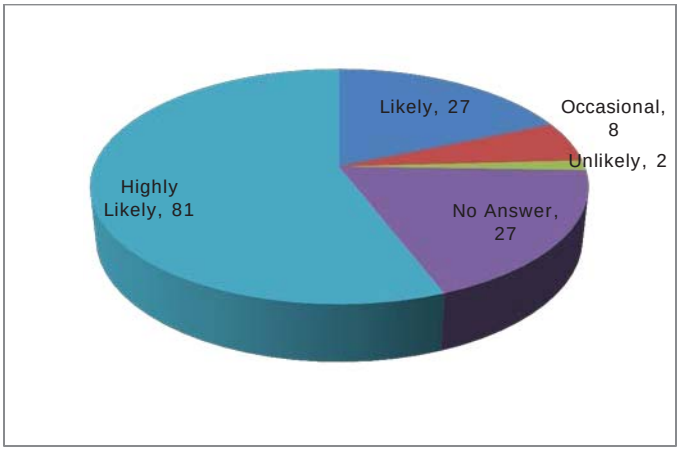
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.
Earthquakes:



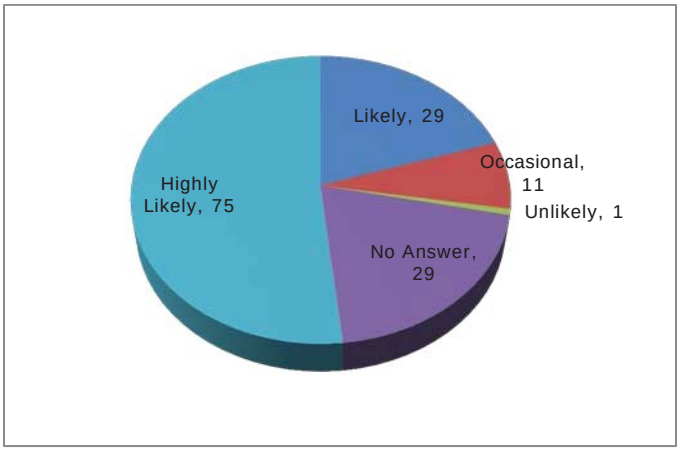
Tornado:



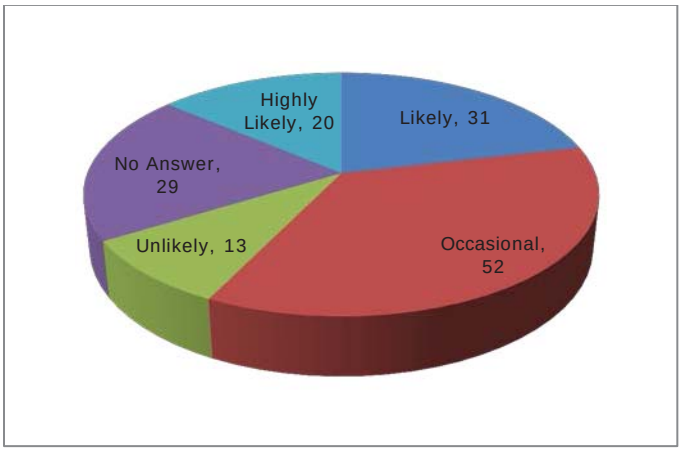
Hail:



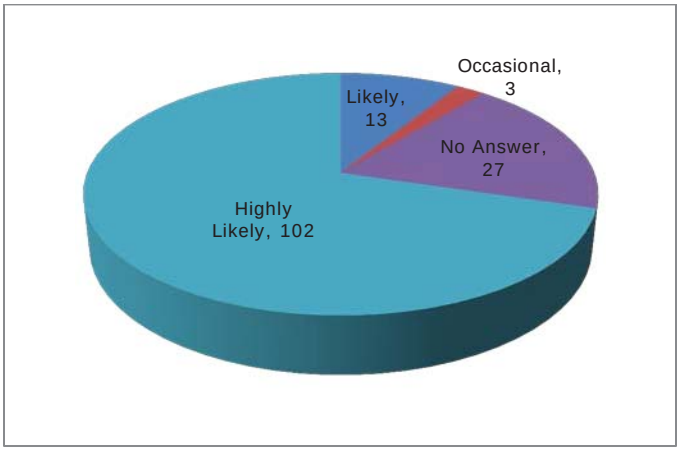
High Winds:



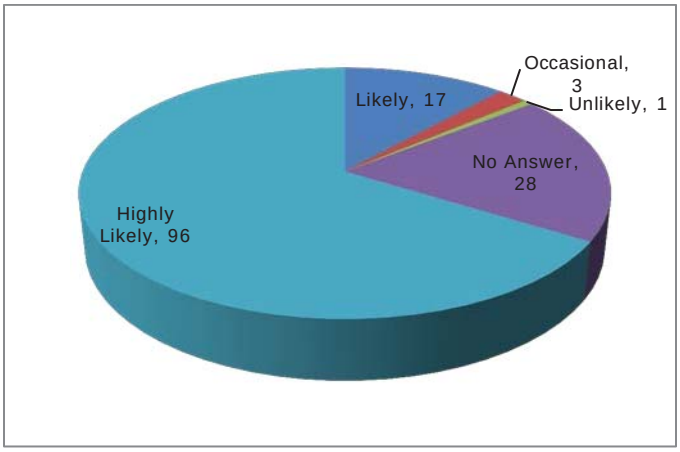
Winter Storms:



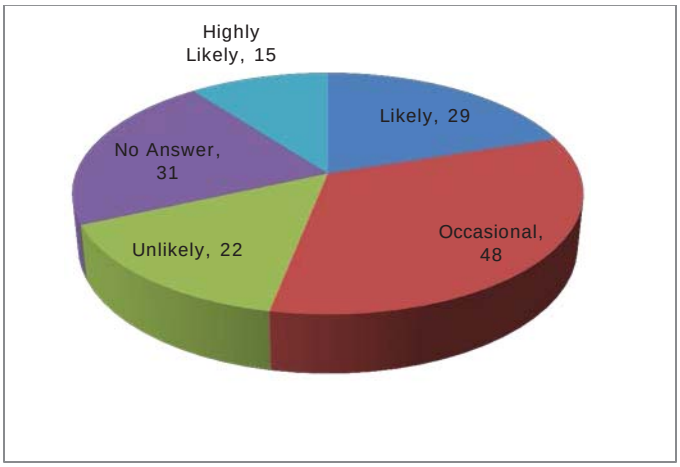
Extreme Heat:



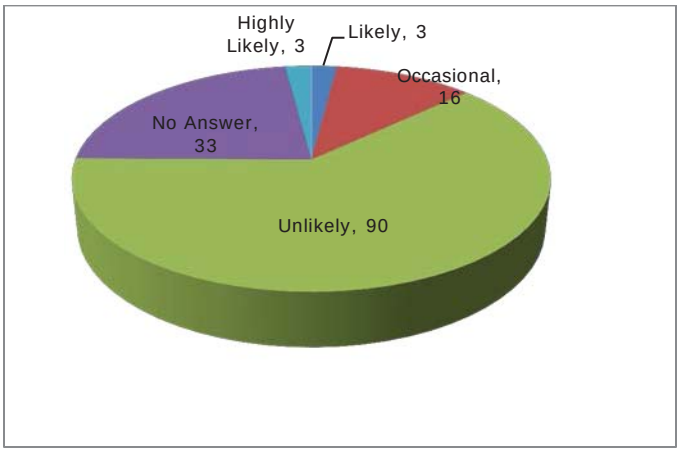
Drought:



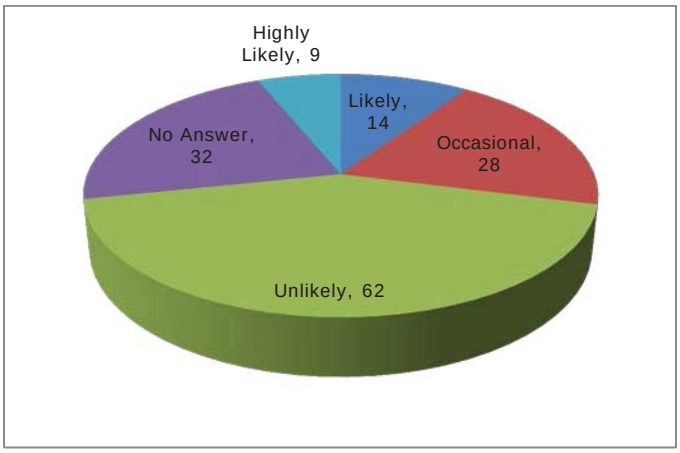
Flooding:



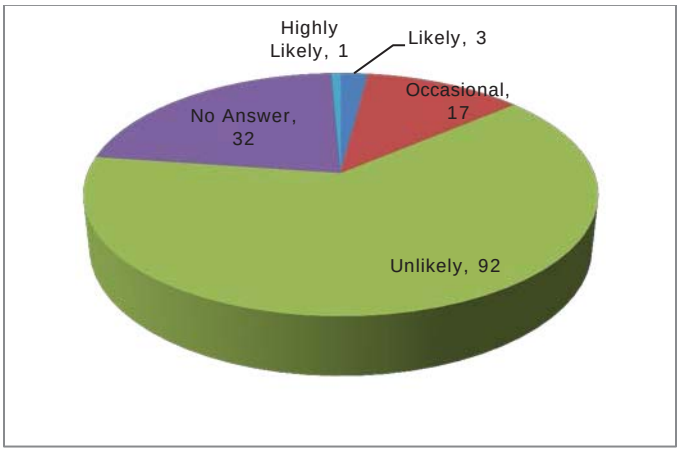
Dam Failure:



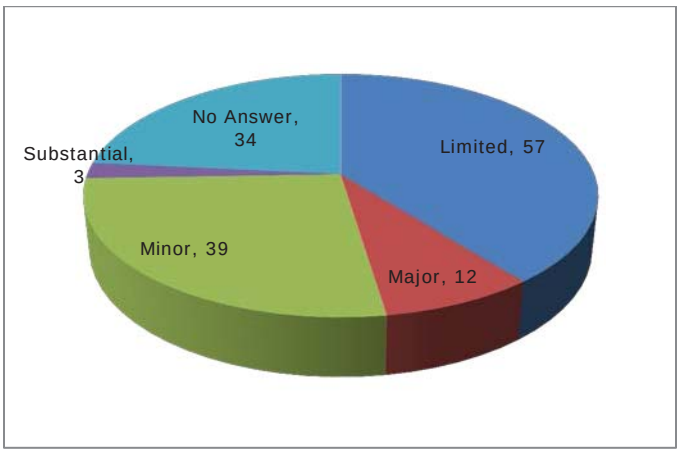
Stream Bank Erosion:



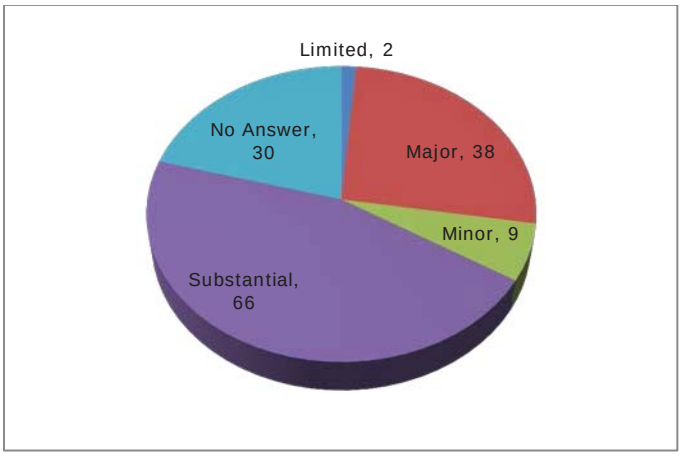
Levee Failure:



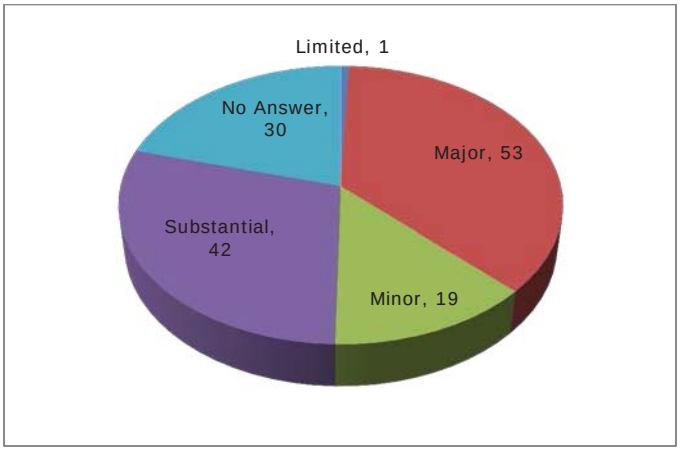
5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.
Earthquakes:



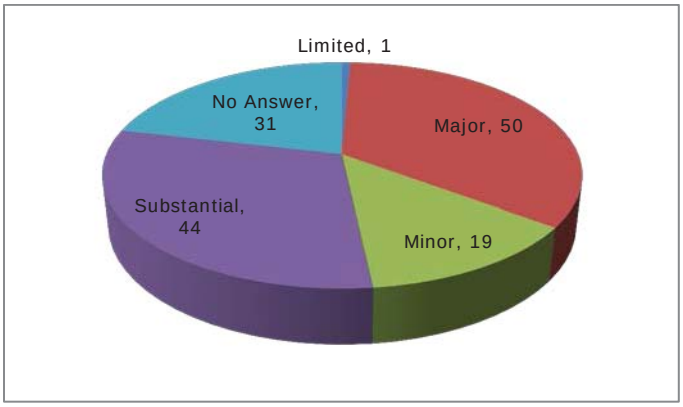
Tornado:



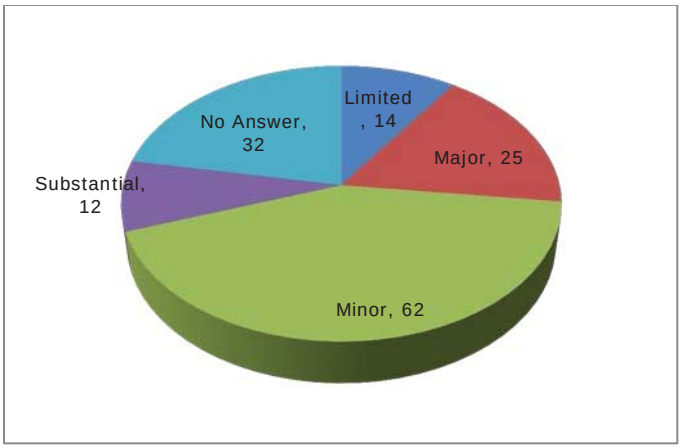
Hail:



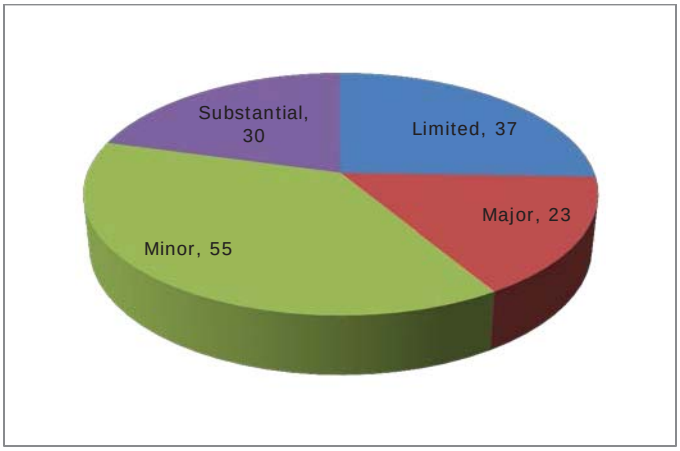
High Wind:



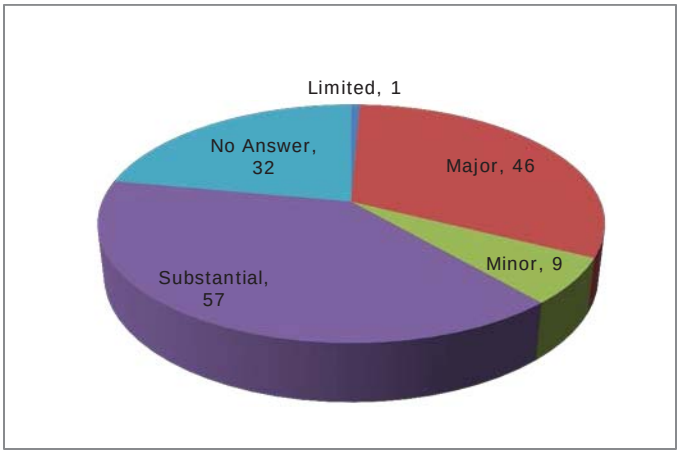
Winter Storms:



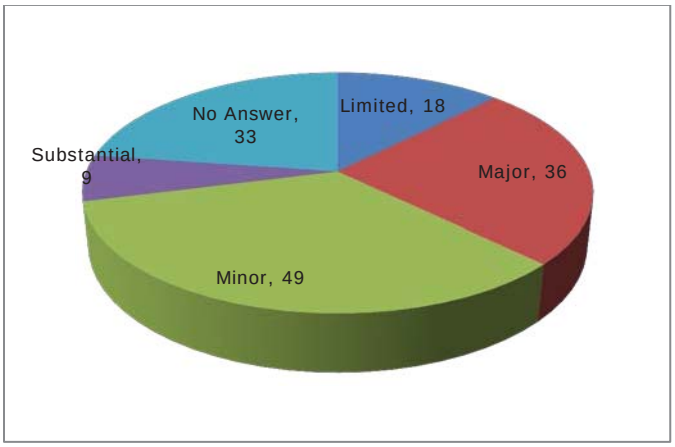
Extreme Heat:



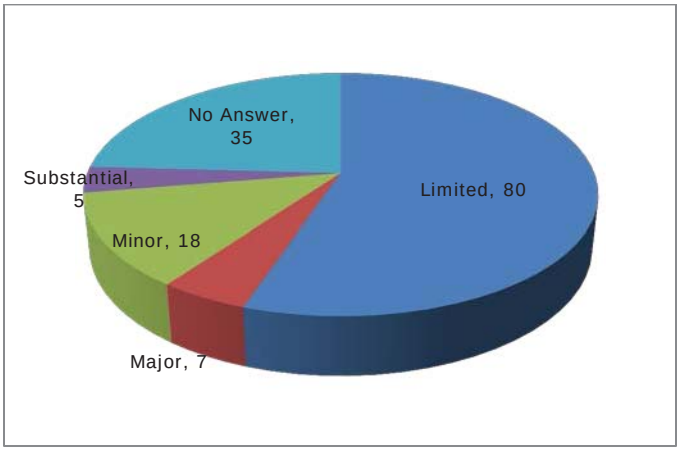
Drought:



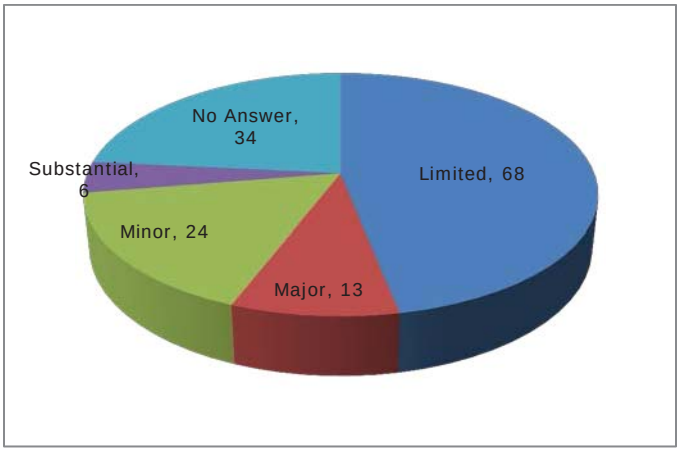
Flooding:



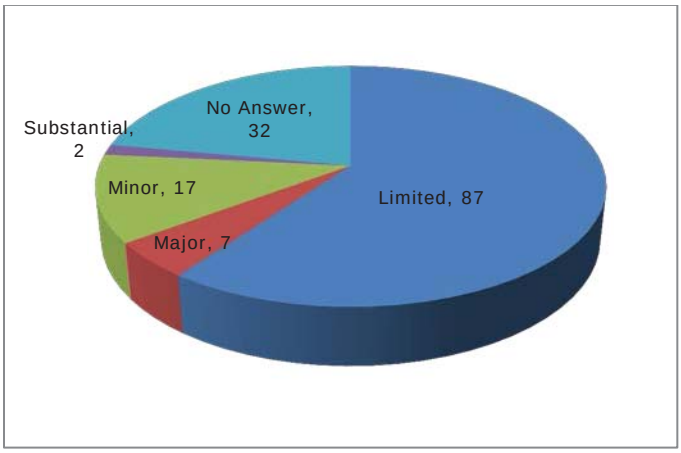
Dam Failure:



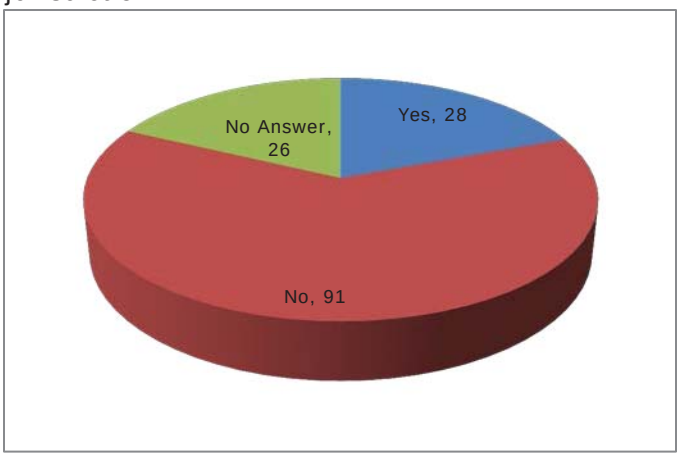
Stream Bank Erosion:



Levee Failure:



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

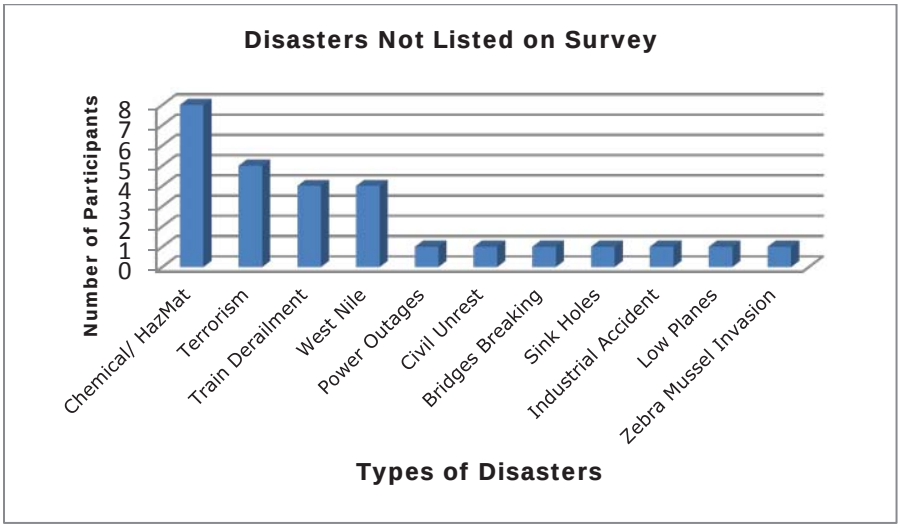


If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ *"Are you only planning for "natural" disasters as opposed to man-made disasters such as terrorism attacks on public water supplies or electric plants?"*
- ✓ *"Chemical leaks/explosions. Whether an accident occurs during transportation of hazardous material or local chemical plants leaks."*
- ✓ *"Chemical spills on the highway or on the bridge over Lake Ray Hubbard-Occasional and Severe"*
- ✓ *"Domestic or foreign terror attack - Medium - High Power grid failure (natural or man-made) - Medium - High Communication(s) failure - Medium - High Domestic unrest - Medium – High"*
- ✓ *"Fire high likely"*
- ✓ *"Fire/Wildfire - Likely, High"*
- ✓ *"Fires due to some of the above mentioned hazards."*

- ✓ *"Hazardous Chemical Spills - (Occasional), (High), (High)"*
- ✓ *"Hazardous materials impact due to rail and GBTP corridor. Hazardous materials in light industrial corridor. Mass casualty event in Light Rail corridor."*
- ✓ *"How to best respond to fires quickly. I saw a lot of slow walking and slow to hook up water when our neighbor's house caught fire last week."*
- ✓ *"Industrial accident Likely Low Low"*
- ✓ *"Lightning, Highly Likely, High"*
- ✓ *"Lightning? Environmental Impacts: to include Bees and Mosquitoes?"*
- ✓ *"Mosquitos - West Nile Virus Occurrence: Likely Severity: Low"*
- ✓ *"Nuclear Unlikely, catastrophic"*
- ✓ *"Plane Crash Hazard Materials road routes- chemicals Buildings that house chemicals Lake"*
- ✓ *"Road erosion. Multiple bridges and passes over lake ray Hubbard in the City of Rowlett. These bridges and roadways over the lake are becoming very concerning, and are LIKELY to fail. This would be a catastrophic."*
- ✓ *"Sinkholes (likely) Dart Light Rail accidents (likely)"*
- ✓ *"Terrorism"*
- ✓ *"Terrorist (chemical, etc.) unlikely, high if it was to happen (being close to Dallas)"*
- ✓ *"Terrorist Acts such as bombing, nuclear bomb threats from other countries. Low"*
- ✓ *"Train derailment carrying toxic chemicals"*
- ✓ *"Train derailment spilling toxic chemicals"*
- ✓ *"Train derailment: Occurrence, Occasional Severity, Medium Extent, Medium"*
- ✓ *"West Nile and other similar outbreaks"*
- ✓ *"West Nile Virus - Extremely Likely – Substantial"*
- ✓ *"What about hazards other than natural, like terrorism and explosions. These are highly likely to occur in an area near Dallas and could be quite catastrophic."*
- ✓ *"Wildland fires could limit manpower and equipment by the reallocation of these resources to other areas for support."*
- ✓ *"Zebra Mussel invasion has currently cut off 28% of our water district's supply of water when we are already experiencing drought conditions. Occurrence: Highly Likely; Severity or Impact: High"*

Type of Hazard	Amount
Chemical/ HazMat	8
Terrorism	5
Train Derailment	4
West Nile	4
Power Outages	1
Civil Unrest	1
Bridges Breaking	1
Sink Holes	1
Industrial Accident	1
Low Planes	1
Zebra Mussel Invasion	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program	36
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	40
Improve, adopt and enforce building codes:	52
Implement the Texas Individual Tornado Safe Room Rebate Program:	90
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	89
Participate in the National Flood Insurance Program (NFIP) and Community Rating	27

Answer Choices	Responses
System (CRS) program:	
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	90
Coordinate with Dam owners to conduct inundation studies of dams:	15
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	69
Purchase and improve on the Weatherization Assistance Program (WAP):	48
Conduct an earthquake vulnerability study:	30
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	58
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	36
Structural Retrofitting of Existing Buildings:	25
Total Respondents:	117

- ✓ 28 respondents skipped this question

List any other strategies you think should be included in the plan (themed responses)

- ✓ *"I do not agree with increasing anything that will lead to more government expenses. We need to lower all expenses because the government is operating in the RED. Only consider expansion of services when the Federal government and Dallas County gets back to operating within a budget and there are reserves on hand."*
- ✓ *"Provide for and list more public storm shelters."*
- ✓ *"Build a secure, ADEQUATE source of water for the population. We have not had enough water for the last decade. This is due, not just to drought conditions, but to an increased population in North Texas. Conservation is only going to go so far. Either we must build a new water supply available to all cities or limit population growth by declining to build more residential homes."*
- ✓ *"I believe our town already has and does a very good job with some of these programs. Rowlett has an excellent CERT however I do not believe the general public understands what CERT and related program are or all the training the volunteers do to participate. There needs RO be more awareness about personal safety issues."*
- ✓ *"Fertilizer storage facilities in the area should be identified and monitored for proper storage, explosion protection and identification."*
- ✓ *"Implement a plan in case of a nuclear bomb or other terrorist acts."*

8. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the

plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction: - List any other strategies you think should be included in the plan

- ✓ *"Great start..."*
- ✓ *"Let's try to eliminate programs that are outdated and not needed."*
- ✓ *"Make sure no home or buildings have CSST. See www.csstdanger.com for info. City of Lubbock has banned this product"*
- ✓ *"Mitigation grants for roads/bridges/ overpass, emergency response to Ray Lake Hubbard/ working with businesses to improve emergency planning."*
- ✓ *"None"*
- ✓ *"None"*
- ✓ *"People need to know in advance of an emergency what they should do and just handing out brochures will not get it done. Instead of town-hall meetings focused on politics, what about some meetings on how to protect your families or what to do if an emergency occurs such as a fire, tornado, flood, etc., what to do if the family members are separated like what happened in New Orleans, what various federal and state agencies do, what to do or not do if your electricity is out for several days in summer or winter, who to contact for assistance. What in the heck is the role of the various government agencies? Once an emergency hits it is bedlam and people need to already have answers, it is already too late. Just an opinion."*
- ✓ *"Provide broadcast shelter areas for each precinct within a county in case of disaster with protection in these areas allowing for power, water etc. backup for emergency use."*
- ✓ *"Traffic flow management in the event of a hazard event."*

City of Sachse Annex

This annex was prepared in 2013 as part of the update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Sachse has a FEMA approved hazard mitigation plan. The city was one of the 11 jurisdictions that participated in the Dallas County Hazard Mitigation Action Plan that was adopted in 2009.

The City of Sachse was represented at the 2013 Countywide Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan Working Group meetings. In addition to the countywide hazards and strategies discussed in the previous sections, this annex serves as a complete hazard mitigation planning tool for the City of Sachse. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.



Introduction

Sachse is located at 32.5835 N and 96.6510 W. It sits directly north of Rowlett, northeast of Garland, east of Richardson, and south of southeast of Plano. It is at the far upper east corner of Dallas County. Texas State highway bisects Sachse in two halves.



William Sachse, who came to America from Herford, Prussia in 1840, was the founder of Sachse. At the age of 25, he arrived in Texas in 1845, securing 640 acres in Collin County. He later acquired an additional 5,000 acres. Sachse erected one of the first cotton mills and gins in the county. In 1886, William Sachse gave 100 feet of right-of-way frontage through all of his holdings to the railroad. In exchange, the railroad built a depot and named the town Sachse. When the railroad built the depot, signs at both ends of the building read “Saxie”. The mistake was later corrected reflecting the proper spelling, but as a result of the error, numerous legal documents during that time designated the town as “Saxie” (cityofsachse.com).

According to the 2010 U.S. Census Bureau, the population of Sachse is approximately 20,329. The racial makeup of the city is 63.7% White, 8.7% African American, 0.5% Native American, 11% Asian, 0.1% Pacific Islander, .2% from other races and 1.8% from two or more races. Hispanic or Latino is 13.9%. The city has a total area of 9.9 square miles with 9.2 square miles being land and 0.2 square miles water. There are approximately 6,972 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.



The City of Sachse operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

The City of Sachse's economic development is attributed to its close proximity to surrounding cities and businesses. Currently, there are plans to redevelop along State highway 78. The city is also working on a plan for a multi-sport athletic complex that has the potential to expand profit for the city.

Internal Planning Process:

The table below lists members of the City of Sachse Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Sachse.

Name	Title/Department or Agency	Role
Rick Coleman	Fire Chief / Emergency Management Coordinator, Fire Rescue Department	HMPT Coordinator, Hazard Identification, capabilities assessment
Marc Kurbansade	Director of Community Development	Hazard & Plan development, Hazard Identification, capabilities assessment, Building Codes and Land Use Data
Greg Peters	City Engineer	Hazard & Plan development, Hazard Identification, capabilities assessment, Hazard Identification, City Critical Infrastructure
Joe Crase	Director of Public Works	Provided of Flood Plain information, Hazard Identification, capabilities assessment
Marty Cassidy	Lieutenant Sachse Police Department	Hazard & Plan development, Hazard Identification, capabilities assessment
Jackie Cottongame	Dispatch Supervisor	Hazard & Plan development, Hazard Identification, capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
7/18/13	Planning meeting with HAZMAP team - Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
7/24/13	County Planning Meeting in Richardson
7/24/13	Sachse Team Planning meeting - HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning
8/14/13	Team meeting - Reviewed the Dallas County HIRA and conducted a risk assessment for the city in respect to the Dallas County HIRA.
8/21/13	Team meeting - Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community.
9/15/13	Team meeting - Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives
10/01/13	Team meeting – Discussed city capabilities and worksheets to determine appropriate department to address specific capabilities discussed in worksheet
10/03/13	Assign Deliverables to deserving team members
10/08/13	Research 2009 plan - Review action items and completed Mitigation Strategy forms. Reviewed public input.
10/09/13	Review Wild land Urban Interface
10/11/13	Review Dam Mitigation Plan
10/16/13	Preliminary research and work on HIRA
10/23/13	Complete the HIRA
10/30/13	Complete Deliverables - Key staff completed draft capabilities assessment
10/31/13	Finalization of HAZMAP - Key staff assisted in the development of the first draft of City's Annex to the HAzMAP.
12/18/13	Final input into plan

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The City of Sachse notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results Overview

The City of Sachse made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of 23 survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

Despite outreach efforts, only 23 responses were received. Of these 23, 21 respondents completed the survey. Majority of the respondents identified extreme heat, high winds, hail, drought, and tornados as the most likely to occur in the city (had an average rating of above 3.00). In terms of impact the respondents identified tornados, high winds and drought as the top three hazards perceived to have the most impact with 71 percent, 52 percent and 47 percent respectively. Overall the City of Sachse Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards. Majority of the respondents indicated they would like to see an increase in public outreach programs (i.e. CERT) and better enforcement of building codes; expanded use of mass notification systems including outdoor warning siren system; and water conservations strategies as the top three mitigation strategies that would best suit the City of Sachse.

The results of the survey provide valuable information for the City of Sachse hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the city may choose to focus on educational outreach about what homeowners and renters can do to reduce future damage from natural hazards. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have implemented mitigation practices. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase

awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

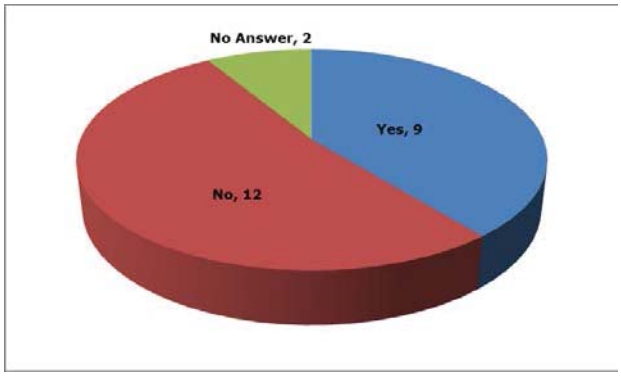
The City of Sachse will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-1 of this annex.

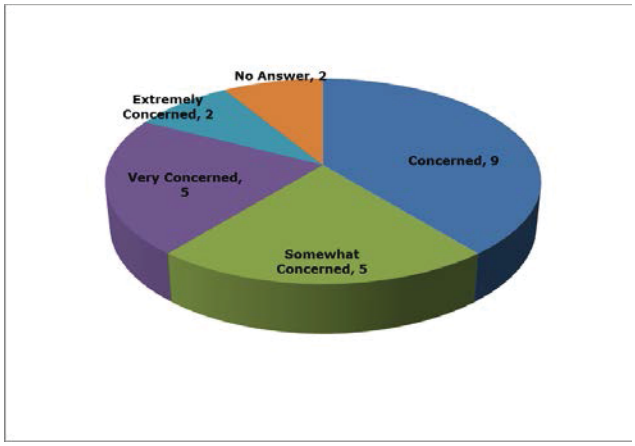
Survey Summary

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
   - ✓ Total number of responses submitted from the citizens of the City of Sachse - 23

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

- ✓ Unlikely
- ✓ Occasional
- ✓ Likely
- ✓ Highly Likely

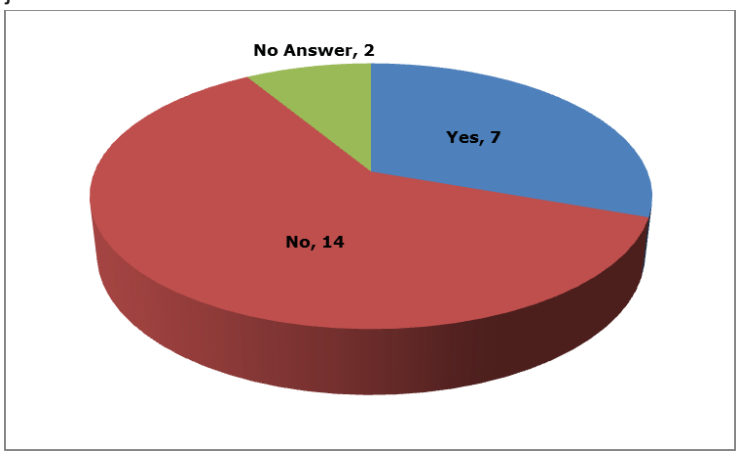
	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total Answered	Average Rating
Summer Heat	0	0	1	20	2	21	3.95
High Winds	0	0	4	17	2	21	3.81
Hail	0	0	6	15	2	21	3.71
Drought	0	2	3	16	2	21	3.67
Tornado	0	3	5	13	2	21	3.48
Winter Storms	2	7	7	5	2	21	2.71
Flooding	5	9	4	3	2	21	2.24
Stream Bank Erosion	14	3	4	0	2	21	1.52
Earthquake	16	3	1	0	3	20	1.25
Dam Failure	17	3	1	0	2	21	1.24
Levee Failure	17	4	0	0	2	21	1.19

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

- ✓ Limited
- ✓ Major
- ✓ Minor
- ✓ Substantial

	Limited	Minor	Major	Substantial	Skipped	Total Answered
Tornado	0	1	5	15	2	21
High Winds	0	2	8	11	2	21
Drought	1	3	7	10	2	21
Hail	0	2	11	8	2	21
Summer Heat	1	5	8	7	2	21
Winter Storms	3	10	6	1	3	20
Earthquake	14	5	2	0	2	21
Flooding	6	7	8	0	2	21
Dam Failure	14	3	4	0	2	21
Stream Bank Erosion	14	5	2	0	2	21
Levee Failure	14	3	3	0	3	20

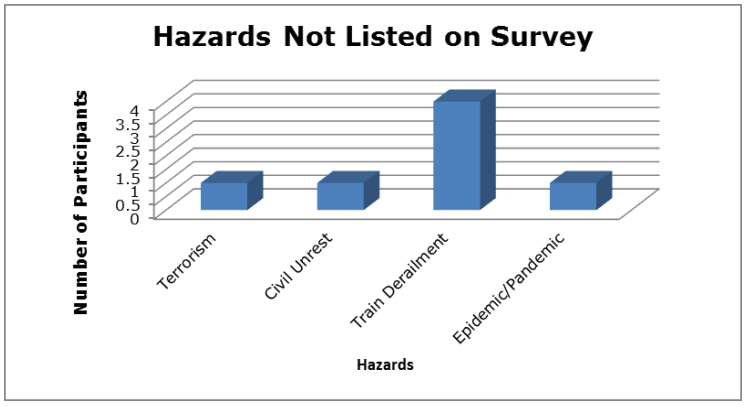
6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e.

- Occurrence (Unlikely, Occasional, Likely or Highly Likely);
- Severity or Impact (Low, Medium, High or Catastrophic); and
- Extent (Low, Medium, High or Catastrophic)

Type of Hazard	Amount
Chemical/ HazMat	3
Terrorism	1
Civil Unrest	1
Train Derailment	4
Epidemic/Pandemic	1



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Total Respondents:	21
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	20
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	17
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	15
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	13
Purchase and improve on the Weatherization Assistance Program (WAP):	10
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	9
Improve on Land Use Program	6
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	6
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Conduct an earthquake vulnerability study:	4
Structural Retrofitting of Existing Buildings:	4
Coordinate with Dam owners to conduct inundation studies of dams:	2

List any other strategies you think should be included in the plan (themed responses)

- ✓ Community Shelters"
- ✓ "Improvement of Water Irrigation Systems"

NB: 2 respondents skipped this question

8. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction: - List any other strategies you think should be included in the plan

a. "Programs focused on educating the public how to better prepare for emergencies."

Public Review Period

On December 3rd, 2013 the City of Sachse announced the availability of the City of Sachse's Annex Draft Plan as part of the Dallas County HazMAP update for public review and comment. A public announcement was made through our website that invited the public to provide input into both the Dallas County Base Plan and the City of Sachse Annex Draft Plan. Invitations were also made to various external stakeholders via email and phone call. These included the Emergency Management Coordinators for the City of Wylie and Collin County.

The announcement provided a 14 day public review and comment period. The public were encouraged to submit comments prior to December 13th, 2013, for consideration and possible incorporation into this draft.

The public comments were directed to the Fire Chief, Rick Coleman with the City of Sachse. Any comments received after the review process will be catalogued for consideration in future updates. Copies of the website positing, email distribution and posters are included in the appendix section of this annex.

Capability Assessment

The City of Sachse identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments: Key department involved in hazard mitigation activities in the City of Sachse include:

1. Sachse Fire Department

The Sachse Fire Department provides the following services:

- ✓ Fire Response
- ✓ Medical Emergencies
- ✓ Rescue Services

The goal of the department is to protect the lives and property of those in the community. Non-emergency services the department is involved in include:

- ✓ Building fires or fire alarms
- ✓ Vehicle accidents involving injury or extrication
- ✓ Injured and sick citizens
- ✓ Hazardous materials incidents
- ✓ Animal rescue
- ✓ Assistance for the disabled and elderly
- ✓ Community education

Other functions of the Sachse Fire Department include:

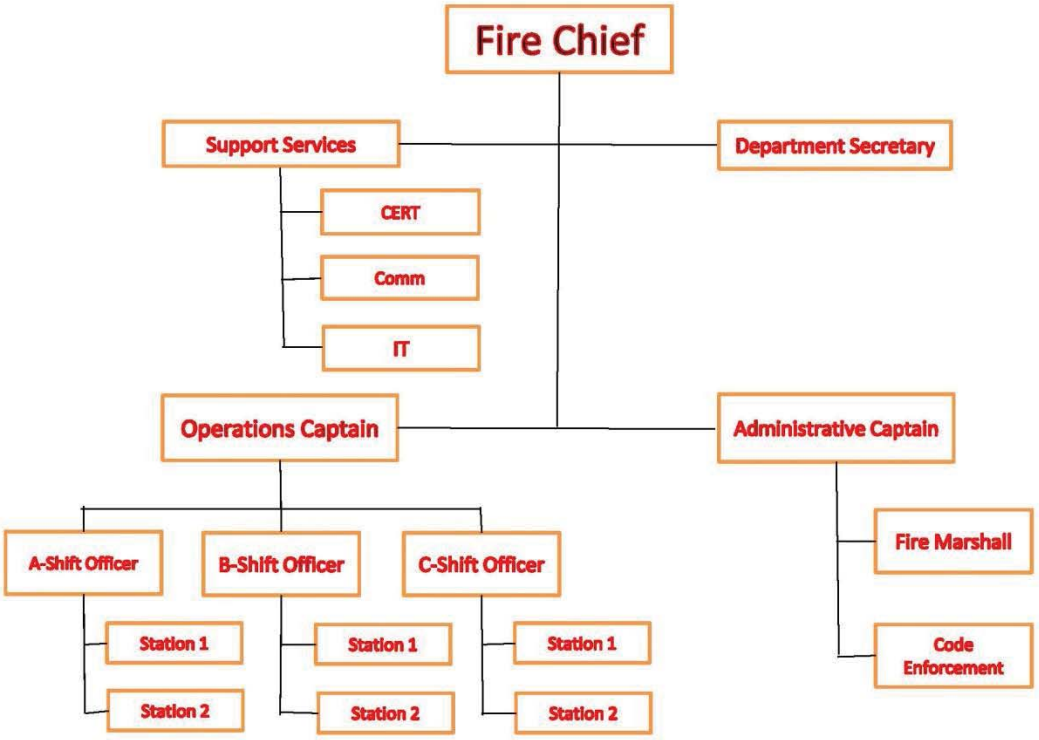
- ✓ Community Emergency Response Team (CERT): CERT refers to a group of people who receive special training to enhance their ability to recognize, respond to, and recover from emergency and disaster situations. Teams are trained to take care of themselves and others before, during, and after an emergency
- ✓ Fire Marshal's Office: The Fire Marshal's Office oversees Code Enforcement, Public Education, Permits, Fees and Codes.
- ✓ EMS: Sachse Fire Rescue (SFR) has full-time and part-time staff Including EMT-basics and paramedics and three fully-staffed ambulances

2. Emergency Management

The Emergency Management Department's primary role is to develop the capabilities to mitigate, prepare, respond, and recover from disasters that threaten the City of Sachse. The responsibilities of the EM department include:

- ✓ Identify roles and responsibilities in case of disaster
- ✓ Ensure Emergency Management Manual is current and city employees understand roles in the event of an emergency
- ✓ Implement public education in emergency preparedness
- ✓ Ensure city's compliance with NIMS (National Integrated Management System for responders) and ICS (Incident Command System)
- ✓ Submit grants from Homeland Security, FEMA, and other federal, state and local organizations

Figure CS 1: City of Sachse Fire Rescue Department Organizational Chart



3. Public Works

The Public Works Department provides, operates, and maintains the utility and infrastructure systems that perpetuate a superior quality of life for our community. The department is responsible for protecting the public welfare and providing basic services that affect citizens on a daily basis who live and work in Sachse. These services include streets, water utilities, drainage system, water distribution and wastewater collection.

4. Community Development

The Community Development Department provides the community with the interpretation and application of regulations in accordance with the community established standards related to:

- ✓ Construction
- ✓ Development
- ✓ Zoning

The responsibilities of the department include:

- ✓ Review, approve and inspect development projects, construction projects and related activities
- ✓ Contractor registration
- ✓ Issue permits
- ✓ Zoning
- ✓ Enforce health and maintenance codes
- ✓ Facilities Maintenance

6. Engineering Department

The City of Sachse Engineering Department provides services to the city's stakeholders in the following areas of responsibility:

- ✓ Citizen inquiry response
- ✓ City departmental support
- ✓ City Engineering Department advancement
- ✓ Construction plan review
- ✓ Engineering expertise advancement
- ✓ Engineering study management
- ✓ Interagency coordination
- ✓ Major infrastructure project management

7. Police Department

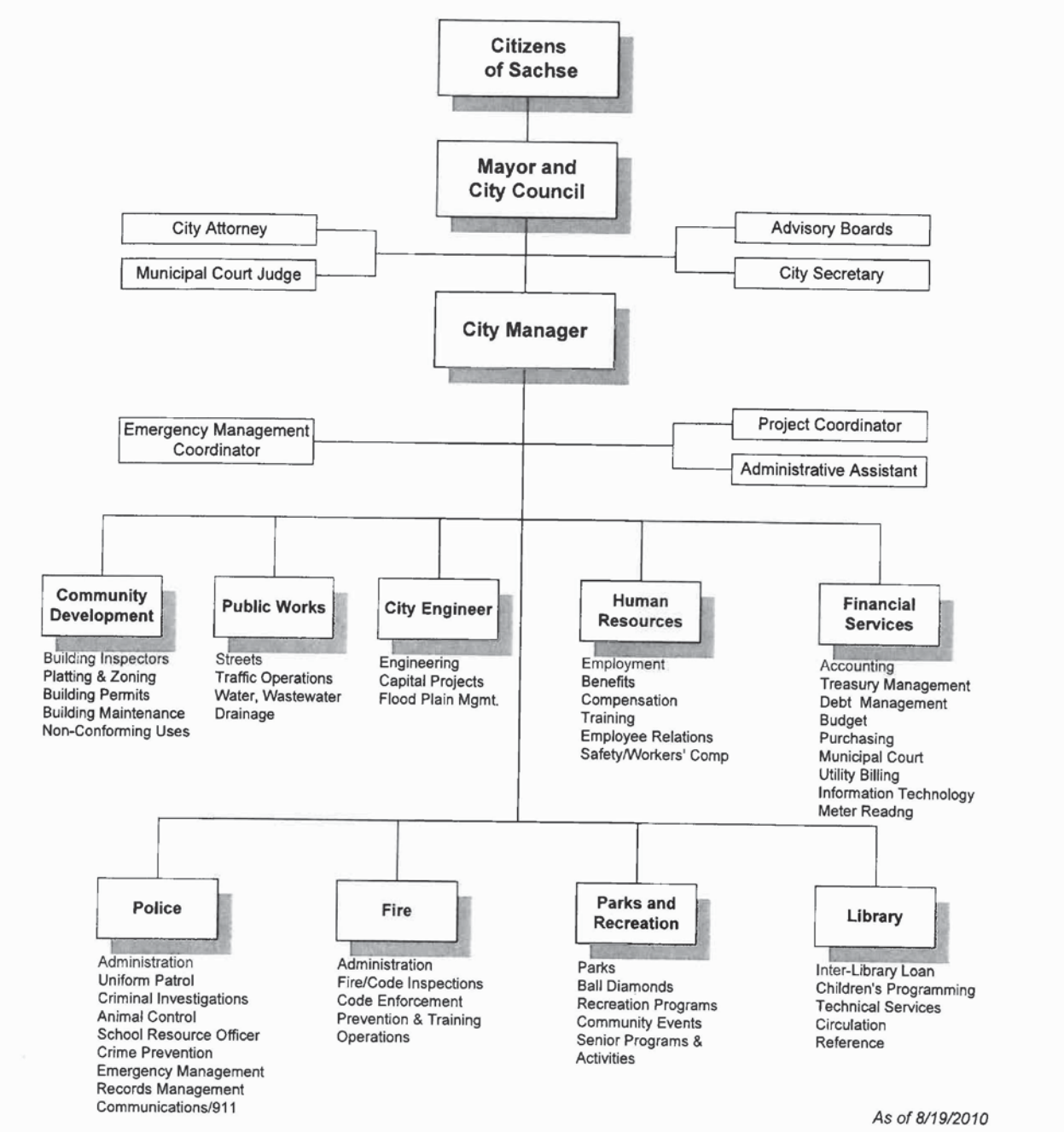
The Sachse Police Department provides law enforcement protection and services to people within the jurisdiction. These services include:

- ✓ Crime Prevention
- ✓ Community Outreach
- ✓ Criminal Investigation
- ✓ Community Patrol
- ✓ Animal Control
- ✓ Records and Evidence Management
- ✓ Presence In and Around Schools

Staffing of the Police Department consists of:

- ✓ Police Chief
- ✓ Support Division
- ✓ Patrol Division
- ✓ Criminal Investigators
- ✓ Patrol Officers
- ✓ Patrol Supervisors
- ✓ School Resource Officers
- ✓ School-Crossing Guards

Figure CS 2: City of Sachse Organizational Chart



Summary of Capabilities

The tables below identify the current capabilities in the City of Sachse.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 2010	**1.** Yes **2.** Yes **3.** Yes
Capital Improvements Plan	Yes 2012	**1.** Yes **2.** Yes **3.** Yes
Economic Development Plan	Yes 2010	**1.** Yes **2.** Yes **3.** Yes
Local Emergency Operations Plan	Yes 2010	**1.** Yes **2.** Yes **3.** Yes
Continuity of Operations Plan	Yes 2010	**1.** Yes **2.** Yes **3.** Yes
Transportation Plan	Yes 2010	Part of the Comprehensive Plan
Storm water Management Plan	Yes 2010	Part of the Comprehensive Plan
Community Wildfire Protection Plan	No	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	

Building Code, Permitting, and Inspections	**Yes/No**	
Building Code	Yes	**Version/Year:** IBC 2009, NEC 2008
Building Code Effectiveness Grading Schedule (BGEGS) Score		**Score:**
Fire Department ISO rating	Yes	**Rating:** 3, 2005
Site Plan review requirements	Yes	Yes
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	**1.** Yes **2.** Yes
Subdivision ordinance	Yes	**1.** Yes **2.** Yes
Floodplain ordinance	Yes	**1.** Yes **2.** Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	**1.** Storm water **2.** Yes
Flood insurance rate maps	Yes	TML
Acquisition of land for open space and public recreation uses	Yes	**1.** Yes **2.** Yes
How can these capabilities be expanded and improved to reduce risk?		
150 rating is slated for review in 2016, a lower rating is expected. Land-use planning and ordinances are reviewed annually for efficiency.		

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	Yes	Planning and Zoning Committee recommending body
Mitigation Planning Committee	Yes	Meet and recommend quality
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Public Works, Parks and Recreation, Health Dept., and Inspections
Mutual aid agreements	Yes	Mutual aid agreements and Dallas County for public safety
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	FT	Yes; Yes; Yes
Floodplain Administrator	FT	Yes; Yes; Yes
Emergency Manager	PT	Yes; Yes; Yes
Community Planner	FT	Yes; Yes; Yes
Civil Engineer	FT	Yes; Yes; Yes
GIS Coordinator	PT	Yes; Yes; Yes
Other	N/A	N/A
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	1. Reverse 911 and outdoor warning system 2. Yes
Hazard data and information	Yes	Required access to MSDS as well as BOSF railway
Grant writing	No	
Hazardous analysis	Yes	Access to level 1-3 hazard analysis
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Keeping abreast of the most updated information and practice utilizing these tools Hire more staff		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1. Infrastructure 2. Yes
Authority to levy taxes for specific purposes	Yes	1.Raise property taxes; bonds 2. Yes
Fees for water, sewer, gas or electric services	Yes	1. Water and sewer 2.No
Impact fees for new development	Yes	1. Yes – New Construction 2. No
Storm water utility fee	N/A	N/A
Incur debt through general obligation bonds and/or special tax bonds	Yes	1. Infrastructure 2.No
Incur debt through private activities	No	
Community Development Block Grant	Yes	1. Yes 2. Yes
Other federal funding programs	No	
State funding programs	Yes	1. Infrastructure 2. Yes
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Explore options for Federal Funding Opportunities Hire more staff		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Citizen Emergency Response Team
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Marshal's office Community Development City Health Department
Natural disaster or safety related school programs	Yes	Garland Independent School District Wylie Independent School District
StormReady certification	Yes	Maintained by Emergency Management Yes
Firewise Communities certification	No	Implement 2016
Public-private partnership initiatives addressing disaster-related issues	Yes	CERT and RACES Garland and Dallas County Health
Other	N/A	
How can these capabilities be expanded and improved to reduce risk?		
Garland and Dallas County Health for immunization, Community Emergency Response Team and RACES involvement in disaster response training		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?		✓
Work on implementing by 2014		
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	✓	

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	✓	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: *The City Council for the City of Sacshe, including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.*

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	61 policies, $16.54M in total premiums
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	4 paid loses, totaling $45,937.42, with none for substantial damage
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	61 known
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	None known at this time
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	Not at this time
Is floodplain management an auxiliary function?	Community FPA	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	The acting Community FPA is the City Engineer. The City Engineer provides oversight and engineering review of public and private infrastructure and land development projects, including roadway, utility, and drainage
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None at this time
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		None known
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Texas Water Development Board	The City of Sachse has not had a CAV
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	1978
Are the FIRMs digital or paper?	Community FPA	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Yes – the minimum allowable elevation of a structure above the 100 – year base flood elevation is 2 feet.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	The Building Official requests that the City Engineer review all building permit requests on property that appears to be within, adjacent to, or near the limits of the 100-year floodplain of any creek, stream, or drainage channel as shown on the FEMA FIRM Maps. The City Engineer reviews the permit request, all available plans submitted with the request, and all available online and paper resources (including the FEMA FIRM Maps). The City Engineer makes a determination on whether the proposed structure and/or improvements are in or out of the floodplain. If a proposed structure is found to be within the limits of the floodplain, a building permit is not issued unless and until the applicant can demonstrate that the limits of the floodplain have been revised through the
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual http://www.fema.gov/flood-insurance-manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative	No

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Sachse HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Sachse are as follows:

High Risk (over 65% on HIRA)	Winter Storms Tornado
Moderate Risk (41%- 65% on HIRA)	Lightning Stream Bank Erosion High Winds
Low Risk (12 %-40% on HIRA)	Wildfire Dam/Levee Failure Drought Flooding Extreme Heat Hail Earthquake
No Risk (Below 12% on HIRA)	

Only three hazards of the 11 natural hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Sachse. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

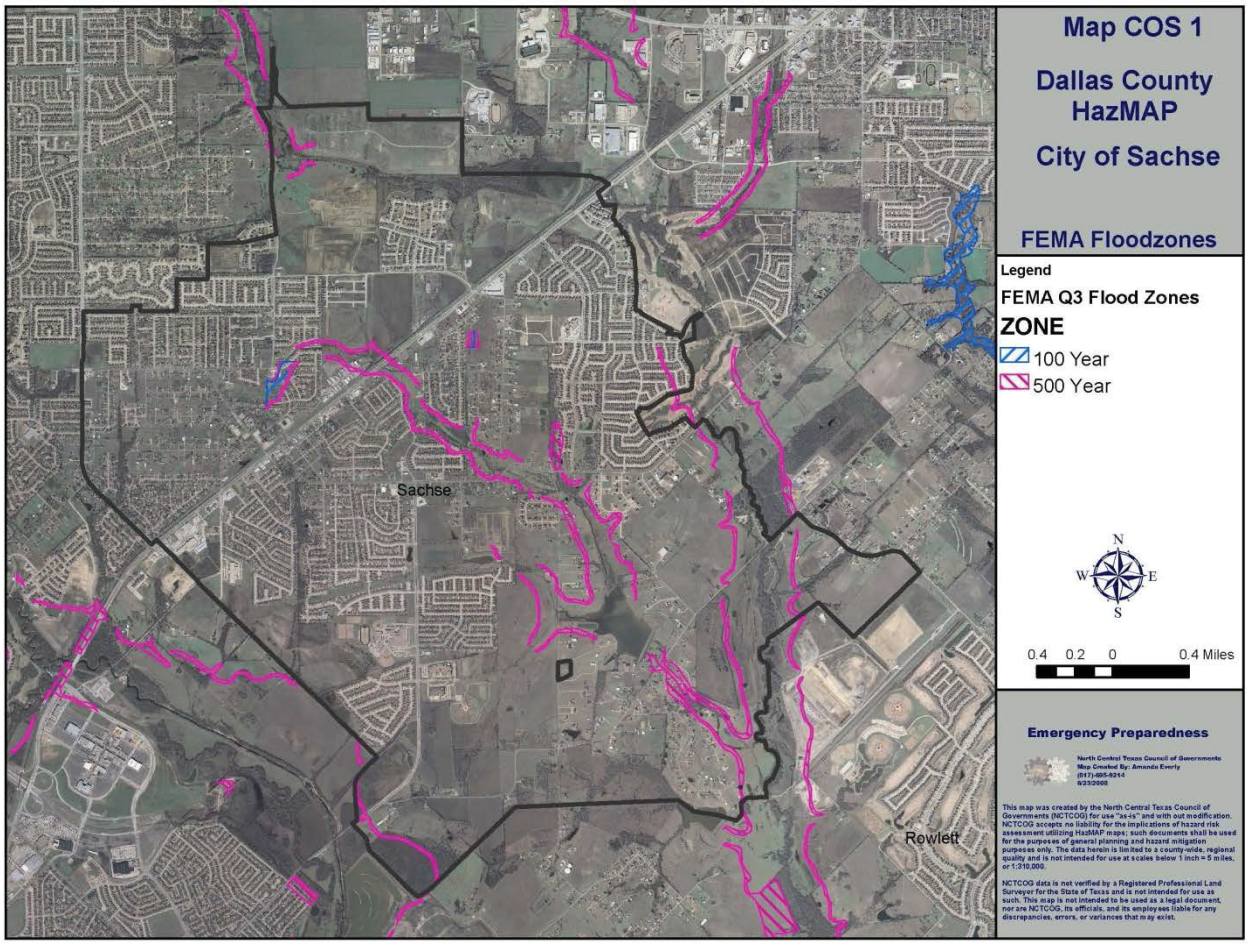
Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Sachse**.**

A. Flooding: Just as was identified in the 2009 HazMAP, flooding continues to be the primary natural disaster to be faced by the City of Sachse. Rowlett Creek, Maxwell Creek, Long Branch of Muddy Creek, Willow Lake and Muddy Creek as well as its tributaries run through the city. The city has taken some measures to reduce the incidents of flooding within the city which have been addressed in the last plan and in this document.

Areas that have proved problematic in causing more road closure issues as opposed to homes or businesses damages include Highway 78, Merritt Road and Sachse Road. These roads often require to be closed due to flooding, though this limits many evacuation routes. While there are mitigation activities identified to address this issue, the city is of the opinion that additional flood studies are needed to adequate address the problem. New construction cannot be built in the floodway and those built in the flood plain must be flood proofed two feet above Base Flood Elevation (BFE). **Map COS1** depicts the City of Sachse 100 and 500 year floodplain.

As indicated in this annex, the City of Sachse participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

Map COS 1: City of Sachse Floodplain

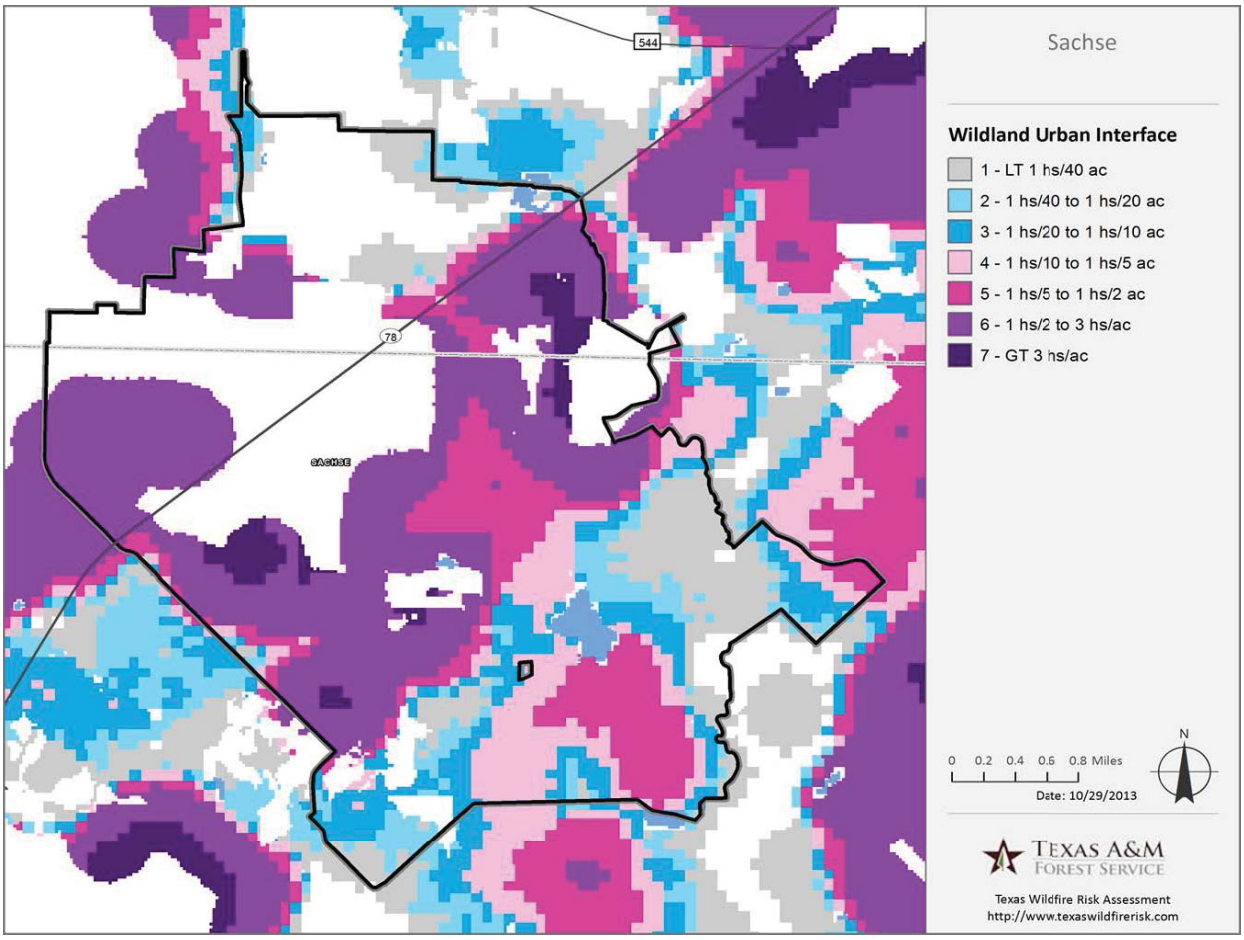


Source: North Central Texas Council of Governments

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas Forest Services (TFS), it is estimated that 8,599 people or 50 percent of the total project area population (17,049) live within the WUI. The Wildland Urban Interface (WUI) Map below reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. **Map SC 2** depicts the WUI for the City of Sachse.

Map SC 2: City of Sachse's Wildland Urban Interface



The wildfire threat for the City of Sachse ranges from Non-Burnable to High. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

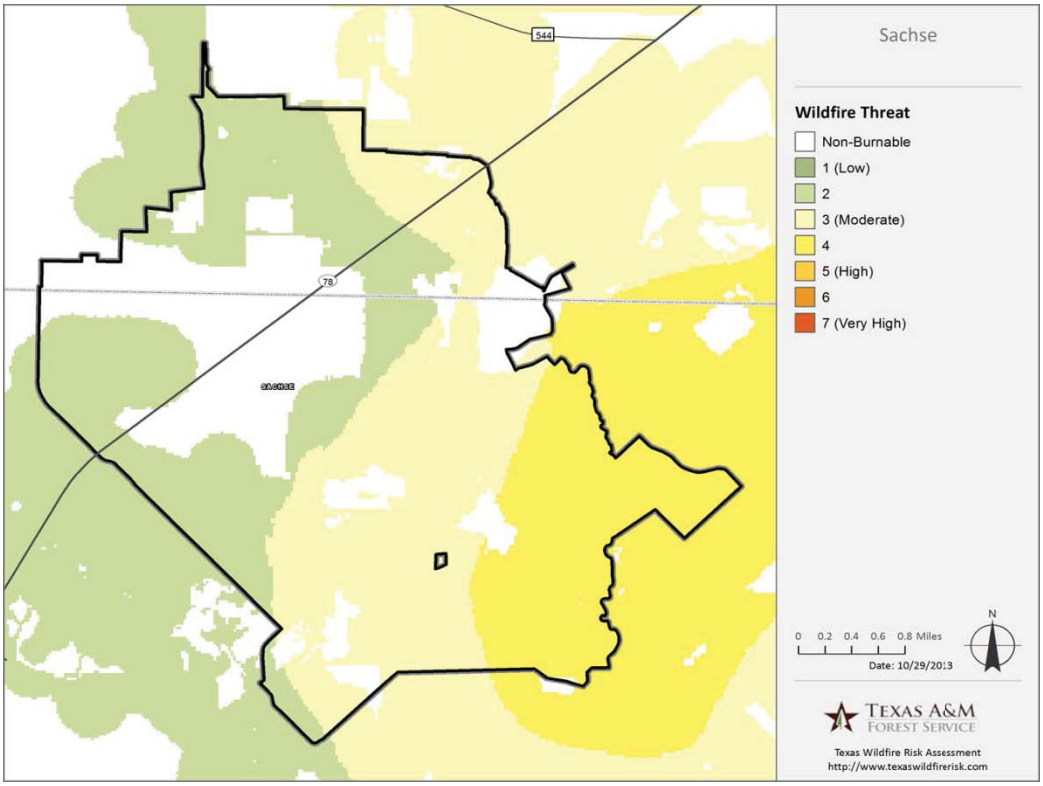
Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

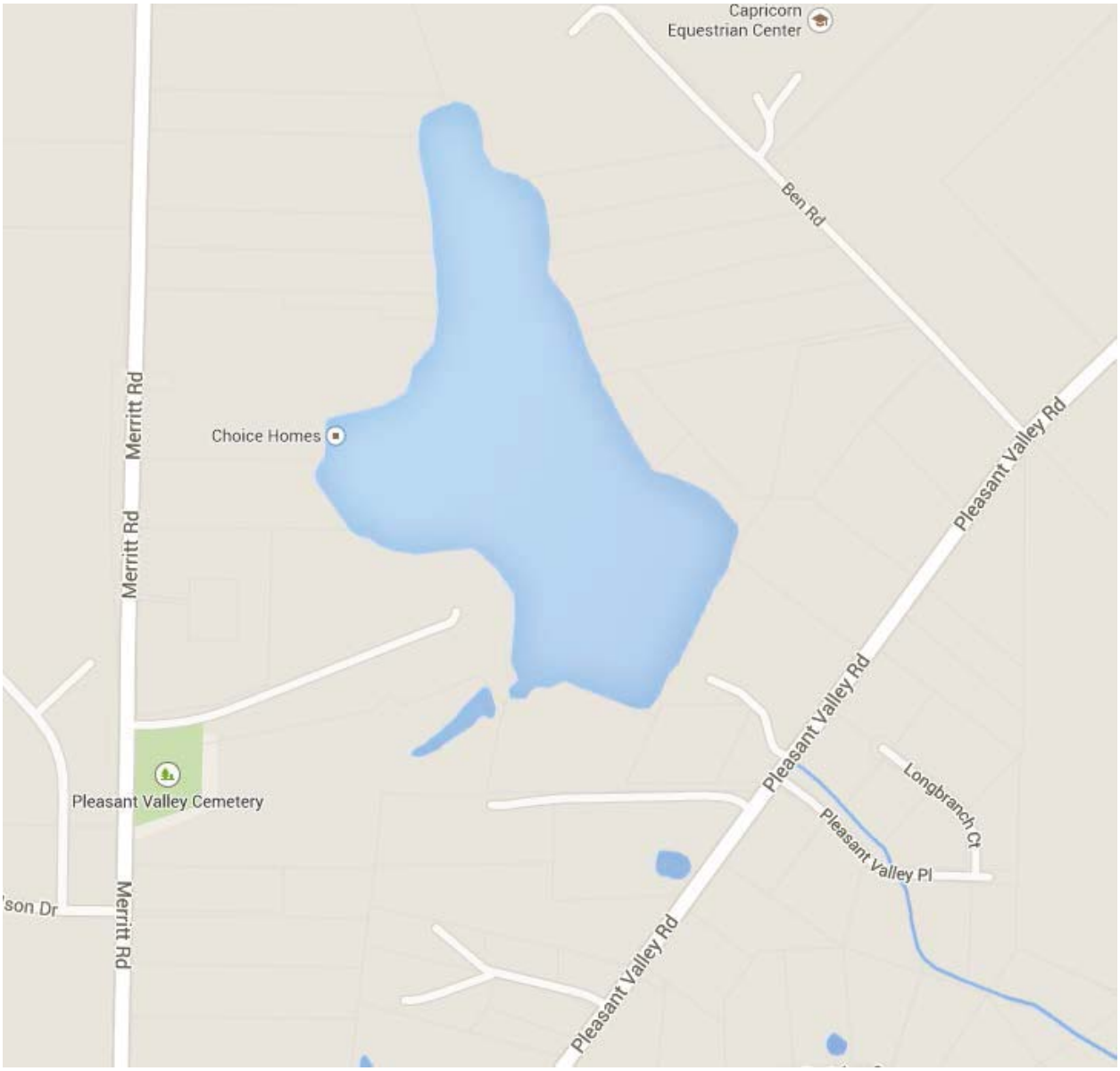
The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

Map SC 3: City of Sachse Wildfire Threat



C. Dam and Levee Failure: The City of Sachse HMPT identified two Soil Conversation Service Sites that could potential affect its communities. These are the Soil Conservation Service Sites 7 and 10 Reservoirs. Site 10 Reservoir is located off Pleasant Valley Road and West of Merritt Road and West of Ben Road. **Map SC 4** depicts the location of the Reservoir. While Site 7 Reservoir is located Northeast of the city limits in Collin County. These reservoirs are not considered to have any significant to the City of Sachse. The city has no control of the and will need to have a better understanding of the potential effects of the reservoirs to surrounding communities and will need to work with the owners to attain proper inundation studies for the dam.

Map SC 4: Location of Soil Conversation Service Site 10 Reservoir



Details of Soil Conversation Service Site Dams are listed below:

Soil Conversation Service Site 10 Dam – City of Sachse, Dallas County

Official Dam Name:	Rowlett Creek Floodwater Retarding Dam Site #10
TCEQ Inventory No:	TX00823
Stream:	Long Branch
Location:	-96.5627, 32.96
Dam Owner:	Dalworth Soil and Water Conservation District #519
Owner Address:	320 West Way Place, Suite #511, Arlington, Texas, 76018
Year Built	1954 by the Soil Conservation Service (Natural Resources Conservation Service)
Type of Dam:	Earthen Dam
Year Constructed:	1955
Dam Height:	34 ft.
Dam Length:	1725 ft.
Drainage Area:	4.18 sq. miles
Hazard Classification:	High
Principal Spillway:	30"x30"x9'Ported drop inlet. 190' L.F. 0f 15" Diameter Reinforced Conc. Pipe
Principal Spillway Capacity	Designed for 2.0 feet of flow
Auxiliary Spillway:	250 Ft. wide has excellent cover of Coastal Bermuda Grass
Normal Storage Volume:	281.7 ac.ft (ported @ 200 ac. Ft)
Maximum Storage Volume:	2500 ac. Ft

Soil Conversation Service Site 7 Dam – Collin County Unincorporated

Official Dam Name:	Rowlett Creek WS SCS Site #7 Dam
TCEQ Inventory No:	TX01090
Stream:	Maxwell Creek (Long Branch of Muddy Creek)
Location:	-96.56965 , 32.99086
Dam Owner:	Collin County Commissioners Court
Owner Address:	2300 Bloomdale Rd # 2302, McKinney, TX 75071
Year Built	1957 by the Soil Conservation Service (Natural Resources Conservation Service)
Type of Dam:	Earthen Dam
Year Constructed:	1957
Dam Height:	38 Ft.
Dam Length:	2320 ft.
Drainage Area:	10.35 sq. miles
Normal Storage Volume:	200 acre ft.
Maximum Storage Volume:	4033 Acre ft.

D. Earthquake: Earthquakes in Sachse is considered as a low risk threat. Earthquakes have only been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. Additionally there is currently not a significant amount of data for earthquakes in Dallas County and will need to be researched and studied. No data to support the change of building codes and engineering standards for high magnitude levels that can affect buildings, transportation routes, and pipelines. A data deficieny is being cited for earthquake risk for the City of Sachse.

E. Stream Bank Erosion: The City of Sachse has several creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The City of Sachse is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency in Stream Bank Erosion in Dallas County including the City of Sachse. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Sachse. The HMPT also took into account the changes in development and population while conducting this assessment. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. All the population of City of Sachse is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved properties are exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Sachse. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Sachse.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Sachse.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Sachse.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of City of Sachse is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Sachse due to winter storm events. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Sachse are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Sachse are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Sachse are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Sachse is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $5,000 of property damage has been recorded due to high wind events in the City of Sachse. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Sachse are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Sachse are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Sachse are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Sachse have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $250,000 dollars of property have been reported as a result of lightning in the City of Sachse. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Sachse are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Sachse are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Sachse are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Sachse. All the population of City of Sachse is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Sachse. All improved properties are exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Sachse are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Sachse are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Sachse are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Sachse is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), $30,000 of property damage was reported for City of Sachse. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Sachse indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Sachse are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Sachse are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Sachse are exposed to this hazard.

Wildfire	
Population	Based on geographical data 50 % of the population in City of Sachse lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved properties within the WUI areas are exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	According to National Climatic Data Center (NCDC), $500 of property damage was reported as a result of flooding in the City of Sachse. There are no improved valued properties in the City's areas at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013

Changes in Population and Development

The City of Sachse participated in the 2009 Dallas County Hazard Mitigation Action Plan. Table 3.1 shows that the population for the city grew from 20,329 to 21,580 between 2010 and 2014 estimated data, an increase of 6.15%.

There were 1,106 new housing development and 56 commercial units in the city between 2008 and 2014. Major structural and economic development, include an elementary school, specialty retail businesses, public buildings, large retail grocery stores, day care facilities, fuel station and churches. None of these new developments have been built in floodplains.

To help mitigate the impacts of the hazards identified the city identified broad mitigation strategies to lower the vulnerability on the population and property from the natural hazards identified. These include establishing additional flood regulations, adopted stricter rules and regulations for building such as the 2009 International Building and Fire Code Standards and expand education and awareness programs.

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Sachse.

Essential Infrastructure Summary Report for the City of Sachse

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	N/A	0
Schools	Sachse High 32°57'40.61"N 96°35'6.89"W Hudson 32°57'31.73"N 96°34'52.38"W Sewell 32°57'25.80"N 96°34'53.78"W Armstrong 32°57'59.40"N 96°36'0.16"W Cox 32°59'5.29"N 96°34'7.88"W Whitt 32°59'25.64"N 96°35'14.47"W	6
Police Stations	32°58'32.34"N 96°35'3.77"W	1
Fire Stations	Station 1 32°58'32.34"N 96°35'3.77"W Station 2 32°59'22.27"N 96°35'43.30"W	2
Emergency Operations Facilities	32°58'32.34"N 96°35'3.77"W	1
Dams	32°57'37.63"N 96°33'44.62"W	1

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure0
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Sachse

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The updated actions items are as follows:

City of Sachse Action Item	Establish city parks along low-lying areas, referenced the Capital Improvement Plan, City of Sachse Park and Open Space Master Plan and Building Restrictions to reduce losses and repetitive damage.
Hazard(s) Addressed	Flooding
Goal/Objective	1-A
Priority	Medium
Estimated Cost	Unknown - To be determined
Potential Funding Sources	HMGP, PDM, City Budget
Lead Department	Public Works
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of creating a natural preserve not only benefits natural resources it also mitigates against flooding.
Discussion	Developing an open space reuse, and preservation plan provides the city with preserve the floodplain as an Open Space for recreational use

City of Sachse Action Item	Purchase and install new sirens to cover expanding population and cover the entire jurisdiction. The sirens will be narrow banded updated sirens that will help improve communication as well as meet the regulations.
Hazard(s) Addressed	Tornado, high winds, hail, dam/levee failure and wildfire
Goal/Objective	2-D
Priority	Medium
Estimated Cost	$500,000
Potential Funding Sources	City Budget, HMGP, PDM, Private Business
Lead Department	Office of Emergency Management (OEM)
Implementation Schedule	2 years upon funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost of implementing this program is low compared to the potential benefits of reduction in personal injuries or death
Discussion	The Sirens will be used in alerting people who live and work in Sachse of impending severe weather situations. Siren alarm warnings have proved to have saved lives and mitigated the loss of lives

City of Sachse Action Item	Purchase a series of lightning prediction devices to be deployed around Parks and Schools. Not only would these provide advance warning to those in the area but the cumulative data collected by these devices will allow Sachse to identify additional action items tailored to mitigating the lightning hazard.
Hazard(s) Addressed	Lightning
Goal/Objective	5-A
Priority	Medium
Estimated Cost	$30,000
Potential Funding Sources	City Budget, HMGP, PDM
Lead Department	Office of Emergency Management (OEM), Parks and Recreation, Public Works
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during weather conditions that comes with lightning.

City of Sachse Action Item	Coordinate with Dam owners to conduct proper Inundation Studies for Dam Safety. Establish Action Items which prove to be more cost efficient.
Hazard(s) Addressed	Dam/Levee failure, flooding, stream bank erosion
Goal/Objective	2-A, 2-C, 3-B
Priority	Low
Estimated Cost	$50,000
Potential Funding Sources	City Budget, State and/or Federal Funding
Lead Department	Public Works and Office of Emergency Management (OEM)
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	As noted the hazards assessment of this annex, there is a deficiency of inundation data of the Soil Conservation Dams that could potentially affect the City of Sachse. The City will need to work the owners and operators of the dams to conduct inundation studies to determine the most appropriate mitigation actions.

City of Sachse Action Item	Make Improvements to the Stormwater Drainage System Capacity at specific problem areas
Hazard(s) Addressed	Flooding/Stream bank Erosion
Goal/Objective	2-A
Priority	High
Estimated Cost	$1 Million
Potential Funding Sources	City Budget, State and Federal Funding including HMGP and PDM
Lead Department	City Engineering
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	Following heavy rainfall flooding and erosion occur in developed areas particular along the roadways. Stormwater management projects that can prevent this include dimensions of drainage culverts in flood-prone and stream restoration to ensure adequate drainage and diversion of stormwater

City of Sachse Action Item	Conduct a Flood Protection Study to determine the most appropriate mitigation actions to alleviate the inundation of multiple arterial thoroughfares near Long Branch of Muddy Creek
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A
Priority	High
Estimated Cost	$150,000
Potential Funding Sources	City Budget, State and Federal Funding including HMGP and PDM
Lead Department	City Engineering
Implementation Schedule	Within two years of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	As noted the hazards assessment of this annex there is a deficiency in flooding and inundation data for the city's streets and thoroughfares. Future flood studies for floodway crossings of Sachse Road, Merritt Road, and Pleasant Valley Road are incorporated into the 10-yr Capital Improvement Plan for the improvement of these minor arterials in the City. Improvements required as a result of the future studies will be incorporated into the future roadway improvement projects. Projects will be completed pending future FEMA Approval and availability of funds for design, study, and construction. The only major arterial in the City is State Highway 78, which is maintained by TxDOT. TxDOT controls the drainage structures crossing SH 78.

City of Sachse	Buyout structures that are in the floodplain. These include properties on Woodbridge Parkway, Sachse and Merritt Roads
Hazard(s) Addressed	Flooding
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	High
Estimated Cost	$1.5 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Sachse Administration, Public Works, Building and Code Departments
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	Remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners and preserving lands subject to repetitive flooding

City of Sachse Action Item	Purchase two additional generators to power critical infrastructure for Command Staff and Shelters/warming stations within the City complex
Hazard(s) Addressed	Winter Weather, dam failure, earthquake, flooding, hail, high winds, lightning, tornados, wildfire and Extreme Heat
Goal/Objective	4-B
Priority	Medium
Estimated Cost	$60,000
Potential Funding Sources	HMGP, City Budget, Facilities Bond
Lead Department	Office of Emergency Management (OEM)
Implementation Schedule	Within One Year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits the project will provide
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Sachse	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Sachse

City of Sachse Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms to residents of Sachse
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Sachse Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Sachse	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Sachse Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Sachse Action Item	Implement water-wise program for the City of Sachse. This program will include purchasing water saving equipment and fixtures such as low flow fixtures in all city facilities. The program can include an incentive plan
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$20,000
Potential Funding Sources	General Budget
Lead Department Responsible	Permits and Inspection Department
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Water is an increasingly expensive resource especially during drought. Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration

City of Sachse Action Item	Participate in Firewise Program
Objective(s) Addressed	1-A, 1-C
Hazard(s) Addressed	Wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	No Cost
Potential Funding Sources	No cost other than enforcing the code
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	24 months
Effect on Old Buildings	Old buildings may not be affected by this
Effect on New Buildings	New regulations will require safer construction and incorporation of wildfire mitigation considerations into the permitting process
Cost Effectiveness	Cost of implementing this program is low compared to the benefits of the program
Discussion	The Firewise program provides a series of steps that individual residents and their neighbors can take to keep their homes and neighborhoods safer from fire. This can include Joining the Firewise Community recognition program sponsored by the National Wildlife Coordination Group (firewise.org); Sponsoring Firewise workshops for local officials, developers, civic groups and neighborhood associations, encouraging or requiring best firewise practices in the city

City of Sachse Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Plan Maintenance

The City of Sachse Department Emergency Management Department will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator/Fire Chief will lead the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Sachse	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will call the City of Sachse Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Emergency Management Coordinator will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the City's Administration. Sachse's HMPT will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Sachse or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Sachse is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Sachse will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Sachse will engage stakeholders in community emergency planning.

Plan Incorporation

The City of Sachse has several other city plans which were considered during the mitigation planning process. These include Federal Emergency Management Agency (FEMA) maps, City of Sachse comprehensive plan, future land use and thoroughfare plans, emergency operations plan, Capital Improvement Program (CIP) including current zoning plan, adopted building codes and amendments and City of Sachse ordinances. The Hazard Mitigation Team will continue to use these plans as guidance in determining gaps in the capabilities of the

city as well as developing goals and mitigation action items in response to the vulnerability assessment.

The planning integration table below illustrates the integration process of this plan into other city documents and plans.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Sachse	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Supporting Documentation

c. Complete Survey Results

Appendix SC - A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Sachse
Hazard Identification and Risk Assessment (HIRA)
Date: September 5, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	3	3	3	3	1	7	43%
Hail	4	4	1	1	1	2	1	4	25%
Lightning	4	4	2	2	1	3	1	5	40%
Winter Storms	2	1	2	4	2	3	1	6	67%
Tornado	2	1	3	6	3	4	2	9	67%
Flooding	2	4	2	1	2	3	2	9	14%
Extreme Temperatures/Heat	4	4	1	1	2	2	1	5	20%
Wildfire	2	2	1	1	1	2	3	6	17%
Energy/Fuel Shortage	1	1	1	1	2	1	2	5	20%
Terrorist Attack	1	1	1	1	4	2	2	8	13%
Urban Fire	1	1	1	1	1	1	1	3	33%
Earthquake	1	1	3	3	2	4	2	8	38%
Levee/Dam Failure	1	1	2	2	3	3	2	8	25%
Drought	4	4	3	3	3	3	2	8	38%
Aircraft Accident	1	1	4	4	4	2	2	8	50%
Stream Bank Erosion	4	2	2	4	2	4	2	8	50%

NB: This City of Sachse HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix SC - B-1: Supporting Documentation & Outreach Materials



12/31/13 Sachse, TX - Official Website - HazMat Action Plan

+myConnections: Engage your community – connect to news, events and information you care about. View more information...

Sign In

CITY LEADERSHIP ... UR COMMUNITY E-SERVICES

Sachse

Search GO

SHARE

FACEBOOK TWITTER

Clinics / Flu Shots
HazMat Action Plan
Preparedness
Terrorism Preparedness
Sachse RACES
Severe Weather Information

Emergency Alerts
Report A Concern
Online Payments
Code of Ordinances
Notify Me
Economic Development Corp.

Home > Departments > Emergency Management > HazMat Action Plan

HazMat Action Plan

Dallas County Office of Homeland Security and Emergency Management (HSEM), in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) and has scheduled a 14-day public review and comment period of the Plan.

This Plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

Dallas County HazMAP – City of Sachse Annex

We are asking that the public take this opportunity to make comments regarding the draft plan. Any comments or suggestions may be sent directly to Fire Chief Rick Coleman.

OR You may print out a comment form, fill out and mail to:
City of Sachse, Attn: Fire Chief Rick Coleman, 3815-B Sachse Road, Sachse, Texas, 75048

OR you may fill out the form and submit online.

Home | Translate | Contact Us | Find Us | Sitemap | Powered by CivicPlus | Accessibility | Copyright Notice | Legal Notice

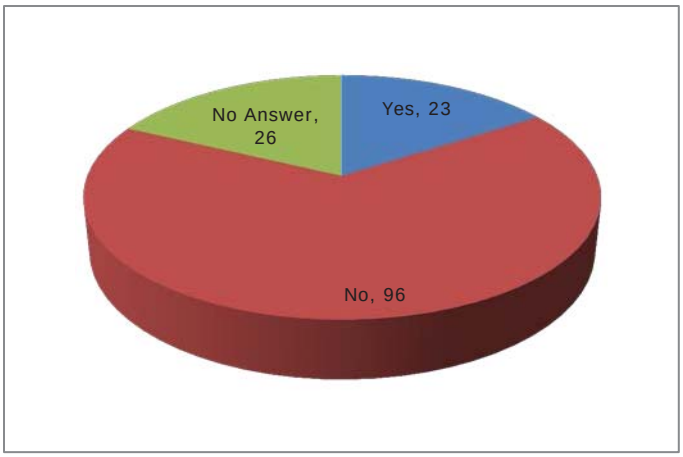
www.cityofsachse.com/index.aspx?NID=422 1/1

Appendix SC - C-1: City of Sachse Survey Reponses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

- ✓ Total number of responses submitted from the citizens of the City of Sachse - 23

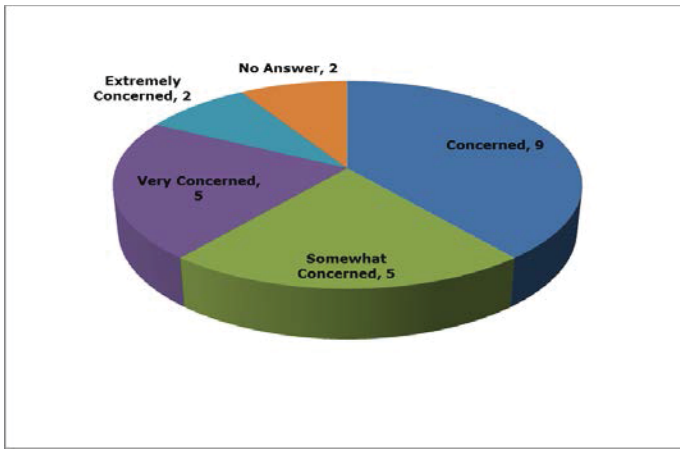
2. Have you ever experienced or been impacted by a disaster?



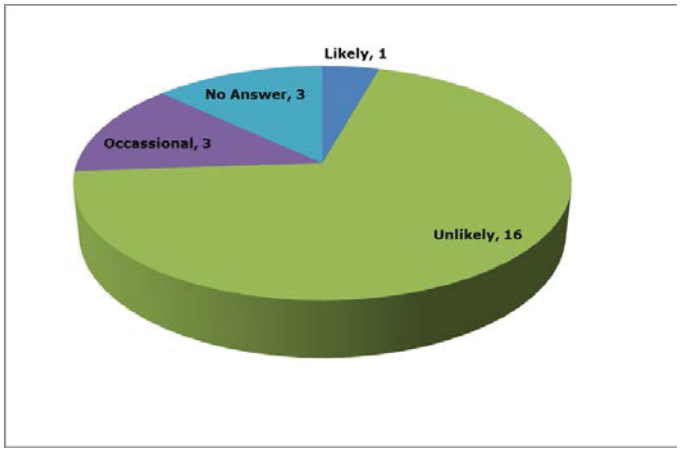
If yes, please indicate what the hazard you have endured and where and when it occurred.

- ✓ “Winter Storms - Topsham ME Earthquakes - California (3) Wildfires – California”
- ✓ “Flood. Fort Worth, 1989”
- ✓ “Tornado, Crosby TX 1980”
- ✓ “1993 Mother's Day Tornado”
- ✓ “In about 2002 we had a significant storm system come through with up to softball size hail and winds over 50mph.”
- ✓ “Tornado, Garland, December 1984 Tornado, Sachse, May 1995(?)”
- ✓ “Sachse tornado f 1993”
- ✓ “Hurricane Allen - Weslaco, Texas and flooding in Staten Island, New York”

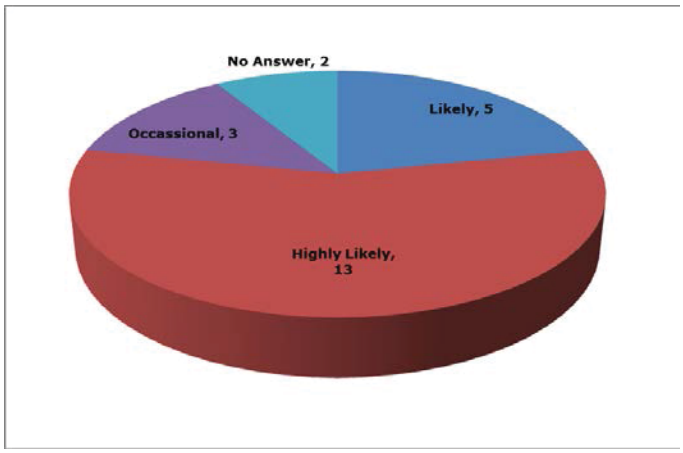
3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



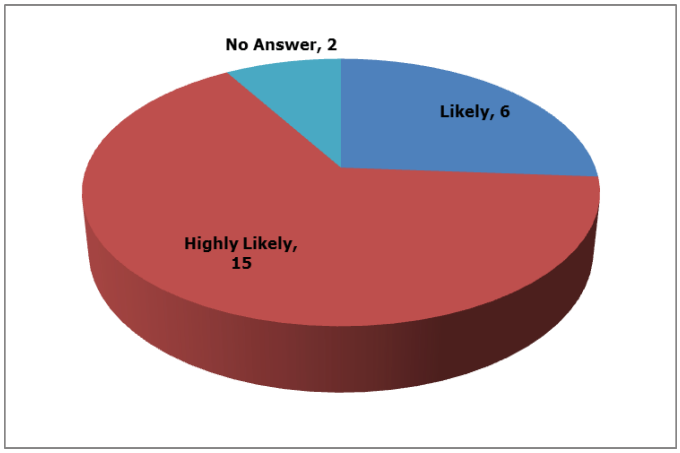
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.
Earthquakes:



Tornado:



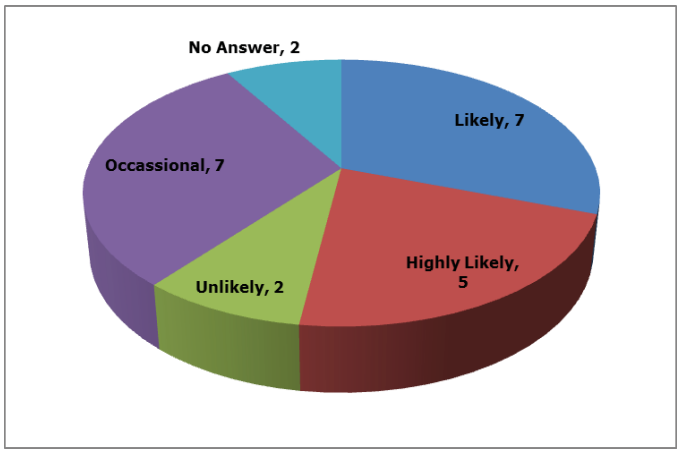
Hail:



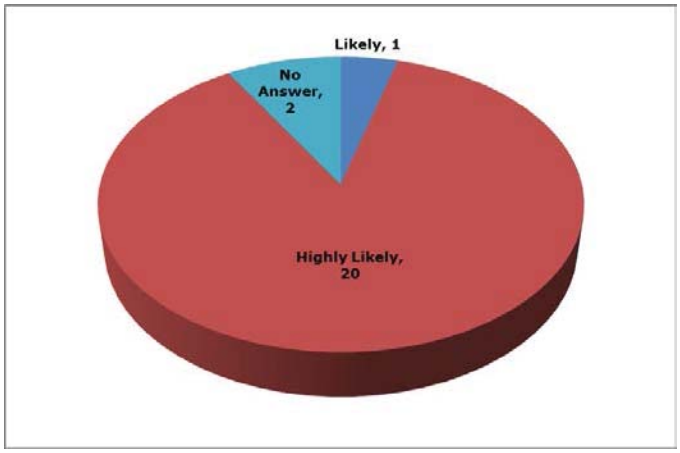
High Winds



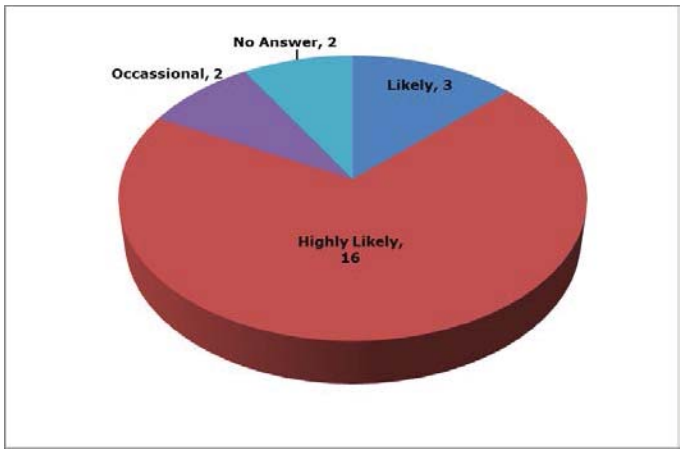
Winter Storms



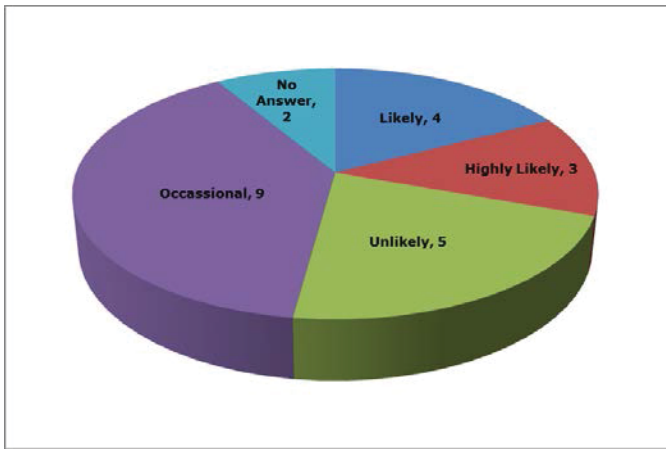
Extreme Heat



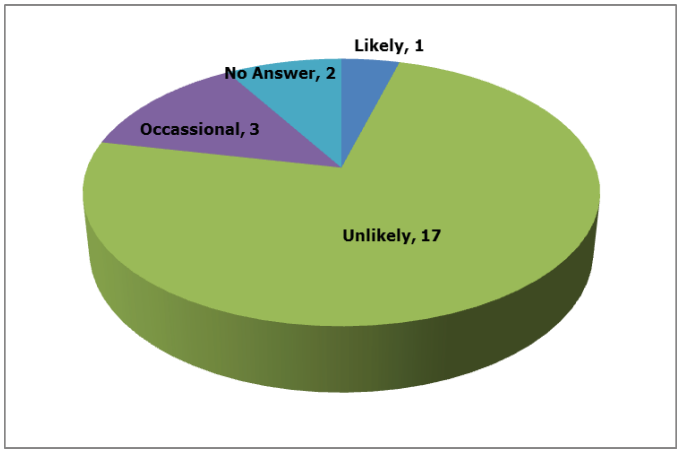
Drought



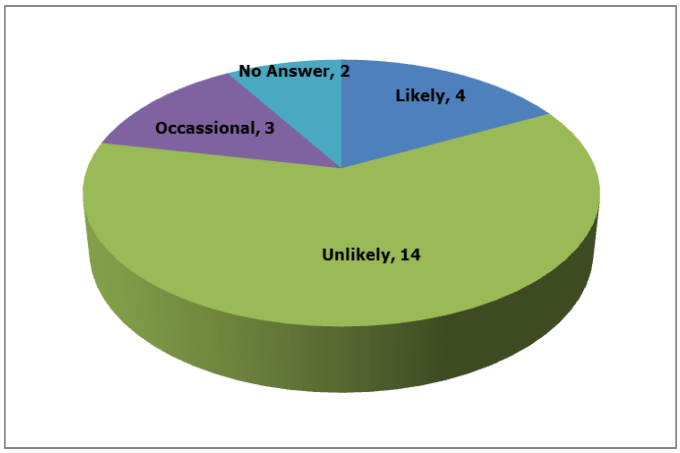
Flooding



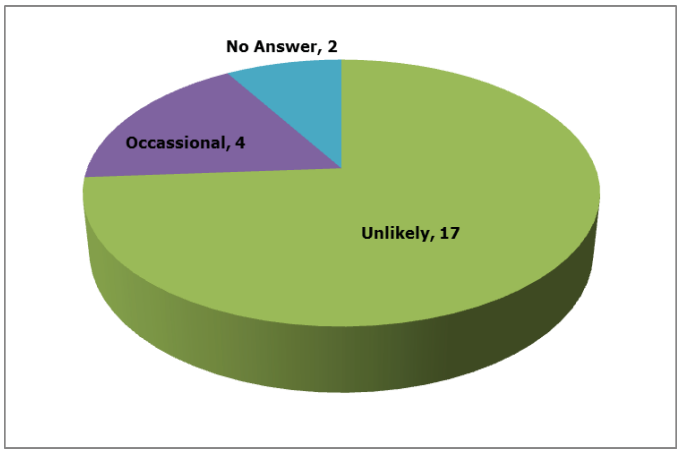
Dam Failure



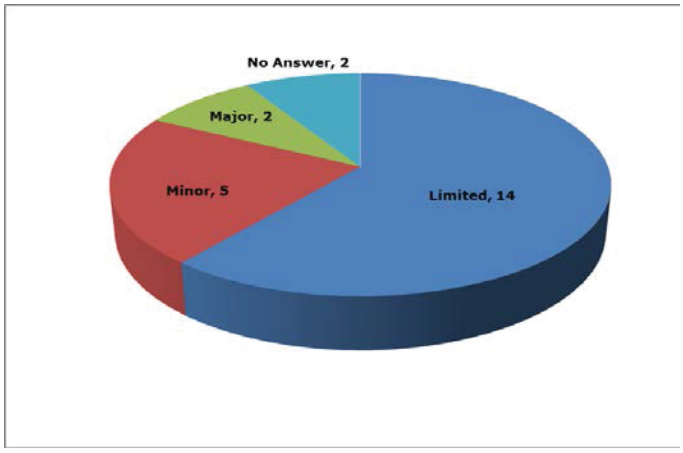
Stream Bank Erosion



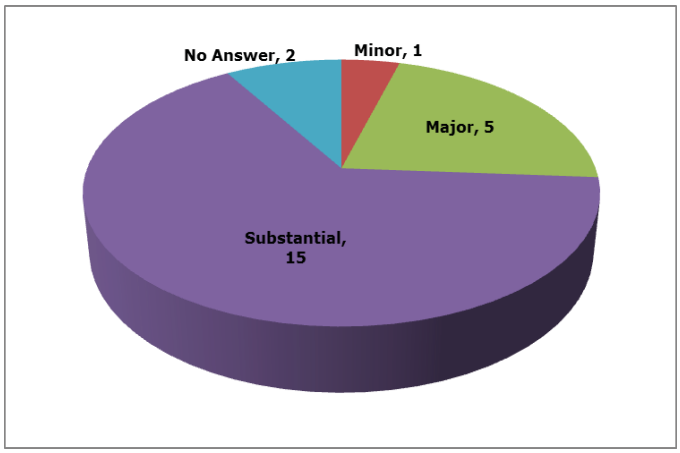
Levee Failure



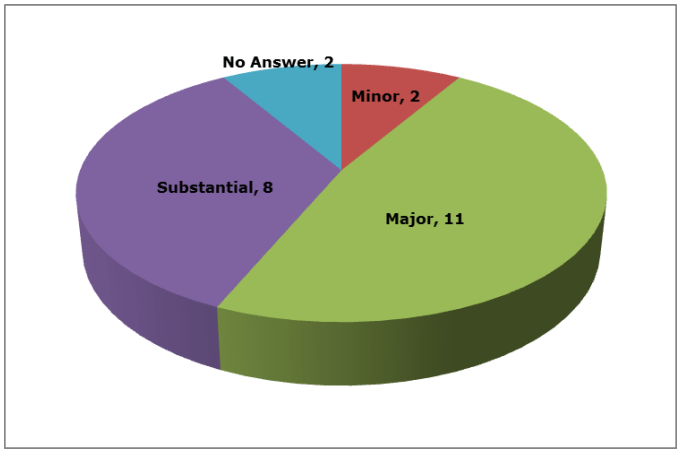
5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.
Earthquakes



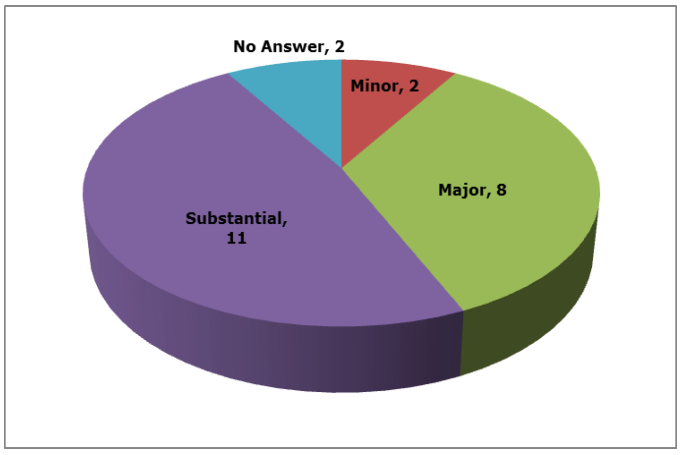
Tornado



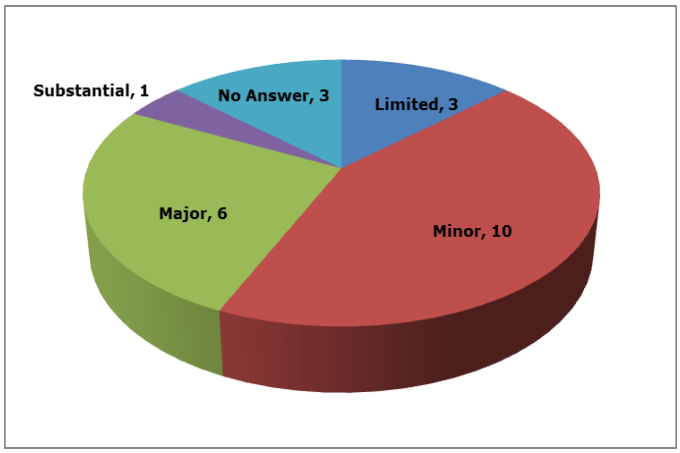
Hail



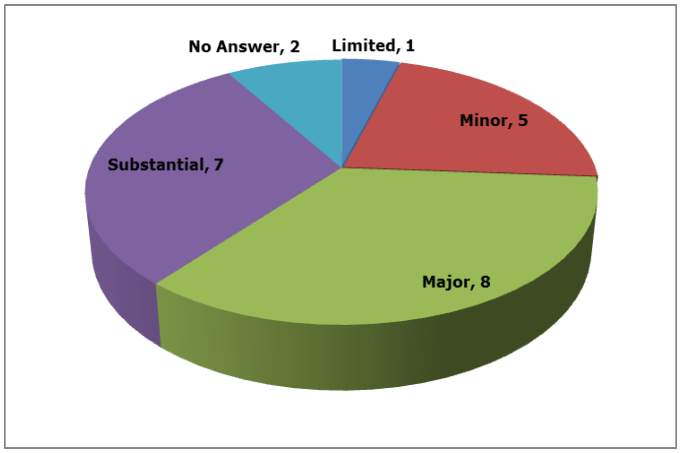
High Winds



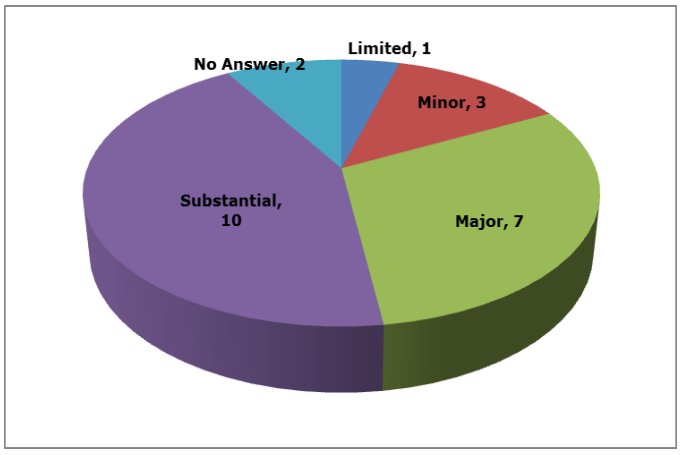
Winter Storms



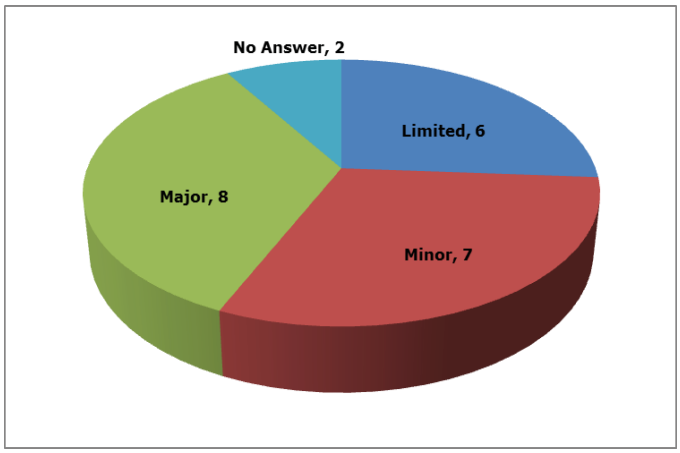
Extreme Heat



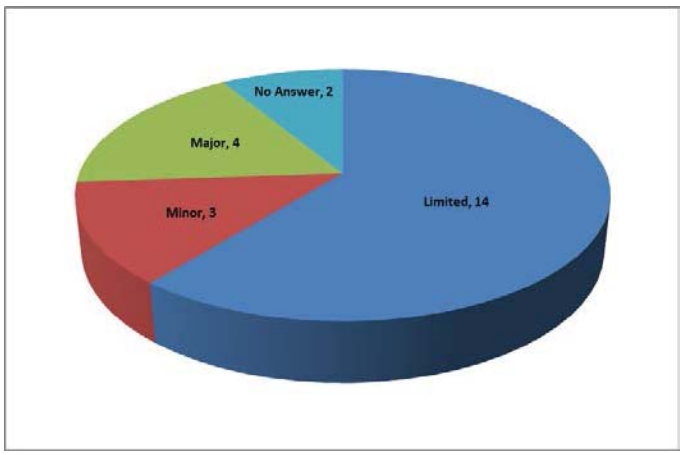
Drought



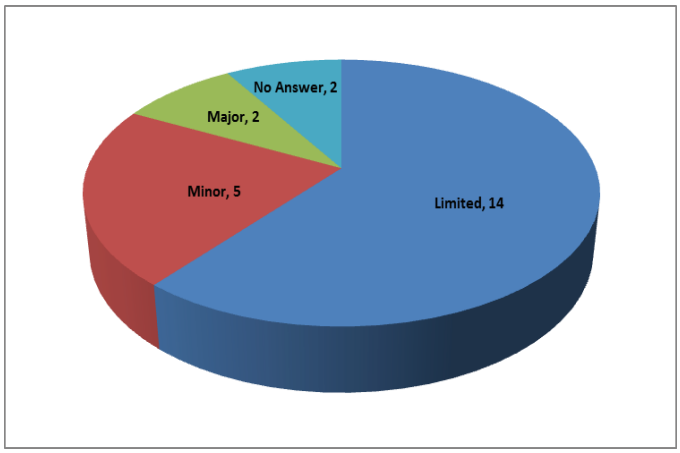
Flooding



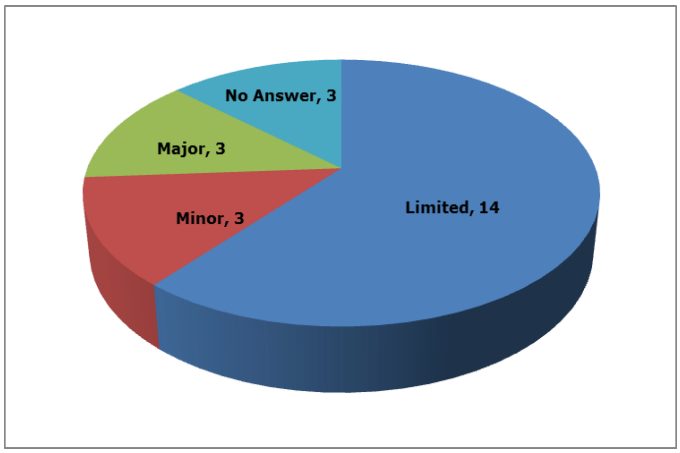
Dam Failure



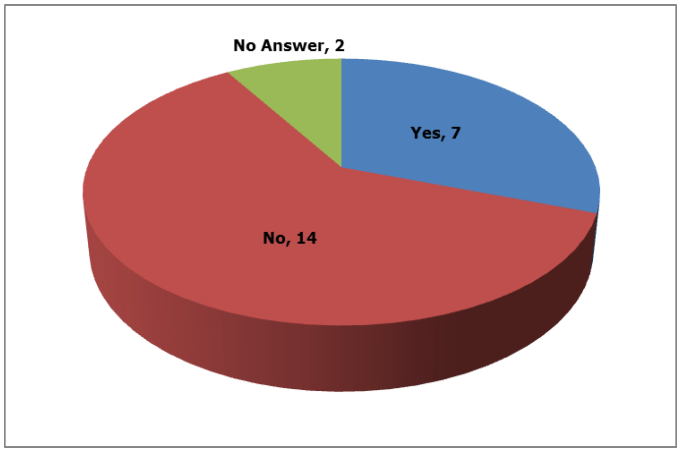
Stream Bank Erosion



Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ "Hazardous Chemical Spill – Major; Likely"
- ✓ "Transportation Accident (mass casualty incident - i.e. Train or bus - Highly likely, Major"
- ✓ "Terrorism – Unlikely; High"
- ✓ "Train Derailment (HazMat) – Occasionally; High"
- ✓ "Train derailment, hopefully never but could create high environmental impact depending on if it was a chemical incident."
- ✓ "Wildland Fire – Occasional; Medium – Medium"

- ✓ " is a major rail line that divides our city which carries a lot of hazardous materials. A derailment or situation on that rail line could have significant

impacts to our town with homes and businesses in very close proximity to that railway."

- ✓ "Railroad that is 6 blocks away. A train derailment of chemicals that are transported through our area could lead to high severity to our community."
- ✓ "Train Derailment (unlikely; major),"
- ✓ "Chemical spill on roadways (unlikely; major),"
- ✓ "Epidemic – flu (unlikely, low-medium),"
- ✓ "Terrorism (unlikely, high)."

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program	6
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	9
Improve, adopt and enforce building codes:	9
Implement the Texas Individual Tornado Safe Room Rebate Program:	14
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	20
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	6
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	17
Coordinate with Dam owners to conduct inundation studies of dams:	2
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	15
Purchase and improve on the Weatherization Assistance Program (WAP):	10
Conduct an earthquake vulnerability study:	4
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	13
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	6
Structural Retrofitting of Existing Buildings:	4
Total Respondents:	21

List any other strategies you think should be included in the plan:

- ✓ "Modifications of zoning ordinances requiring irrigation systems. ...with water issues in this area irrigation systems in every yard is not a good idea. New technologies of drip irrigation or other methods could be options but cities put pretty yards rather than the water issues."
- ✓ "Consider the feasibility and impact of finding/funding/building/encouraging community tornado shelters. Perhaps new communities, especially those with an HOA could construct a group tornado shelter for the whole community, as not everyone can build them on their property (including because of HOA restrictions on what can be added onto a building height wise etc.) Perhaps they could be located near community pools, or in a community meeting building."

8. List any other strategies you think should be included in the plan (Open Ended Response)

- ✓ "Programs focused on educating the public how to better prepare for emergencies."

This page intentionally left blank.

City of Seagoville Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Seagoville participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to the Federal Emergency Management Administration (FEMA) for the City of Seagoville. In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of Seagoville. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Seagoville is located at latitude 32.651920 and longitude -96.550033. It sits at the southeast corner of Dallas County, bordering Mesquite to the north, Kaufman County to the east, and the City of Dallas on the west along U.S. Highway 175 and the Southern Pacific Railroad.

The Town of Seagoville was founded in 1876 by a gentleman named T.K. Seago (1836-1904). Mr. Seago cleared his land of dense timber and built the first store in the area. His stock consisted of $200 in dry goods and groceries. Mr. Seago was postmaster of Seago in 1881 and was known to be in the area until at least 1883. Mr. Seago moved from here to Comanche, Texas and represented Comanche County in the Texas Legislature.



According to the North Central Texas Council of Governments (NCTCOG), the population of Seagoville is estimated to be about 15,000. The city has a total area of 19.0 square miles of which 18.7 square miles is land and 0.31 square miles or 1.58%, is water. There are approximately 4600 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

The City of Seagoville is a home rule city which operates under the City Manager form of government. Being located in the Dallas - Fort Worth metropolitan area, it offers all the benefits of small town living with the conveniences of the big city only a few short miles away.



The current Federal Correctional Institution was first built in the 1930's as a women's detention station on land located on the west side of Seagoville near Highway 175. Since its inception, the institution has

contributed enormously to the economy of the City with jobs and an influx of federal employees from all over the country. The local business community boasts a variety of strong small businesses providing services and goods to local citizens, and the city is home to the facilities of major national corporations such as O'Reilly Auto Parts.

Internal Planning Process

Table 9.1 below lists members of the City of Seagoville Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Seagoville.

Table 9.1: Seagoville Hazard Mitigation Planning Team

Name	Title/Department or Agency	Role
Tommy Lemmond* (retired)	Fire Chief & Emergency Management Coordinator, City of Seagoville	HMPT Coordinator, Hazard Identification, capabilities assessment
Todd Gilcrease	Fire Chief & Emergency Management Coordinator, City of Seagoville	Hazard & Plan development, Hazard Identification, capabilities assessment
Patrick Stallings	Police Chief, City of Seagoville	Hazard & Plan development, Hazard Identification, capabilities assessment
Ladis Barr	Building Official, Code and Enforcement Department	Hazard & Plan development, Hazard Identification, capabilities assessment, Building Codes, Land Use, , City Critical Infrastructure
James Berman**	Public Works Director, City of Seagoville	Took over as HMPT Coordinator, Submission of Flood Plain Documentation, capabilities assessment

**Tommy Lemmond has retired and is no longer working on this project*
***James Burman has left the city and was replaced with Steve Miller*

The Hazard Mitigation Planning Team (HMPT) met regularly during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and	Ensure buildings meet applicable

Source	Data Incorporation	Purpose
	ordinances	mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
05/21/2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
07/31/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for Seagoville in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA form
08/20/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment
10/08/2013	Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of Seagoville's Annex to the HAzMAP. Invited for public comment on the draft plan. Forwarded information to IT department, library and water billing offices to include announcements for public input and participation in the draft annex
02/11/2014	Finalized on action items and updated plan

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. The City of Seagoville notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the public library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of Seagoville made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input.

A total of five (5) survey responses were collected, the results of which are analyzed in this section. Of these five respondents only two completed the survey. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas

The majority of the survey respondents from the City of Seagoville identified five hazards that were deemed as most likely to occur in their jurisdiction. These included tornadoes, hail, high winds, and drought as the hazards that were rated the most likely to occur (had an average rating of above 3.00) and have the highest impact on the community. Overall the Seagoville Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards.

The results of the survey provide valuable information for the City of Seagoville hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

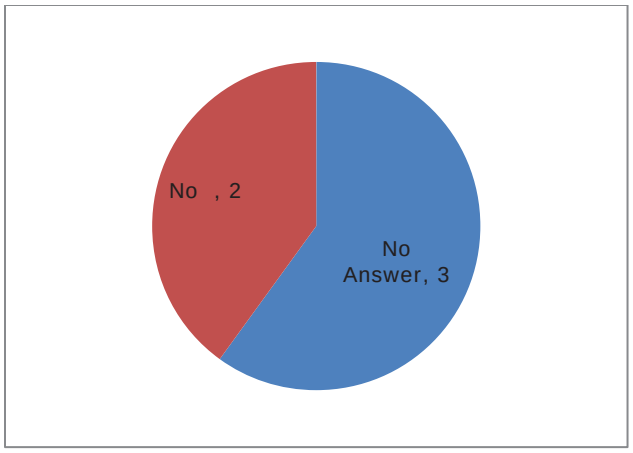
The City of Seagoville will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively.

A summary of the survey results are provided below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-2 of this annex.

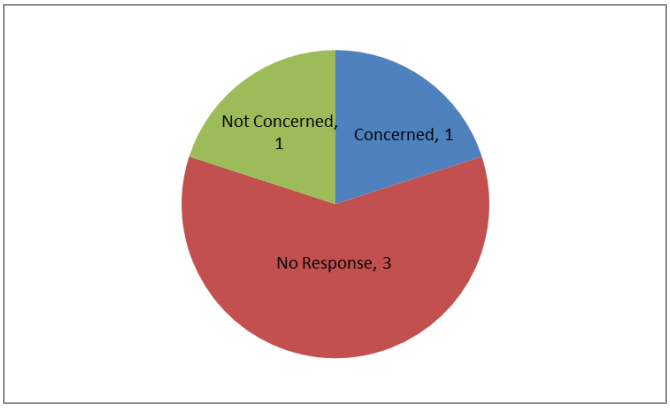
Survey Overview

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ City of Seagoville (5 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

✓ Unlikely ✓ Likely
✓ Occasional ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	No Answer	Total	Average Rating
Earthquake	0	2	0	0	3	2	2.00
Tornado	0	0	0	2	3	2	4.00
Hail	0	0	0	2	3	2	4.00
High Winds	0	0	0	2	3	2	4.00
Winter Storms	0	1	1	0	3	2	2.50
Summer Heat	0	0	0	2	3	2	4.00
Drought	0	0	0	2	3	2	4.00
Flooding	0	0	2	0	3	2	3.00
Dam Failure	1	1	0	0	3	2	1.50
Stream Bank	1	1	0	0	3	2	1.50

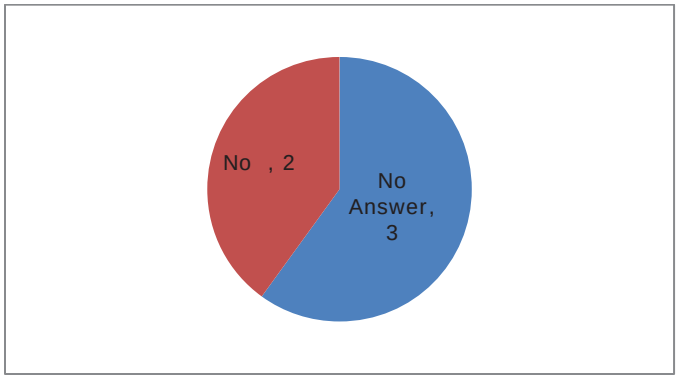
Erosion							
Levee Failure	1	1	0	0	3	2	1.50

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

✓ Limited ✓ Minor
✓ Major ✓ Substantial

	Limited	Minor	Major	Substantial	No Answer	Total
Earthquake	1	1	0	0	3	2
Tornado	0	0	1	1	3	2
Hail	0	0	0	2	3	2
High Winds	0	0	0	2	3	2
Winter Storms	0	1	1	0	3	2
Summer Heat	0	0	0	2	3	2
Drought	0	0	1	1	3	2
Flooding	0	1	1	0	3	2
Dam Failure	1	0	1	0	3	2
Stream Bank Erosion	1	0	1	0	3	2
Levee Failure	1	0	1	0	3	2

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses

Improve on Land Use Program:	0
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	1
Implement the Texas Individual Tornado Safe Room Rebate Program:	1
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	1
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	1
Coordinate with Dam owners to conduct inundation studies of dams:	1
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	2
Purchase and improve on the Weatherization Assistance Program (WAP):	1
Conduct an earthquake vulnerability study:	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	1
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	2

Public Review Period

On December 2, 2014, the city announced the availability of the Dallas County HazMAP update draft and the City of Seagoville's annex for public review and comment. The announcement was made through the city's website. A public notice was also posted on the City of Seagoville's Public Library and City Hall Notice Board. Invitations were also made to various external stakeholders via email. These included Emergency Management Coordinators for the Dallas-Fort Worth Airport and Dallas County Community College District. The announcement provided a 14 day public review and comment period and encouraged the public to submit comments prior to December 17, 2014 for consideration and possible incorporation into this draft.

The public comments were directed to James Berman the Public Works Director with the City of Seagoville and to Michael Gaciri, the Hazard Mitigation Specialist with Dallas County Office of Homeland Security and Emergency Management. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

Capability Assessment

The City of Seagoville identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The City Council for the City of Seagoville, including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Key Departments

The following is a summary of existing departments in the city and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the city. The administrative and technical capabilities of the city, as shown in **Table 9.1** provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the plan. **Figure 9.1** shows the agencies within the City of Seagoville that will have a significant role in implementing the plan.

A. Seagoville Fire Department (SFD)

Staff: The Department operates with six full-time firefighters per shift. The Fire Department has implemented a Swift Water Rescue Team that consists of a 15-member team. All members are Swift Water Rescue Technician II certified.

Apparatus for the city include:

- ✓ One Command Vehicle
- ✓ Two Class A Engines
- ✓ One Booster Truck
- ✓ One Rescue Truck
- ✓ One Swift Water Rescue Boat and Trailer

The Seagoville Fire Department contracts its Paramedic Ambulance Service.

The Mission Statement of the Department is Courage. Confidence. Discipline. Teamwork. The Seagoville Fire Department protects our citizens and visitors by minimizing the loss of life and property resulting from fire, medical emergencies, and other disasters in such a manner that will retain the public's support and confidence in all aspects of service delivery.

It accomplishes this mission through fire prevention, investigation, public education, and training efforts as well as by maintaining a quick and effective response for fire suppression, Emergency Medical Services, and other emergency and non-emergency functions.

The Fire Chief also serves as the Emergency Management Coordinator for the city and is responsible for the facilitating and coordinating the development of an Emergency Management Plan (EMP) in accordance with Chapter 418 of the Texas Government Code and Title 37, Part 1, Chapter 7 of the Texas Administrative Code. The EMP consists of a basic plan and functional annexes and appendices. The basic plan outlines a jurisdiction's approach to emergency operations, and provides general guidance for emergency management activities, including methods of mitigation, preparedness, response, and assigns responsibilities for various emergency tasks. The City of Seagoville EMP is covered under the Dallas County plan as it has a joint resolution with Dallas County.
The City of Seagoville Fire Department within its duties noted above, will use this HazMAP in conjunction with the city's emergency operations plan to implement strategies, projects and policies which lead to a more resilient and safe city.

B. Seagoville Police Department (SPD)

Staff: The Police Department currently employs 24 full time Sworn Officers, 2 part time Sworn Officers, 1 Reserve Sworn Officer, 1 Support Services Manager, 6 Public Safety Technicians, 1 part time Public Safety Technician, 1 Support Services Technician, 1 part time Support Services Technician, and 3 School Crossing Guards. Each member of the Police Department is dedicated to quality customer service and is ready and eager to assist you with your needs.

The Seagoville Police Department was named the 2012 Agency of the Year by the North Central Texas Council of Governments for its outstanding E911 Communication Center. The Communications Center is staffed around the clock with highly trained Public Safety Technicians that are responsible for answering both emergency and non-emergency phone calls. In addition the Public Safety Technicians dispatch police, fire, and emergency medical services, and monitor the department's holding facility operations.

C. Building and Code Department

The Building Inspection Department is responsible for ensuring compliance with city building codes and issuing permits for construction. The Building Inspection Department provides public safety by enforcing Municipal and State regulations and codes relative to the construction, enlargement, alteration, repair, moving, demolition, conversion, occupancy, equipment, use, height, area, and maintenance of all buildings or structures in the city. The construction codes of the city shall be administered and enforced by the office of the Building Official.

The Code Enforcement Department is responsible for maintaining compliance with City of Seagoville codes and ordinances, and issuing warnings and/or citations for violations. The mission of code enforcement in the City of Seagoville is to protect the health and safety of the city's residents and visitors, and the livability of the community, by assuring compliance with the city's land use, environmental, and construction codes. The city will assure code compliance by encouraging voluntary compliance and in cases where voluntary compliance has not been met, using all legal resources available to the City of Seagoville.

D. Public Works

The Public Works Department is responsible for the maintenance of the city streets, water and sewage system, and drainage within the City of Seagoville. The department has several functions these include Solid Waste Management, Streets Division, Storm water Management, Water Distribution, and Wastewater Collection.

The Solid Waste Division works comprehensively with Republic Waste Services to ensure reliable trash removal. This teamwork concept between Republic Waste Services and the City of Seagoville ensures that every customer receives quality managed waste removal.

The Street Division of Public Works is responsible for the maintenance of the following:

- ✓ Striping
- ✓ Signs
- ✓ Crack sealing
- ✓ Street repairs
- ✓ Curb and gutter
- ✓ Drainage
- ✓ Rights of way

The Division is also responsible for 85 paved lane-miles in the City of Seagoville. Functions of the Division also include minimizing hazardous roadway conditions and responding to citizen requests for service. The division also responds to emergencies and weather events as needed in an effort to ensure safe conditions for citizens and motorists.

The Water Distribution Division maintains and repairs over 100 miles of main lines and numerous water valves that provide the flow of potable water. The Division reads and maintains over 4.000 water meters, provides the utility billing division with monthly billing information, and provides the citizens of Seagoville with the best possible service. The Division also maintains over 500 fire hydrants.

The Wastewater Collection Department maintains and repairs over 95 miles of sanitary sewer line, more than 600 manholes, and 12 lift-stations. The main goal of the Wastewater Collection Department is to ensure an adequate capacity for wastewater flow to the North Texas Municipal Water District Sewer Treatment Plant located in Mesquite, Texas, by gravity flow and sewer pump stations throughout the system.

Figure SGL 1: City of Seagoville Organizational Chart and Key Departments

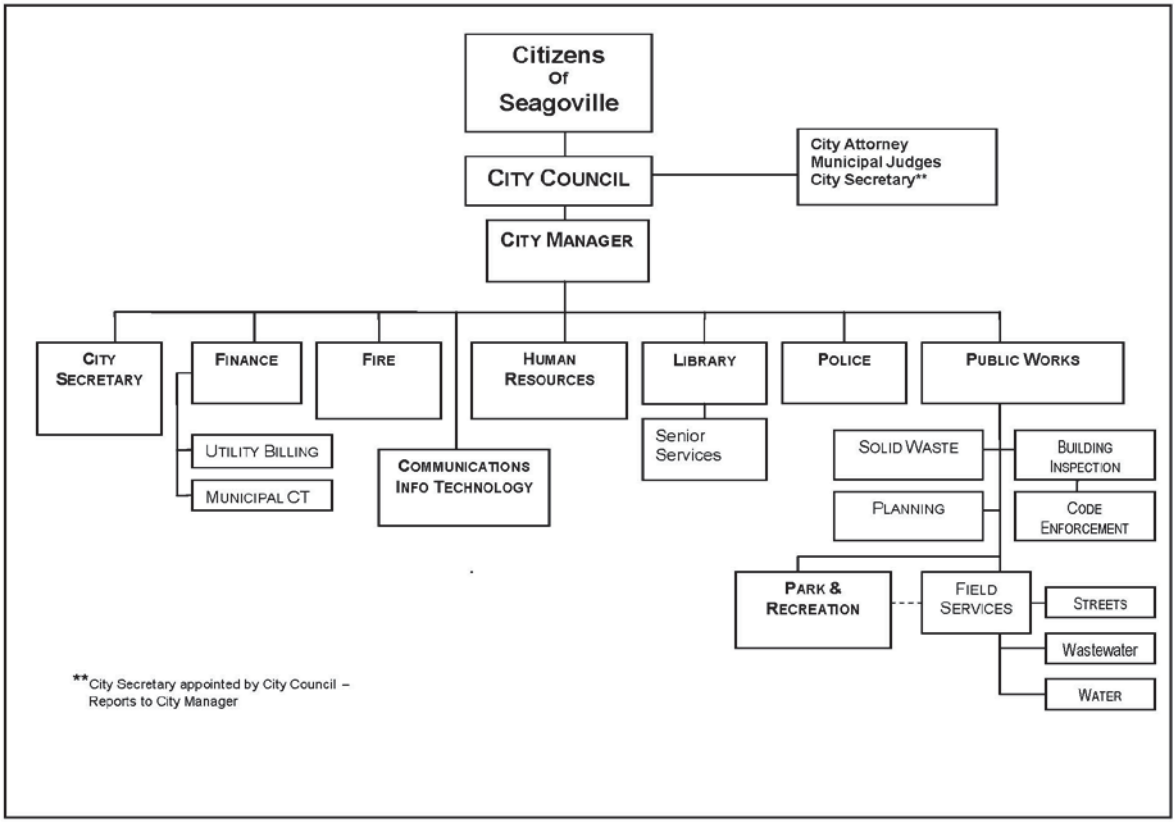
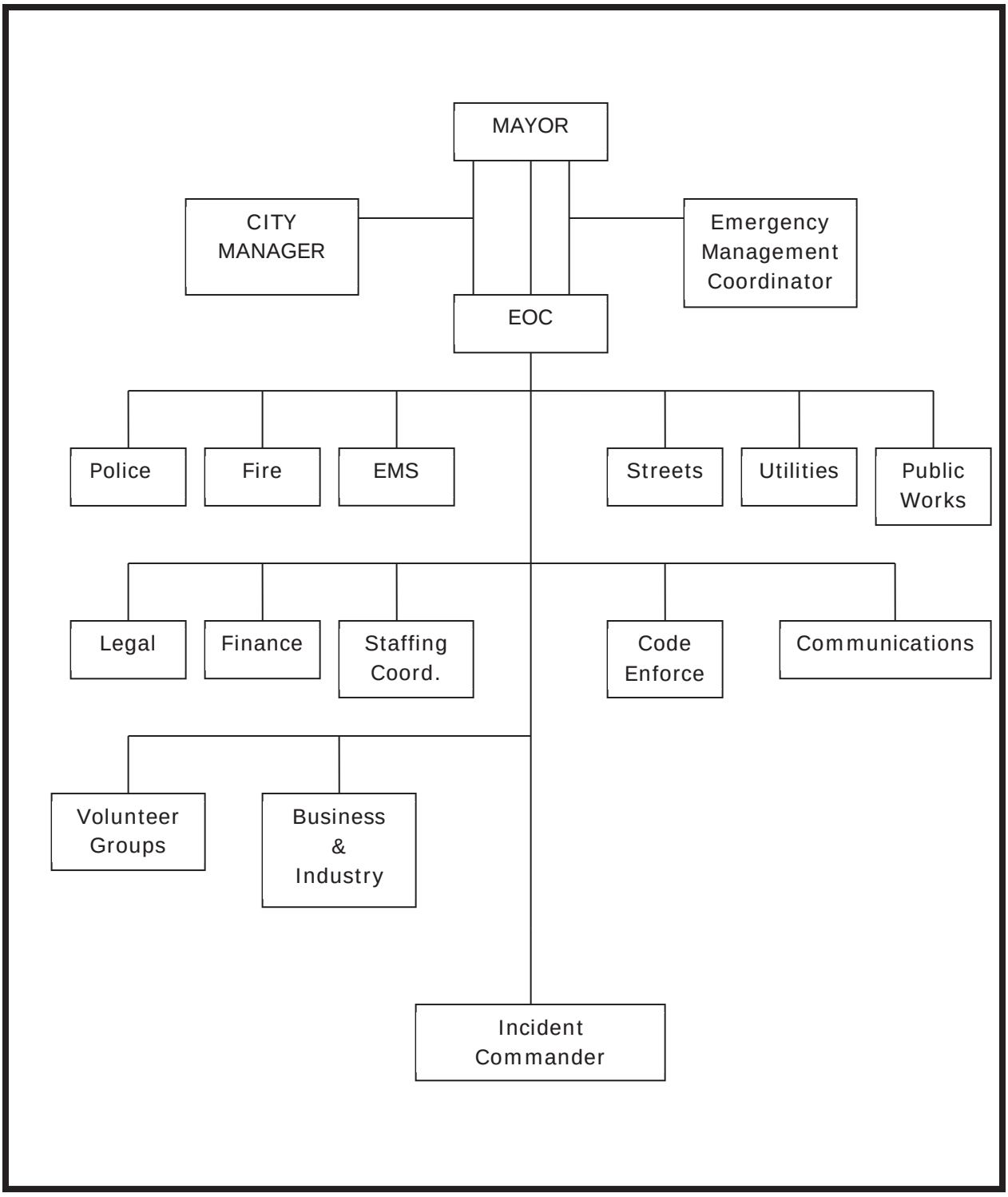


Figure SGL 2: City of Seagoville Emergency Operations Center Organizational Chart


MAYOR
CITY MANAGER
Emergency Management Coordinator
EOC
Police
Fire
EMS
Streets
Utilities
Public Works
Legal
Finance
Staffing Coord.
Code Enforce
Communications
Volunteer Groups
Business & Industry
Incident Commander

Summary of Capabilities

The tables below identify the current capabilities in the City of Seagoville.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	**Yes**	**1. No** **2. No** **3. Yes**
Capital Improvements Plan	**Yes**	**1. No** **2. No** **3. Yes**
Economic Development Plan	**Yes**	**1. No** **2. No** **3. Yes**
Local Emergency Operations Plan	**Yes**	**1. Yes** **2. No** **3. Yes**
Continuity of Operations Plan	**No**	**N/A**
Transportation Plan	**Yes**	**1. Yes** **2. No** **3. Yes**
Storm water Management Plan	**Yes**	**1. Yes** **2. Yes** **3. Yes**
Community Wildfire Protection Plan	**No**	**N/A**
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	**No**	**N/A**

Building Code, Permitting, and Inspections	Yes/No	
Building Code	**Yes**	**Version/Year: 2006 International with Amendments**
Building Code Effectiveness Grading Schedule (BGEGS) Score		**Score: 9**
Fire Department ISO rating	**Yes**	**Rating: 3**
Site Plan review requirements	**Yes**	

Land Use Planning and Ordinances	Yes/No	Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?
Zoning ordinance	**Yes**	**Yes** **Yes**
Subdivision ordinance	**Yes**	**Yes** **Yes**
Floodplain ordinance	**Yes**	**Revised**
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	**No**	
Flood insurance rate maps	**Yes**	**Dallas County 480187** **Kaufman County 480187**
Acquisition of land for open space and public recreation uses		

How can these capabilities be expanded and improved to reduce risk?
Buy Out Flood Prone Areas and develop into Parks Develop an Ordinance that would require structures that get damaged will be required to raise the structure at least 2 feet above the base plain elevation Enhance Building Codes Adopt 2013 Building Codes

Administrative and Technical

Administration	Yes / No	Describe capability Is coordination effective?
Planning Commission	Yes	Minimal No
Mitigation Planning Committee	Yes	Yes
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	City does maintenance on drainage ditches and trees
Mutual aid agreements	Yes	City of Dallas Dallas County City of Crandall
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes; FT	Yes; Yes; Yes
Floodplain Administrator	Yes; FT	Yes; Yes; Yes
Emergency Manager	Yes; FT	Yes; Yes; Yes
Community Planner	No	
Civil Engineer	Yes; PT	
GIS Coordinator	No	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Citizens can sign up for phone notification Yes
Hazard data and information	No	N/A
Grant writing	Yes	Yes
HAZUS analysis	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more Staff		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	1. Used in the past to fund infrastructure improvements 2. Yes
Authority to levy taxes for specific purposes	Yes	1. Used annually to fund ongoing city operations 2. Yes
Fees for water, sewer, gas or electric services	Yes	1. Water and Sewer fees are charged to local customers 2. Yes
Impact fees for new development	Yes	1. Park development fees 2. No
Storm water utility fee	Yes	1. Instituted this fiscal year 2. Yes
Incur debt through general obligation bonds and/or special tax bonds	Yes	1. Used in the past to fund infrastructure improvements 2. Yes
Incur debt through private activities	No	1. No 2. No
Community Development Block Grant	Yes	1. Used in the past to fund read repair 2. Uncertain
Other federal funding programs	Yes	1. AFC Grant and Safer Grant 2. No
State funding programs	No	
Other	No	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

The Administration is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Churches to provide temporary shelters
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Fire Department provides fire safety and home safety classes in our schools and Senior Centers
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?		✓
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?		✓
2. Do environmental policies maintain and restore protective ecosystems?		✓
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		✓
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?		✓
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?	✓	
Capital Improvement Program and Infrastructure Policies	**Yes**	**No**
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓

Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		✓
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According the Texas Water Development Board data the City of Seagoville has 13 policies with a total premium of $11,323.00
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	1 claim was paid out and closed in the City of Seagoville for a total of $6,200. No reports of substantial damage
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	There are several roadways that are exposed to flood risk. See flood section below
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	There are no areas with limited NFIP policy coverage in the City of Seagoville
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	NO
Is floodplain management an auxiliary function?	Community FPA	YES
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	If property is within 100 year floodplain as per our flood plain map, a 100 year survey is required. Our ordinances require structures to be built 2 feet above 100 year flood plain. Engineer design required.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		2013
Is a CAV or CAC scheduled or needed?		None

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	02/01/74 06/15/81
Are the FIRMs digital or paper?	Community FPA	Digital & Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceed, require 2 feet above base flood plain elevation
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual CRS Coordinator, ISO representative CRS manual	Upon any application for permits, it is reviewed to check to see if it is within the flood plain. If questionable a flood plain survey is required. Our Flood Prevention Ordinance requires that if any building is to be built it is to be at least 2 feet above the 100 year flood plain. Fences and Storage buildings go through the same process.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	YES
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?	N/A	N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment

The conclusion drawn by City of Seagoville HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Seagoville are as follows:

High Risk (over 65% on HIRA)	High Winds Extreme Heat
Moderate Risk (41%- 65% on HIRA)	Tornado Hail Lightning Winter Storms
Low Risk (12 %-40% on HIRA)	Wildfire Drought Flooding
No Risk (Below 12% on HIRA)	Stream Bank Erosion Earthquake Dam/Levee Failure

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure. Stream bank erosion was not considered a risk at this point for the city. There is no property or people that have been identified as being at risk from this hazard in the jurisdiction.

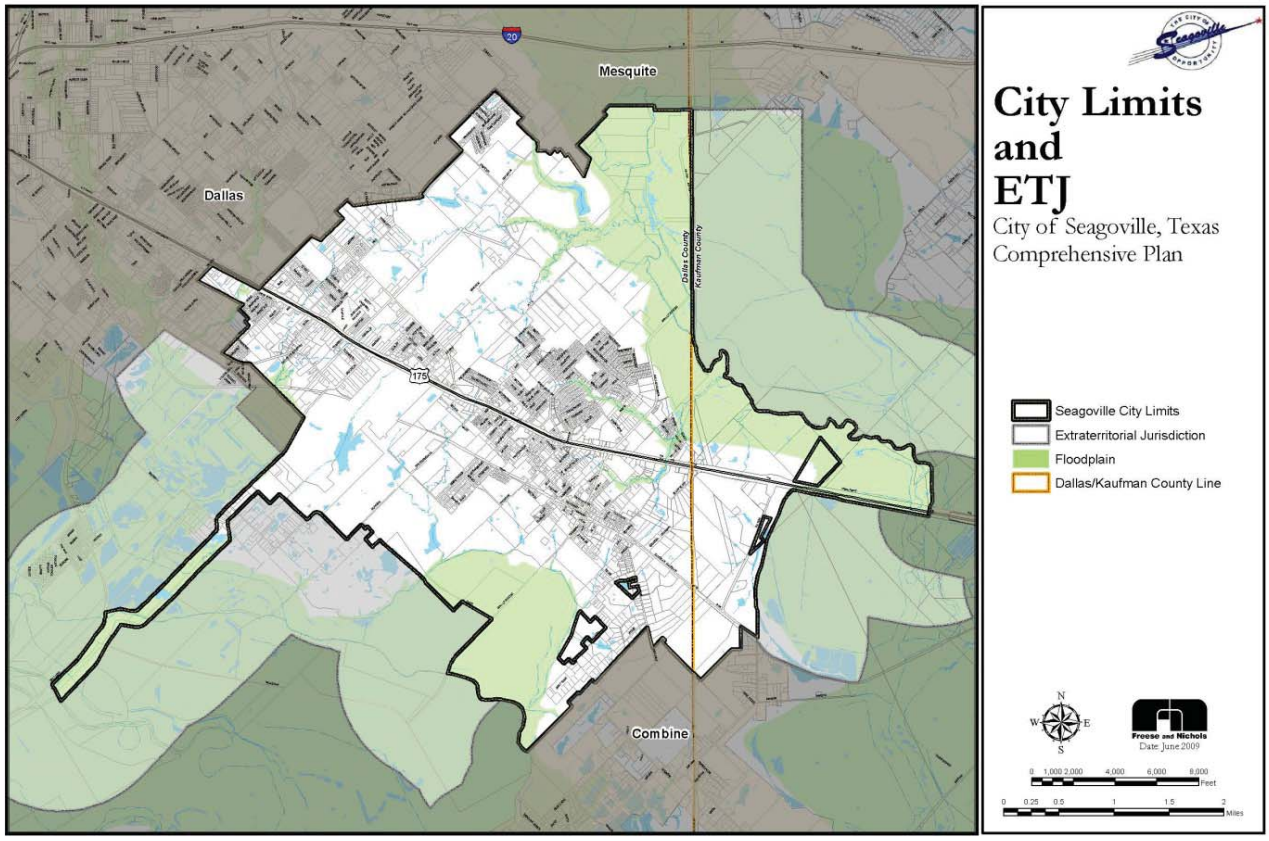
Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Seagoville. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Seagoville**.**

A. Flood: The City of Seagoville is one of the communities that are part of the Ten Mile/Red Oak Creeks Watershed. Other jurisdictions that are part of this watershed include Balch Springs, Cedar Hill, Combine, Dallas, DeSoto, Duncanville, Ennis, Ferris, Garrett, Glenn Heights, Hutchins, Lancaster, Mesquite, Midlothian, Oak Leaf, Ovilla, Palmer, Pecan Hill, Red Oak, Richardson, Waxahachie, Wilmer, Dallas County, Ellis County, and Kaufman County.

The City of Seagoville initially joined the Federal Emergency Management Agency (FEMA) National Insurance Flood Program on June 15, 1981. The initial Flood Hazard Boundary Map (FHBM) was issued in February 1974. The **SGL 1** depicts the city limits as well as highlights the flood plain.

GL Map 1: City of Seagoville City Limits



Locations: The following are areas of the City of Seagoville are susceptible to flooding as they lie within the flood zone:

- 400-1000 block of Barry Street - Very high water and home flooding during large rainfall events
- 400-1000 block of Larry Drive - Very high water and home flooding during large rainfall events
- Willis St. at Barry Street – Very high water runs across roadway during large rainfall
- 1300 block E. Malloy Bridge Road – Very high water runs across roadway during large rainfall
- 700 block of Hall Street – High water runs across roadway during large rainfall
- 700 block of Jack Street – High water runs across roadway during large rainfall
- 700 block of Judy Lane – High water runs across roadway during large rainfall
- 700 block of Reeves Lane – High water runs across roadway during large rainfall
- 1000-1100 E. Farmers Road – Very high water runs across roadway during large rainfall
- 700 block of Smith Lane – Water runs across roadway during large rainfall
- 200 block Hwy 175 Service Road – Water runs across roadway during large rainfall
- 1400 block Bowers Road – Water runs across roadway during large rainfall
- 1600 Parkhaven – Water runs across roadway during large rainfall
- 1600 Woodhaven – Water runs across roadway during large rainfall
- Animal Shelter 1100 block E. Malloy Bridge Road – Could flood during heavy rainfall (Low probability)

As has been stated earlier in this annex, the City of Seagoville participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

Using this plan the City of Seagoville will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

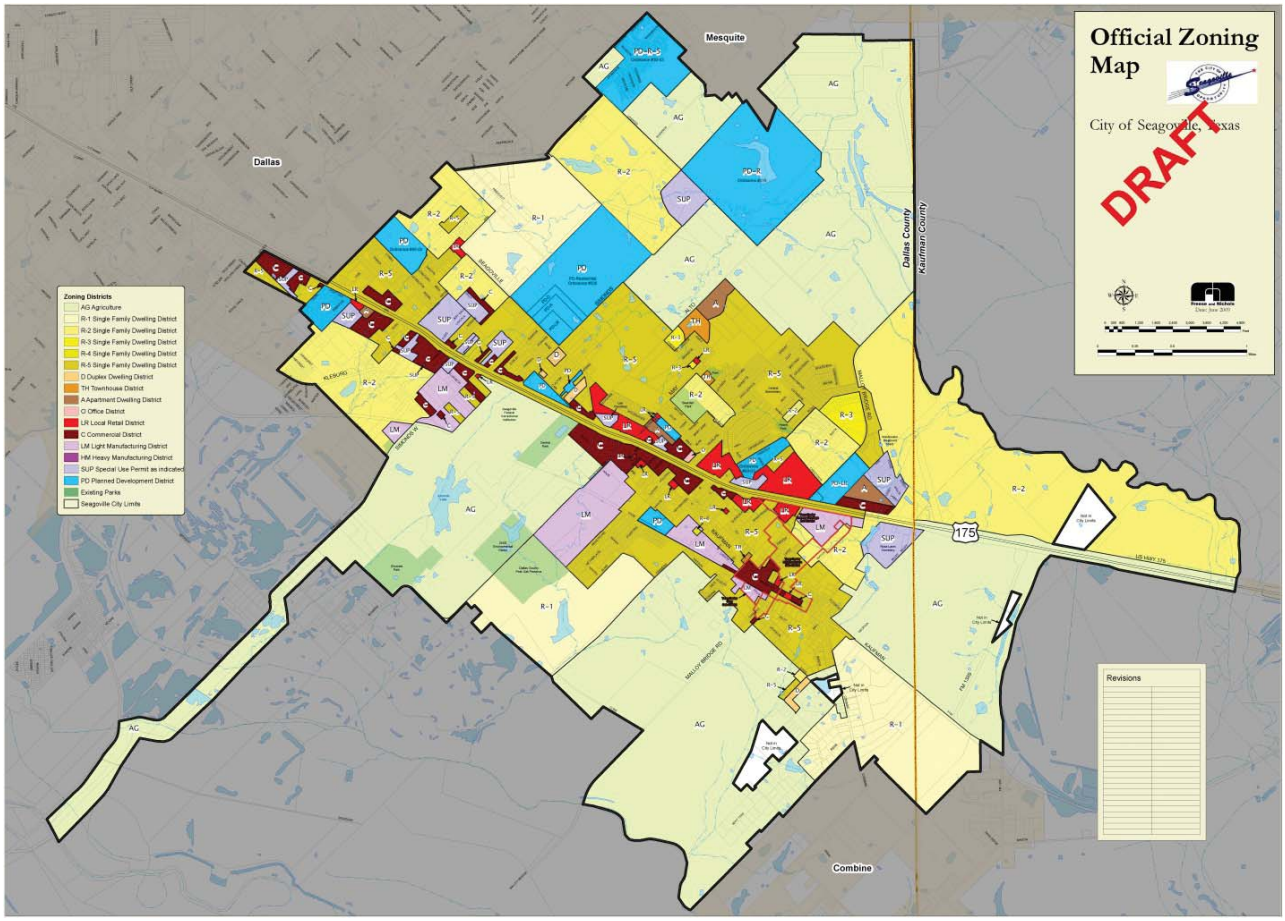
Jurisdiction	Community Floodplain Administrator	NFIP Activity	Activity Description	Enforcement
City of Seagoville	Floodplain Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the Department of Building and Code. The City of Seagoville requires-2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and elevation certificate document non-residential structures requires 2 feet of free board above the Base Flood Elevation or Flood Proof Certificate Document that will be built on properties created or platted after the effective date of the Flood Damage Prevention Ordinance.	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the city requirements may be fined in accordance with the Texas Water Code for each violation per day.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Take action to minimize the effects of flooding on people, property, and building.	Public Works (City Road and Street Operations) department installs signs at low water crossings that indicate "When flooded turn around don't drown".	

The Community Rating System (CRS)

The Community Rating System (CRS) is a voluntary program for NFIP-participating communities. The City of Seagoville participates in this program. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. All CRS communities must maintain completed FEMA elevation and flood proofing certificates for all new and substantially improved construction in the Special Flood Hazard Area after the date of application for CRS classification.

The Land in Seagoville is approximately 60% built out. Thus, Seagoville has plenty of land yet to be developed. On the residential side, it has been recognized as one of the fastest growing cities in Dallas Fort-Worth Area. According to the Dallas Central Appraisal District, Seagoville is building approximately 400 homes a year. **SGL Map 2** depicts the draft copy of the city's Zoning Map.

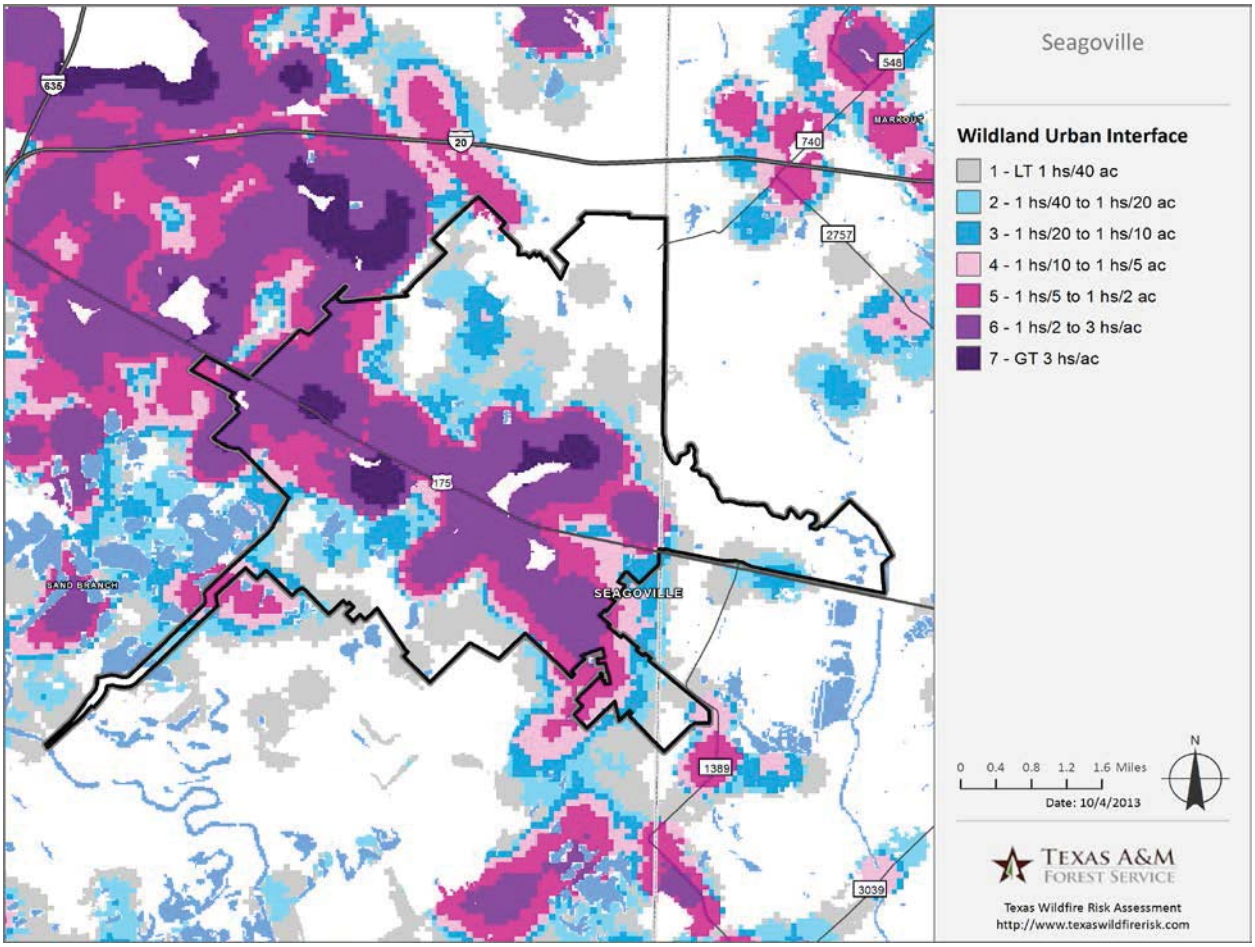
SGL Map 2: Zone Map for the City of Seagoville



B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas Forest Services (TFS), it is estimated that 12,703 people or 94 percent of the total population (13,535) in the City of Seagoville live within the WUI. The Wildland Urban Interface (WUI) Map below reflects housing density depicting where humans and their structures meet or intermix with wildland fuels.

Map SGL 3: Seagoville's Wildland Urban Interface



The wildfire threat for the City of Seagoville is ranges from Non-Burnable to Low. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

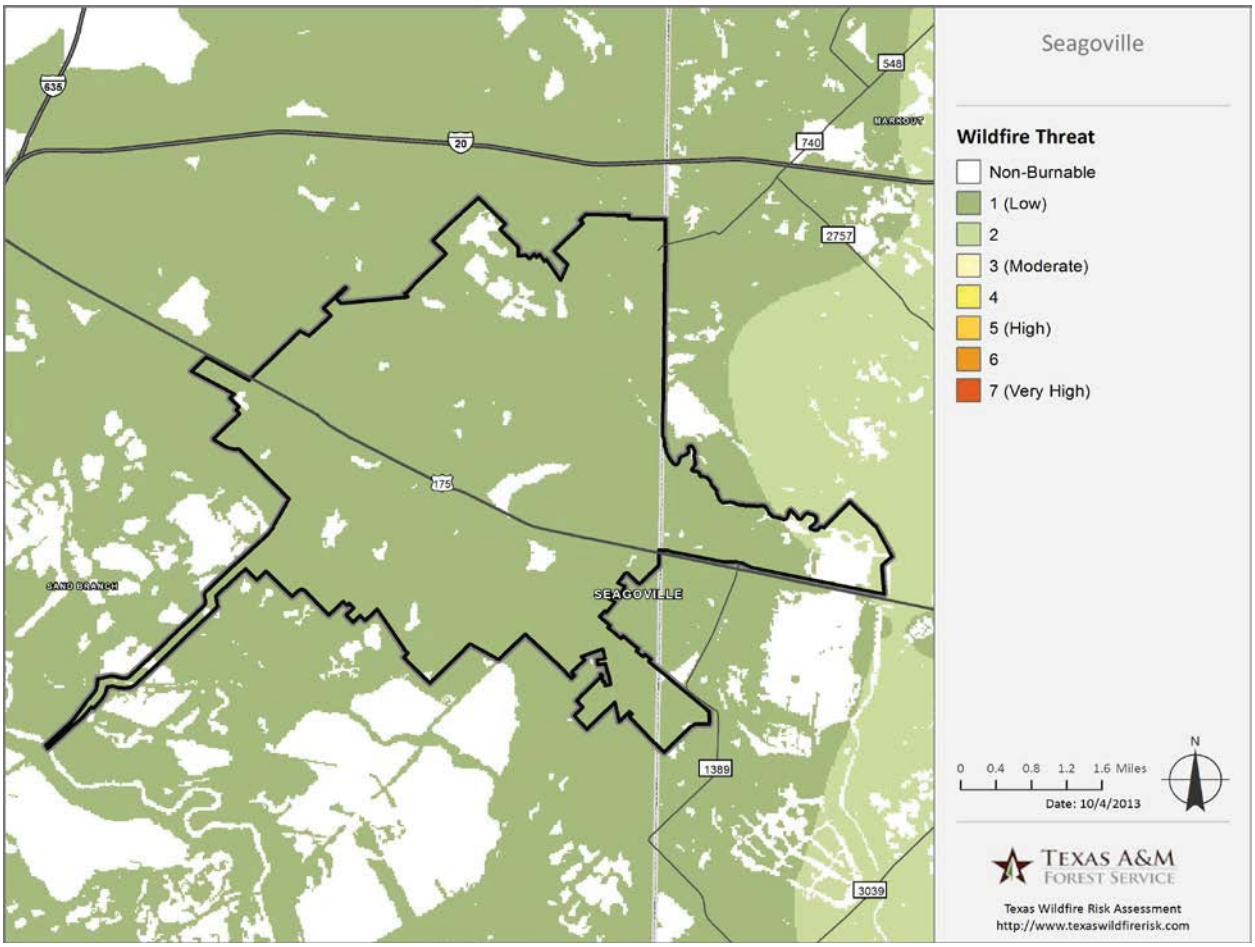
from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of Wildfire Threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning. Historically, there have been no wildfires reported in the City of Seagoville.

Map SGL 4: Seagoville Wildfire Threat



C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of Seagoville as there are no dams within the City and neither do any dams in neighboring jurisdictions affect any properties within the jurisdiction. None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults within Seagoville there is no historical data of earthquakes in the City of Seagoville.

E. Stream Bank Erosion: There are no areas of Seagoville where stream bank erosion is considered to be a hazard nor is there any history of stream bank erosion in Seagoville. Stream Bank Erosion is not considered a hazard that affects Seagoville and will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Seagoville. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Seagoville. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Seagoville.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Seagoville.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Seagoville.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Seagoville due to winter storm events.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Seagoville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Seagoville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Seagoville are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Seagoville is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Seagoville. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Seagoville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Seagoville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Seagoville are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Seagoville have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Seagoville. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Seagoville are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Seagoville are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Seagoville are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Seagoville. All the population of City of Seagoville is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Seagoville. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Seagoville are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Seagoville are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Seagoville are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Seagoville. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Seagoville indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Seagoville are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Seagoville are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Seagoville are exposed to this hazard.

Wildfire	
Population	Based on geographical data 94 % of the population in City of Seagoville lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no improved valued properties in the City's areas at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Seagoville.

Essential Infrastructure Summary Report for the City of Seagoville:

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Seagoville Elementary School	32 38' 29.47"N 96 32' 23.28"W	1
Seagoville Central Elementary School	32 39' 25.71"N 96 32' 15.04"W	1
Seagoville North Elementary School	32 39' 28.90"N 96 33' 27.90"W	1
Police Stations	32 38' 57.48"N 96 32' 23.52"W	1
Fire Stations/Back-up EOC	32 39' 17.78"N 96 33' 34.34"W	1
Emergency Operations Facilities	32 38' 57.48"N 96 32' 23.52"W	1
Hazardous Materials Sites		0
Military Institutions	32 39' 13.55"N 96 34' 47.00"W	1
Nuclear Power Plants		0
Water Treatment Facility		0
Sewer Collector	32 39' 07.66"N 96 31' 30.56"W	1
Animal Shelter	32 39' 12.26"N 96 31' 30.81"W	1
City Hall	32 38' 57.33"N 96 32' 28.72"W	1
Dams (Moderate to High Hazard)		0

Structure / Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	$ 8,100,000	500	Within
Commercial	0	N/A	N/A
Industrial	N/A	N/A	N/A
Government / Public	$ 100,000	500	Within

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	0	N/A	N/A	N/A
Commercial	0	N/A	N/A	N/A
Industrial	0	N/A	N/A	N/A
Government / Public	0	N/A	N/A	N/A

Mitigation Strategies:

Based on the results of the risk and capability assessments, the City of Seagoville Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural hazards

Goal 4: Continue to build capacity for hazard mitigation in the City of Seagoville

- ✓ ***Objective 4-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 4-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 4*-C:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Seagoville Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

City of Seagoville Action Item	Increase the capacity of residents to receive early warning from the National Weather Service. This would be accomplished by purchasing and distributing NOAA All Hazard Radios to each household in the city.
Hazard(s) Addressed	Tornado, High Winds, Hail, flooding, drought, wildfire, and lightning
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	$100,00
Potential Funding Sources	City Budget, Grant Funds, HMPG, PDM, Partial payment by receiving party,
Potential Matching Sources	Business donations, local funds, in-kind, donations, citizen cost-share
Lead Department	City of Seagoville Fire Department & Administration Office
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Advanced warning saves lives, which outweighs the cost of the radios.
Discussion	

City of Seagoville Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, winter storm, hail, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Seagoville Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Seagoville Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms to the residents of Seagoville
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Seagoville Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Seagoville	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, lightning
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Seagoville Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Seagoville	Buyout of remaining structures that are in the floodplain
Hazard(s) Addressed	Flooding
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	High
Estimated Cost	$1.5 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Seagoville Administration, Public Works, Building and Code Departments
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	Remove structures from flood-prone areas to minimize future flood losses by acquiring and demolishing or relocating structures from voluntary property owners and preserving lands subject to repetitive flooding

Plan Maintenance

The City of Seagoville Fire Department (SFD) will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator/Fire Chief or his/her designee will be the point of contact for leading, the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Seagoville	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

SFD will call the Seagoville Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

SFD will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Seagoville City Council. Emergency Operations Center will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Seagoville or its communities, legal changes, and other events may trigger a meeting of the Seagoville Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Seagoville is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Seagoville will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City of Seagoville will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Seagoville will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Seagoville	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. City of Seagoville HIRA

b. Supporting Documentation (Meeting & Outreach Documentation)

Appendix SGL A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

City of Seagoville

Hazard Identification and Risk Assessment (HIRA)

Date: July 29, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4	1	3	1	5	80%
Hail	4	4	3	3	1	3	1	5	60%
Lightning	4	4	2	2	1	2	1	4	50%
Winter Storms	2	4	4	2	1	2	2	5	40%
Tornado	4	4	4	4	2	3	3	8	50%
Flooding	3	3	3	3	1	3	3	7	42%
Pandemic/Public Health Emergency	1	1	4	4	3	1	3	7	57%
Extreme Temperatures/Heat	4	4	3	3	2	1	1	4	75%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3	3	1	3	7	60%
Wildfire	1	1	2	2	1	2	2	50	40%
Utility Failure									
Energy/Fuel Shortage	1	1	3	3	2	1	3	6	50%
Terrorist Attack	1	1	4	4	4	4	4	12	33%
Urban Fire	4	4	3	3	2	3	3	8	37%
Earthquake	1	1	1	1	3	4	3	10	10%
Earthquake	1	1	1	1	3	4	3	10	10%
Drought	3	3	1	1	1	1	1	3	33%
Aircraft Accident	1	1	2	2	3	3	3	9	22%
Earthquake	1	1	1	1	3	4	3	10	10%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4	4	4	4	12	33%

NB: This City of Seagoville HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix SGL B-1: Meeting and Outreach Support Documentation



1/2/14 Seagoville, TX - Official Website - Dallas County Multi-Jurisdictional Hazard Mit

+myConnections: Engage your community - connect to news, events and information you care about. View more information...

ernment Services Departments

Sign In

PRINT SHARE RSS

Dallas County Multi-Jurisdictional Hazard Mit
Frequently Asked Questions
Solid Waste
Streets
Stormwater
Submit a Service Request
Water Distribution
Wastewater

Adopt a Pet
Online Payments
Notify Me
Service Requests 24/7
Comments & Concerns
No Emergency

You are here: Home > Departments > Public Works > Dallas County Multi-Jurisdictional Hazard Mit

Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update

Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan (HAZMap) Update

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.

View the entirety of the plan here.

This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

- Click the link below to access the draft plan:
- Base Draft Plan
- City Annex Draft

This comment period will give the public the opportunity to review the draft and make comments regarding the draft plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft plan. Any comments or suggestions can be emailed to (James Berman at Jberman@seagoville.us

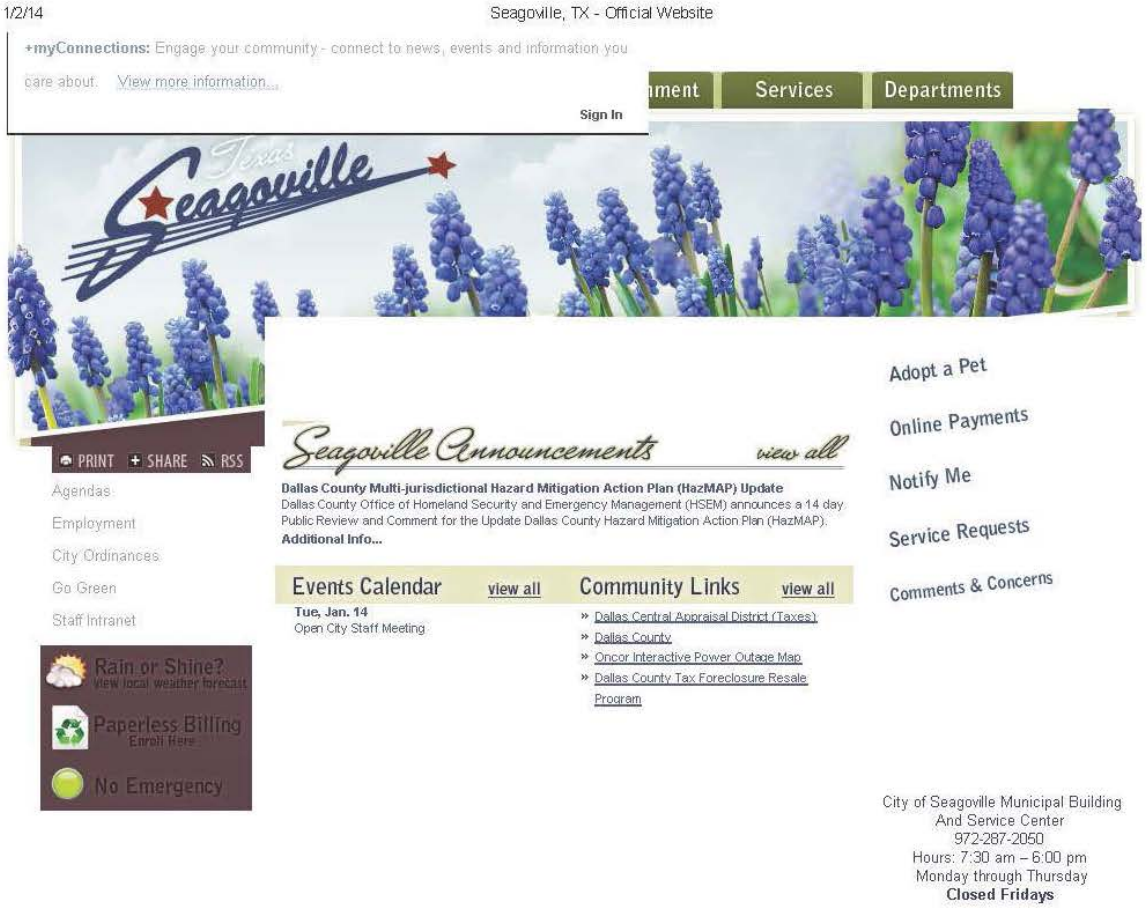
You may also print, fill out and forward below document to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202
Public Comment Form

The plan will be available for public comment until January 10, 2014. All comments received by this date will be reviewed and considered.

Home Contact Us Translate Accessibility Disclaimer Copyright Notices Using Renewable Energy Powered by CivicPlus
Seagoville City Hall 702 North Highway 175 Seagoville, TX 75159 Phone: 972-287-2050 Mon-Thur 7:30 am - 6:00 pm

seagoville.us/index.aspx?nid=393 1/1



1/2/14 Seagoville, TX - Official Website

+myConnections: Engage your community - connect to news, events and information you care about. View more information...

Sign In

nment Services Departments

Texas Seagoville

PRINT SHARE RSS

Agendas
Employment
City Ordinances
Go Green
Staff Intranet

Rain or Shine? View local weather forecast
Paperless Billing Enroll Here
No Emergency

Seagoville Announcements view all

Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update
Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).
Additional Info...

Events Calendar view all

Tue, Jan. 14
Open City Staff Meeting

Community Links view all

- Dallas Central Appraisal District (Taxes)
- Dallas County
- Oncor Interactive Power Outage Map
- Dallas County Tax Foreclosure Resale Program

Adopt a Pet
Online Payments
Notify Me
Service Requests
Comments & Concerns

City of Seagoville Municipal Building
And Service Center
972-287-2050
Hours: 7:30 am – 6:00 pm
Monday through Thursday
Closed Fridays

Home Contact Us Translate Accessibility Disclaimer Copyright Notices Using Renewable Energy Powered by CivicPlus
Seagoville City Hall 702 North Highway 175 Seagoville, TX 75159 Phone: 972-287-2050 Mon-Thur 7:30 am - 6:00 pm

www.seagoville.us 1/1

Appendix SGL C-1: Survey Results

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    - ✓ City of Seagoville (5 responses)

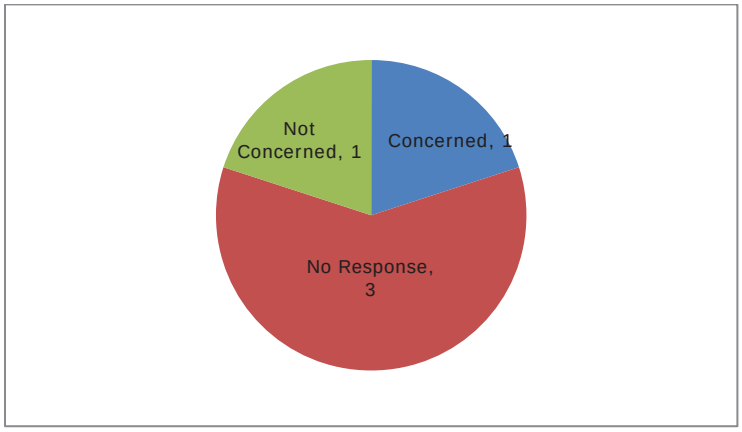
2. Have you ever experienced or been impacted by a disaster?

    - ✓ Yes (0)
    - ✓ No (2)
    - ✓ No Answer (3)

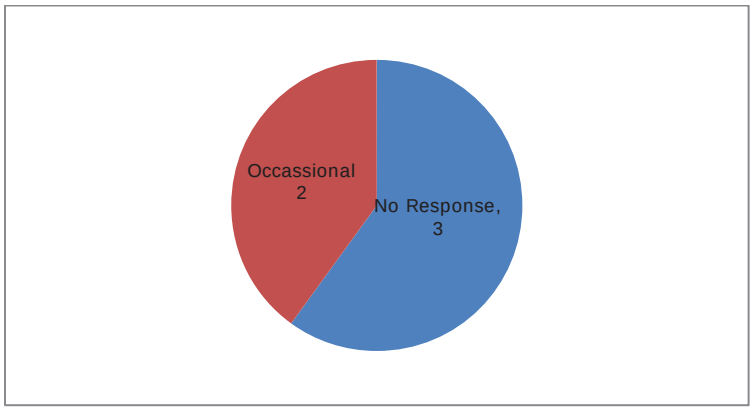
    If "Yes", please indicate what hazard you have endured and where it occurred?

    - ✓ No Answers

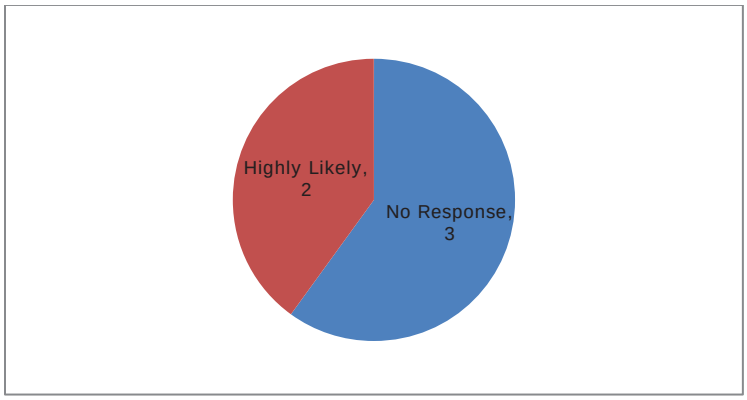
3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



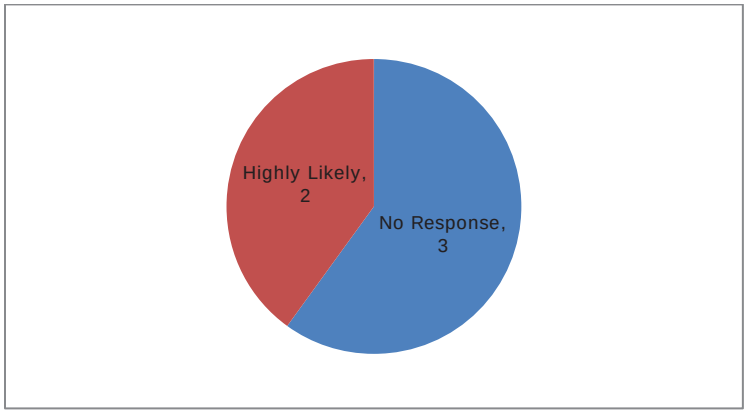
4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact
   a) Earthquake



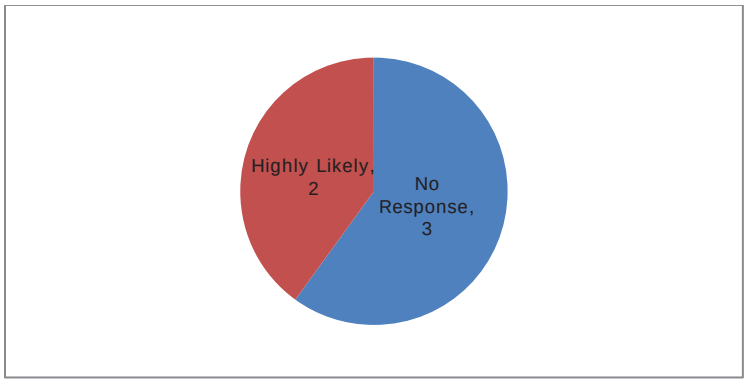
   b) Tornado



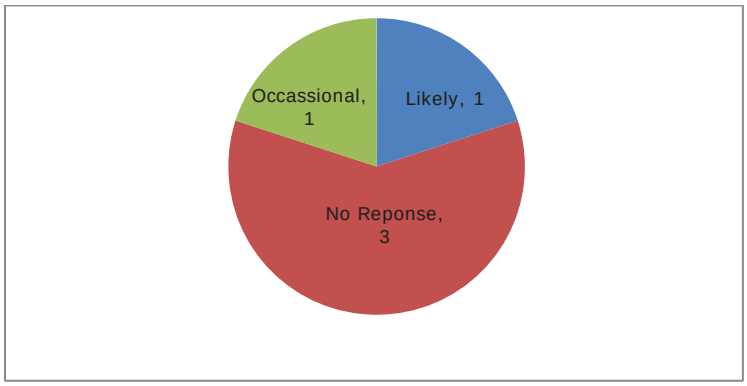
   c) Hail



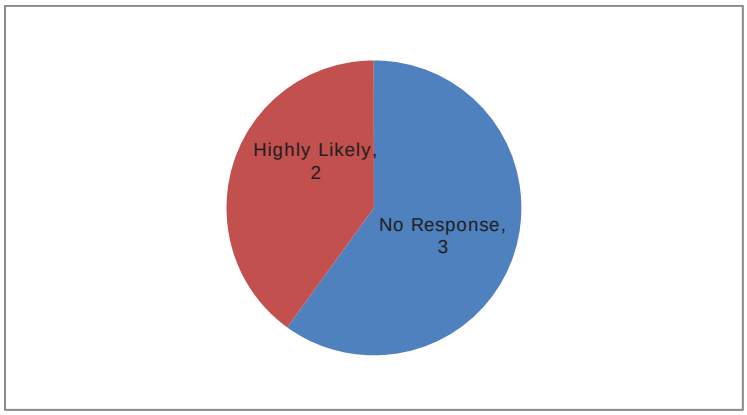
d) High Winds



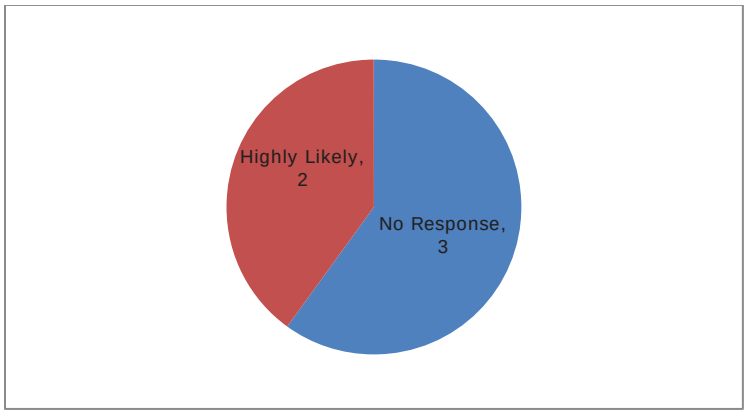
e) Winter Storms



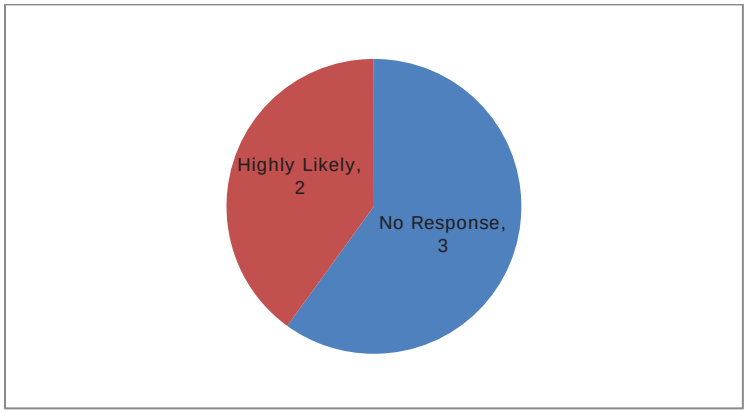
f) Extreme Heat



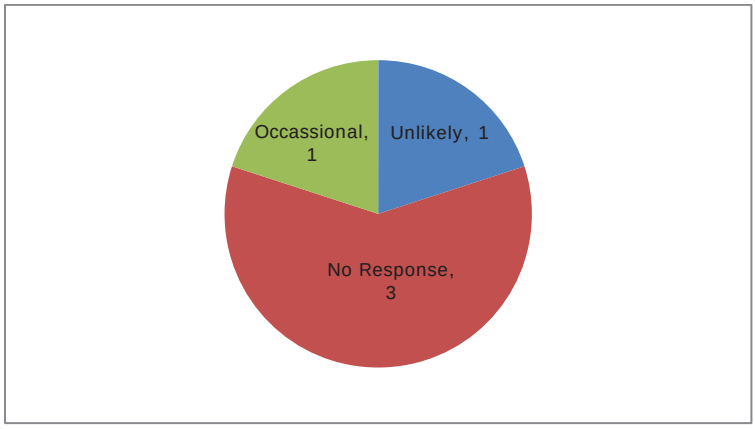
g) Drought



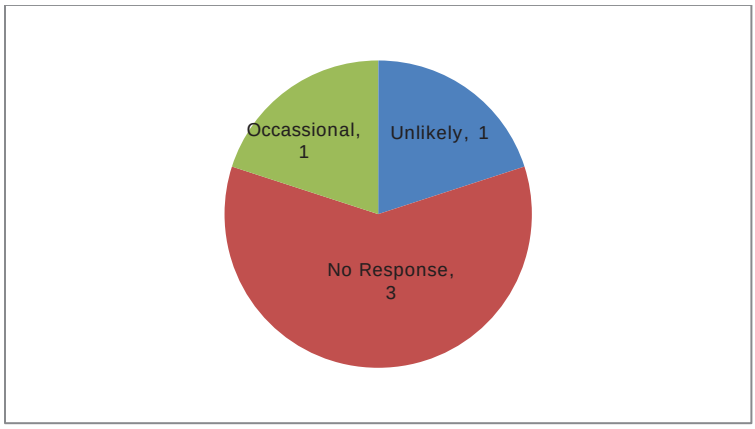
h) Flooding



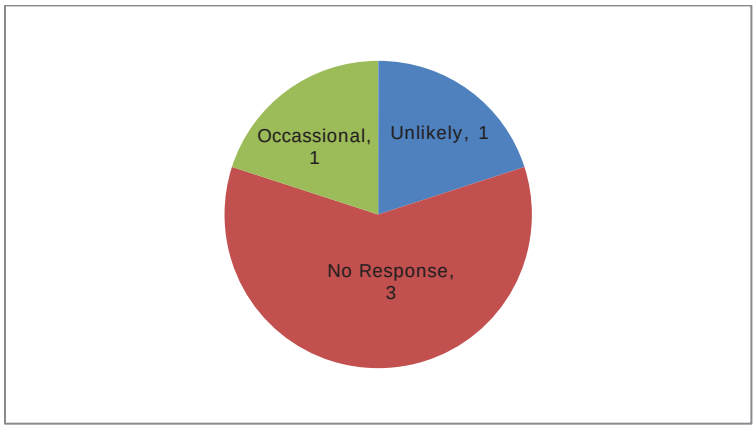
i) Dam Failure



j) Stream Bank Erosion

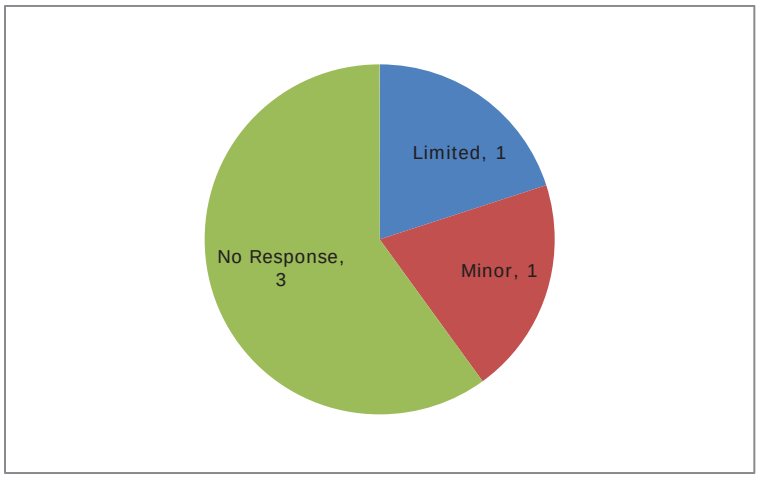


k) Levee Failure

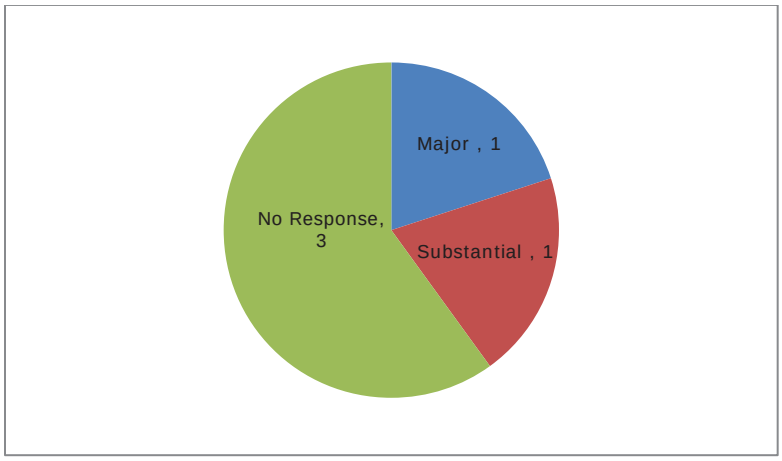


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential **magnitude or impact** of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

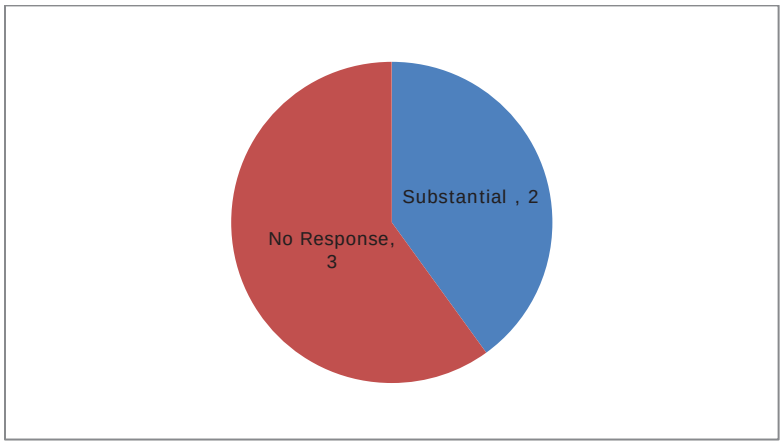
a) Earthquakes



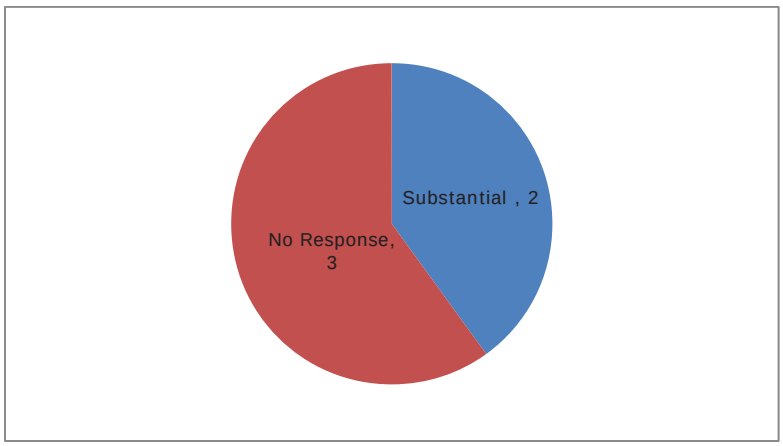
b) Tornado



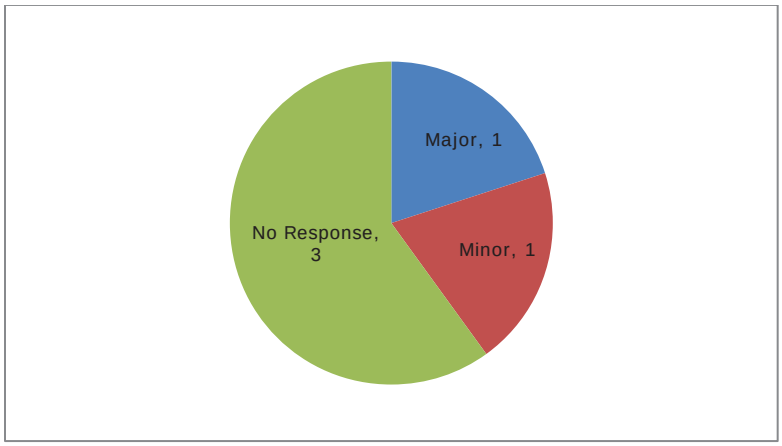
c) Hail



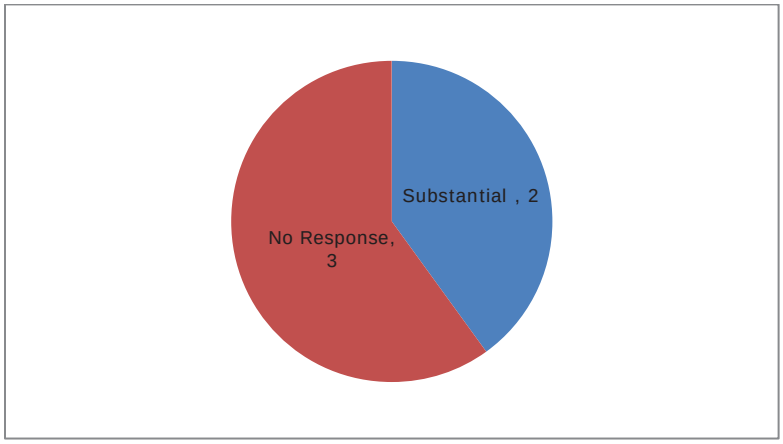
d) High Winds



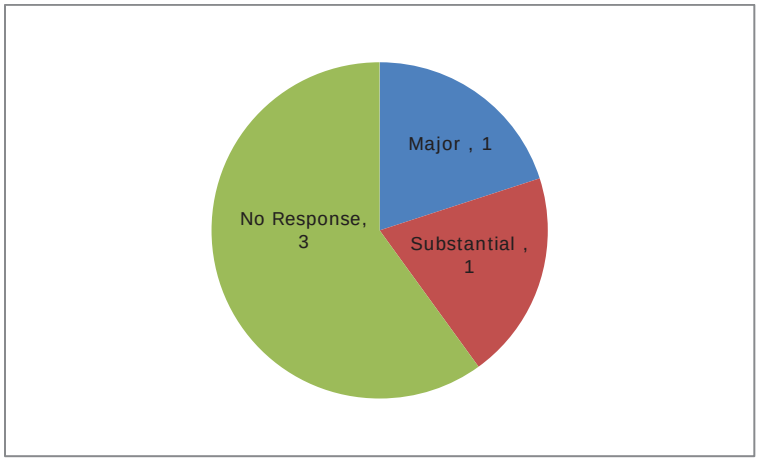
e) Winter Storms



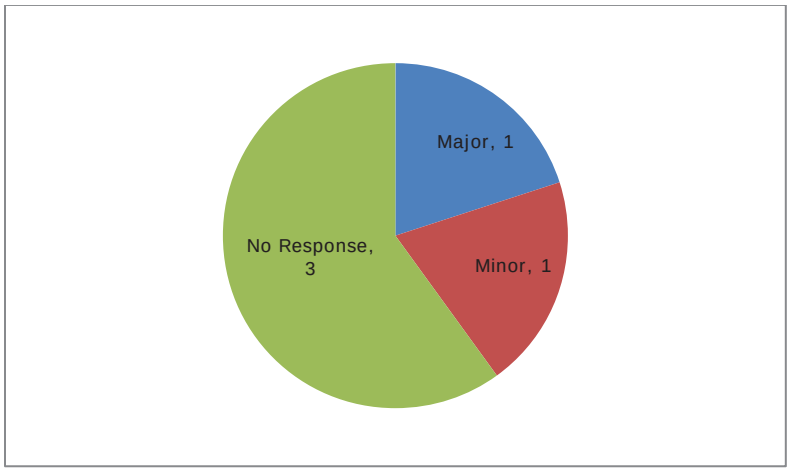
f) Extreme Heat



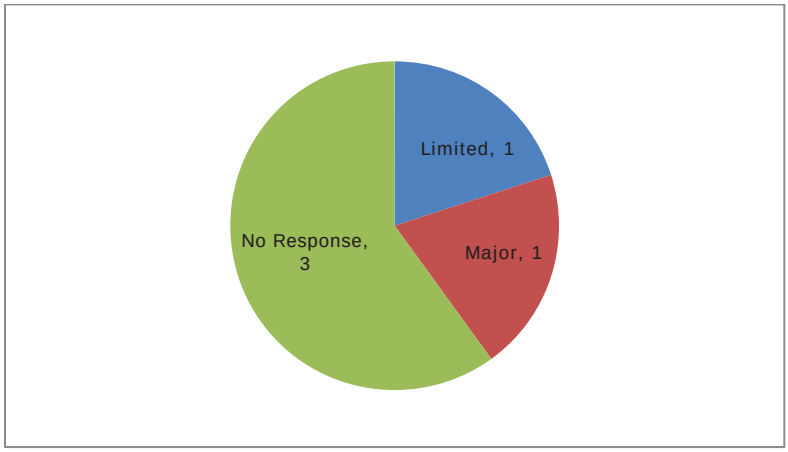
g) Drought



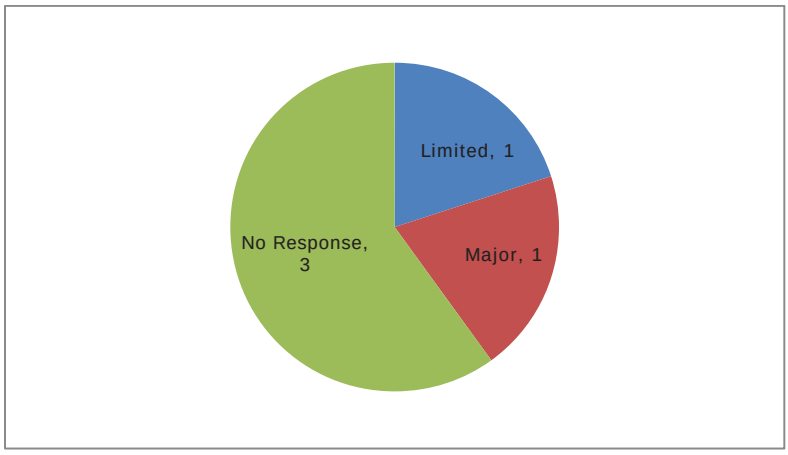
h) Flooding



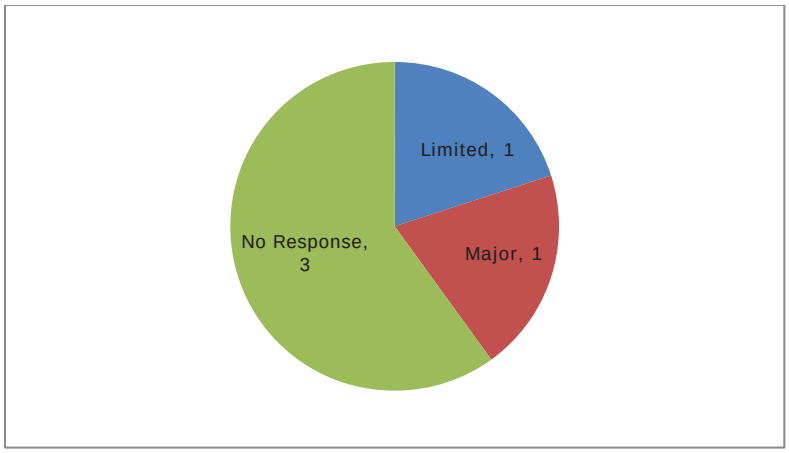
i) Dam Failure



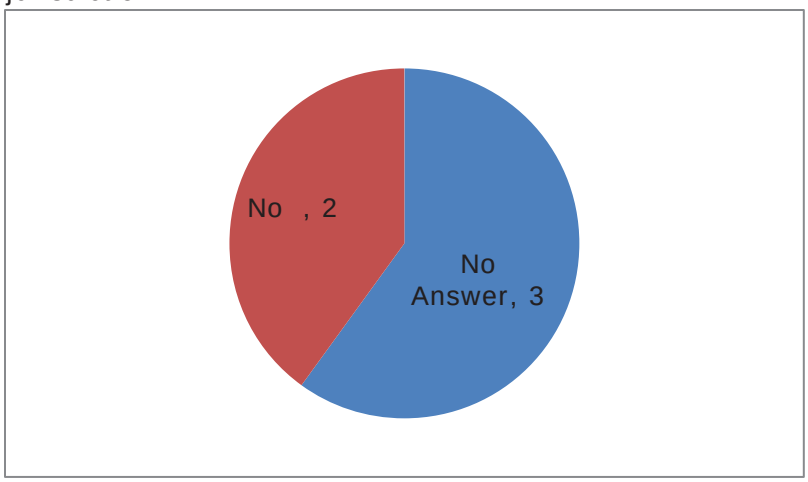
j) Stream Bank Erosion



k) Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	0
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	1
Implement the Texas Individual Tornado Safe Room Rebate Program:	1
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	1

Answer Choices	Responses
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	1
Coordinate with Dam owners to conduct inundation studies of dams:	1
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	2
Purchase and improve on the Weatherization Assistance Program (WAP):	1
Conduct an earthquake vulnerability study:	1
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	1
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	1
Structural Retrofitting of Existing Buildings:	2
Total Respondents:	2

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events.
    l) No Responses – Skipped by all Respondents

Town of Sunnyvale Annex



This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The Town of Sunnyvale participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the Town of Sunnyvale.

In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the Town of Sunnyvale. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction

Sunnyvale is located at 32.4813 N and 96.3411 W. It is at the western border of Dallas County and sits directly west of Mesquite, south of Rowlett, north of Seagoville, and west of Forney. Lake Ray Hubbard runs just northwest of its town limit.

Sunnyvale is made up of four settlements that merged together in 1953: Long Creek, New Hope, Hattersville, and Tripp. Homesteaders settled the Long Creek settlement in about 1845. New Hope became a center of rural commerce when Mr. Tinsley purchased land for a store building in 1885.

According to the 2010 U.S. Census Bureau the population of Sunnyvale is approximately 5,130. The racial makeup of the town is 88.9% White, 2.60% African American, 0.71% Native American, 4.6% Asian, 2.23% other races, and 0.93% from two or more races.



Hispanic or Latino of any race is 4.38% of the population. The town has a total area of 16.7 square miles with all of it being land. There are approximately 1,713 housing units in the town consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

Sunnyvale is a General Law town with an aldermanic form of government as recognized by Texas statutes. General Law municipalities may operate under the aldermanic, the commission, or the Town manager form of government. Municipalities which operate under "General Law" are governed by Title 2, Subtitle B of the Local Government Code. "Home Rule" municipalities, on the other hand, are governed by their own charters.

The town's structure of government consists of:

- ✓ Mayor
- ✓ Five-member council
- ✓ Town Manager
- ✓ Town Secretary
- ✓ Boards & Commissions



Sunnyvale strives to maintain its rural element. It is home to many distribution and industrial centers such as FedEx, Dal-Tile, Associated Truss and Lumber, and American Marazzi Tile that all contribute to Sunnyvale's economic growth.

Internal Planning Process:

The table below lists members of the Town of Sunnyvale Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the town's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the town of Sunnyvale.

Name	Title / Department or Agency	Role
Richard J. Adkins	Emergency Management Coordinator	HMPT Coordinator,
Elizabeth Hopkins	Finance Director	Hazard & Plan development, Hazard Identification, capabilities assessment
Leslie Malone	Town Secretary	Hazard & Plan development, Hazard Identification, capabilities assessment
Johnny W. Meeks	Director of Public Works	Hazard & Plan development, Hazard Identification, capabilities assessment. Provided guidance on information about the floodplain
Steve Gilbert	Building Official	Hazard & Plan development, Hazard Identification, capabilities assessment, Building Codes, Town Critical Infrastructure
Severyn Brandau	Economic Development Coordinator	Hazard & Plan development, Hazard Identification, capabilities assessment, Land Use
Vince DiMaggio* Sean Fox	Town Manager	Hazard & Plan development, Hazard Identification, capabilities assessment
Peggy Adkins	Fire Inspector	Hazard & Plan development, Hazard Identification, capabilities assessment
Kevin Judd	Fire Chief	Hazard & Plan development, Hazard Identification, capabilities assessment

**Left during the writing of the plan*

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
Town and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
07/18/2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting Review of materials required for HazMAP deliverables
8/27/2013	HMPT prepared for HIRA meeting and data compilation. Forwarded survey information to IT department, library and water billing offices to include announcements for public input and participation in the planning. Reviewed the Dallas County HIRA and conducted a risk assessment for the Town of Sunnyvale in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA form Tasks and assignments given to team members
08/30/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment using worksheets provided
09/26/2013	Review of deliverables and worksheets and discussion on the suitability of the information included in the worksheets
10/02/2013	Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of Sunnyvale's Annex to the HAzMAP. Invited for public comment on the draft plan. Forwarded information to IT department, library and water billing offices to include announcements for public input and participation in the draft annex
10/11/2013	Finalized on action items and updated plan
12/03/2013	Meet to review that draft Annex

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk.

The Town of Sunnyvale notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their town's website. The survey was made available in both English and Spanish. Copies of the town's outreach materials are included in Appendix Section.

Survey Results

The town of Sunnyvale made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the town's website and public outreach program was implemented to solicit public input.

Despite outreach efforts, no responses were received. As a result, information collected from the survey was not be statically valid and could not be incorporated into the Town of Sunnyvale Annex of the Dallas County HazMAP.

Public Review Period

On December 19, 2013 the Town of Sunnyvale announced the availability of the Dallas County HazMAP update draft and Town of Sunnyvale's annex for public review and comment. The announcement was made through the town's website. The announcement provided a 14 day public review and comment period and encouraged the public to submit comments prior to January 3, 2014 for consideration and possible incorporation into this draft. Invitations were also made to various external stakeholders via email. These included the Emergency Management Coordinator for the Town of Forney and the Superintendent for the Sunnyvale Independent School District Administration and Safety Department.

The public comments were directed to Richard Adkins, the Emergency Management Contact Person with the Town of Sunnyvale. Michael Gaciri the Hazard Mitigation Specialist with Dallas County Office of Homeland Security and Emergency Management contacts were also provided as an alternate contact. It was indicated that any comments received after the adoption of the plan is annex will be catalogued for consideration in future updates.

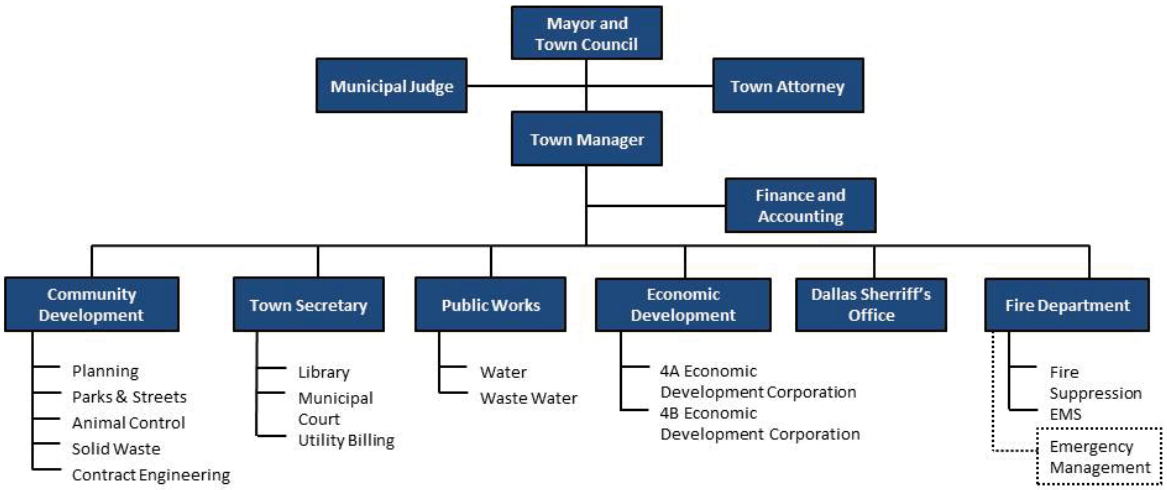
Capability Assessment

The Town of Sunnyvale identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments

The following is a summary of existing departments in the town and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the town. The members of the town's Hazard Mitigation Planning Team as listed above identifies the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan.

Figure TOS 1: Organizational Chart for the Town of Sunnyvale



Town Manager

The Town Manager's office is committed to providing the highest level of service to the entire community. It is our goal to interact with our customers in a professional, responsive and courteous manner at all times; and to be available and accessible to the community we serve. We strive to provide an exceptional level of customer service and hope you will contact us with any questions, concerns, or suggestions you may have to help us achieve this goal. Responsibilities of the Town Manager's office include:

- ✓ Implementing the policies and procedures adopted by the Town Council
- ✓ Providing direction to Town departments and their administrative functions
- ✓ Providing day-to-day leadership in policy development and implementation
- ✓ Continual monitoring of the delivery of town services to ensure efficiency
- ✓ Preparation and oversight of the annual budget process
- ✓ Managing the town's inter-governmental relations and public information functions
- ✓ Preparation and coordination of public information via newsletters and other forms of communication

- ✓ Manages flood plain and reviews flood studies for the town

Fire Department
The Sunnyvale Fire Department is a full-service, combination department, staffed by professional Firefighters and EMT's. 24 hours each day, 7 days per week to provide emergency response services within the town. The department is also in charge of all Emergency Management activities in the town.

Finance Department
The goal of the Finance Department is to provide efficient financial services to the governing body and community. The department fosters an atmosphere that promotes responsible financial planning, accountability, and integrity while complying with all related laws and town policies.
Responsibilities of the Finance Department include:

- ✓ Accounts payable
- ✓ Accounts receivable
- ✓ Payroll
- ✓ Financial reporting
- ✓ Investments/cash management
- ✓ Budget preparation and oversight
- ✓ Service Contract Compliance

Public Works
The Department of Public Works and Utilities is responsible for maintaining all drainage, water, and wastewater utilities. This often requires after hours labor to ensure the health and safety of residents and businesses. In addition, employees of this department are an integral part of the planning process related to future infrastructure.

Building Inspection Department
The building inspection department assists town residents and the builders/contractors with building permits when required. The building inspector's office also helps ensuring safe working environments and compliance with the building codes and performing necessary inspections on building and structures during the construction process.

Economic Development
The economic development department strives to enhance and promote economic development and expansion through a proactive and responsive program for attracting new businesses to our community while retaining those who are already a part of Sunnyvale.

Town Secretary
The Town Secretary is the clerk for the Town Council and is responsible for the documentation, publication and preservation of all official town records including minutes, ordinances, resolutions, contracts, deeds, easements and Town Boards and Commissions. The Town Secretary also serves as the Elections Administrator.

The tables below identify the current capabilities in the Town of Sunnyvale.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	No; No; No
Capital Improvements Plan	Yes	No; No; No
Economic Development Plan	No	No; No; No
Local Emergency Operations Plan	Yes	Yes; Yes; Yes
Continuity of Operations Plan	Yes	Yes – Within local emergency
Transportation Plan	Yes	Yes; No; Yes
Storm water Management Plan	Yes	Yes; Yes; Yes
Community Wildfire Protection Plan	No	No; No; No
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	No	

Building Code, Permitting, and Inspections	Yes/No	
Building Code	Yes	Version/Year: IBC/2009
Building Code Effectiveness Grading Schedule (BGEGS) Score		Score: 5 for one and two Family; 4 for commercial
Fire Department ISO rating		Rating: 4
Site Plan review requirements	Yes	Code Personnel
Land Use Planning and Ordinances	**Yes/No**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	Yes; Yes
Subdivision ordinance	Yes	Yes; Yes
Floodplain ordinance	Yes	Yes: Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	No	N/A
Flood insurance rate maps	Yes	FEMA
Acquisition of land for open space and public recreation uses	No	N/A
How can these capabilities be expanded and improved to reduce risk?		
Through the enforcement of warrant ordinances above, adverse risks are reduced to a level of insignificance.		

Administrative and Technical

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	The Commission meets as needed and makes recommendations to Council
Mitigation Planning Committee	Yes	This is coordinated from the Fire Department through the Emergency Management Coordinator (EMC)
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	Coordinated through the Public Works Department
Mutual aid agreements	Yes	Town of Mesquite, Dallas County, Forney, and Garland
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes/FT	Yes – Staffing adequate, hazards are mitigated and coordination is high level
Floodplain Administrator	Yes/FT	Yes;
Emergency Manager	Yes/PT	This a function that is within Sunnyvale Fire Department,
Community Planner	Yes/PT	
Civil Engineer	Yes/PT	
GIS Coordinator	No	N/A
Other	N/A	N/A
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	The town tests community sirens monthly to ensure functional capability to warn citizens of impending severe weather. Additionally, the town uses Reverse 911 and Blackboard, to register users, to inform and warn citizens of hazardous conditions to include: winter storms, extreme heat or other hazardous conditions.
Hazard data and information	Yes	County hazardous response and FEMA
Grant writing	Yes	
HAZUS analysis	N/A	N/A
Other	N/A	N/A
How can these capabilities be expanded and improved to reduce risk?		
Increase staff support training of all members		

Financial

Funding Resources	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	Road, water lines, sewer lines, building, water tower; Funding capital improvement
Authority to levy taxes for specific purposes	Yes	Town currently collects straight ad valorem and sales tax for general operations and debt service
Fees for water, sewer, gas or electric services	Yes	Commercial/Residential accounts that pay water and sewer fees. Outside utility provider pay franchise fee
Impact fees for new development	Yes	Water, sewer, and road impact fees collected on new permits and governed by ordinance
Storm water utility fee	No	N/A
Incur debt through general obligation bonds and/or special tax bonds	Yes	Town has $10,160,00 in outstanding debt for the CIP projects in item 1
Incur debt through private activities	No	N/A
Community Development Block Grant	Yes	No active EDC grants at this time
Other federal funding programs	Yes	No active funding programs at this time
State funding programs	Yes	No active state grants at this time. Cost assistance through TX. Ag. And American Heart Assoc.
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Pamphlet handouts
Natural disaster or safety related school programs	Yes	School District
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other	NA	
How can these capabilities be expanded and improved to reduce risk?		
Grants to expand public education		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
Zoning		
2. Do environmental policies maintain and restore protective ecosystems?	✓	
No building in flood plain and wetlands		
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
To an extent. There is policy overlap		
2. Is safety explicitly included in the plan's growth and development policies?		✓
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	✓	
Intent of the ordinances are to protect safety, health, and welfare		
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		✓
3. Do the regulations allow density transfers where hazard areas exist?		✓

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		✓
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		✓
No such plan exists		
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		✓
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	✓	
County Emergency Plan		

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

Note: The Town council of Sunnyvale, including the councilmembers and mayor, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	31 policies are in the community with a total premium paid of $19,615
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	5 claims have been paid totaling $26,368. None of the payments were substantial
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	24 -26 residential 2 Commercial
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	None known
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	Auxiliary; Town Administrator is the appointed FPA
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	If property is within 100 year floodplain a permit application will need to be submitted to the FPA. Requirements are provided in the town's ordinances. Any structure in the floodplain needs to flood proofing criteria and be built 2 feet above 100 year flood plain. Engineer design required
What are the barriers to running an effective NFIP program in the	Community FPA	Personnel
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	No, Not compliant with NFIP at this point
Are there any outstanding compliance issues (i.e., current violations)?		No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		None Scheduled
Is a CAV or CAC scheduled or needed?		The community has not had a CAV

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	Community is not enrolled
Are the FIRMs digital or paper?	Community FPA	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Exceed by zoning ordinance
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual Community FPA, FEMA CRS Coordinator, ISO representative	Permit process is provided in the town's ordinances. Upon any application for permits, it is reviewed to check to see if it is within the flood plain. If questionable a flood plain survey is required. Our Flood Prevention Ordinance requires that if any building is to be built it is to be at least 2 feet above the 100 year flood plain. Fences and Storage buildings go through the same process
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	Yes
What is the community's CRS Class Ranking?	Flood Insurance Manual	No Ranking
What categories and activities provide CRS points and how can the		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative	No Plan

Hazard Assessment and Risk Assessment

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the Town of Sunnyvale. This is because these hazards affect the entire County equally and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Referencing the Hazard Identification and Risk Assessment Matrix (HIRA) provided through the Dallas County HazMAP Working Group, the table below represents the most prevalent hazards for the Town of Sunnyvale:

HAZARD IDENTIFIED	FREQUENCY	SEVERITY	COMMENTS
Flooding	Low	Minor	Few residents lie within the flood plain
Tornadoes	Low	Serious	Although no tornadoes have been reported Sunnyvale; the town lies within Tornado Alley
High Winds	Medium	Serious	High winds are prevalent when the potential of severe storms exist
Lightning	Low	Serious	Lightning is prevalent when the potential of severe storms exist
Severe Storms	Medium	Serious to Extensive	Severe storms are common through Spring and early Summer
Dam/Levee Failure	N/A	N/A	No Known dams
Extreme Heat	Medium	Serious to Extensive	High temperatures exist through July to early September and can exceed 100 °F
Wildland/Wild Fire	Low	Serious to Extensive	Summers with high temperatures and low humidity can create significant hazards
Technical Hazards	Low	Extensive to Catastrophic	Although no events occurred the hazardous materials presents a potential threat to the entire town. Technical hazardous will however not be assessed in this plan
Earthquake	Low	Minor	There are no known active geological faults located within town limits. Earthquakes are not a prevalent hazard.
Stream Bank Erosion	Low	Minor	The streams within the town are well managed and protected. However, there appears to be a data deficiency on the effects of stream bank erosion.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Sunnyvale.

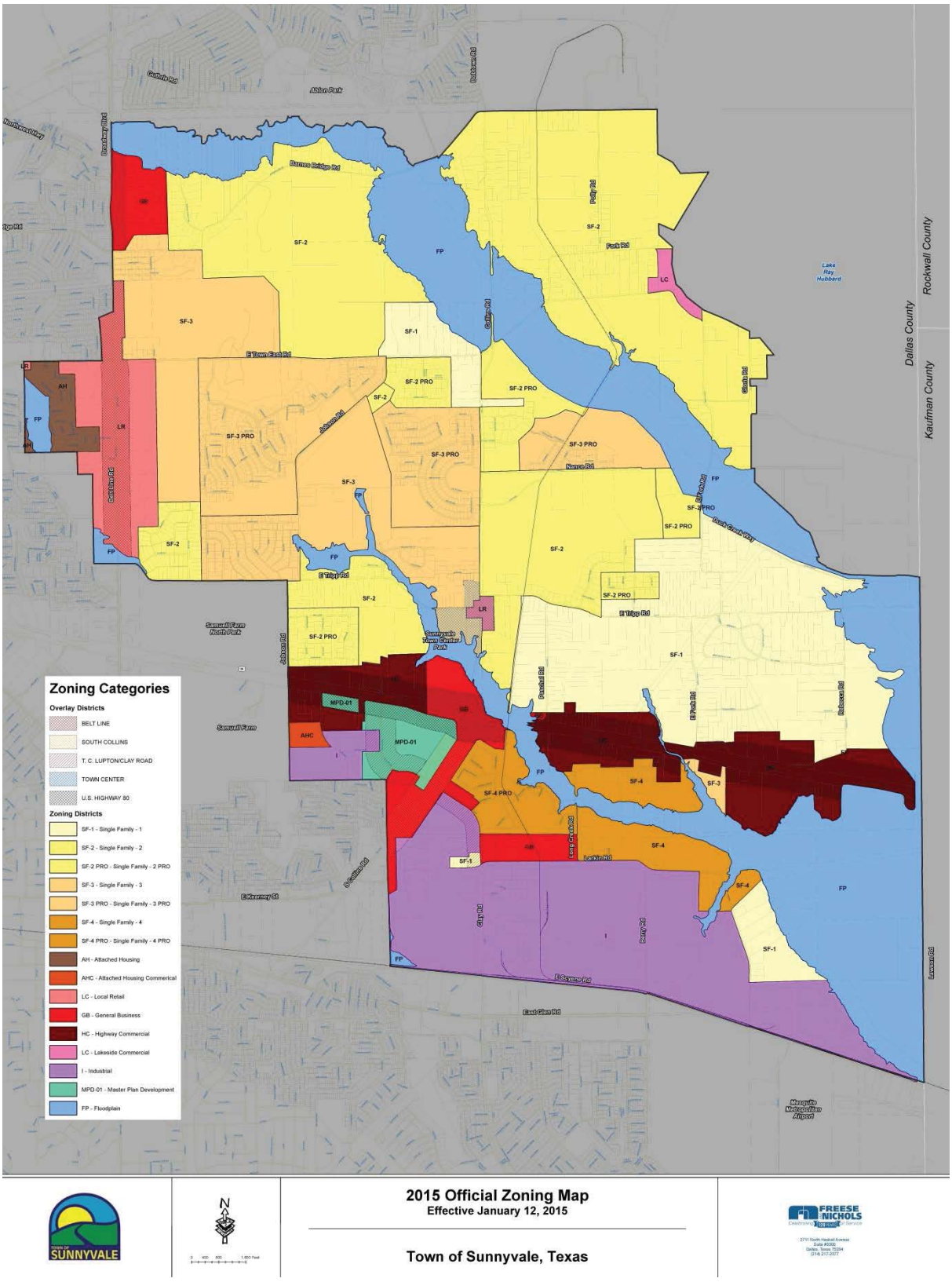
A. Flooding: Only few residents lie within the flood plain though there are a several areas that are affected by flooding. These areas include:

- ✓ 300 Barnes Bridge Road, 300 East Fork Road;
- ✓ 3000 N. Belt Line Road East Tripp Road at Sunbird when Mesquite Creek backs-up
- ✓ 300 East Town East Blvd
- ✓ West of Collins Road
- ✓ U.S. Highway 80 East of Lawson below Ray Hubbard Dam

As discussed in the capabilities section of this annex there are some properties that are within the 100-Year flood plain. **Map TOS 1** depicts the flood plain and zoning map for the Town of Sunnyvale.

The Town of Sunnyvale participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

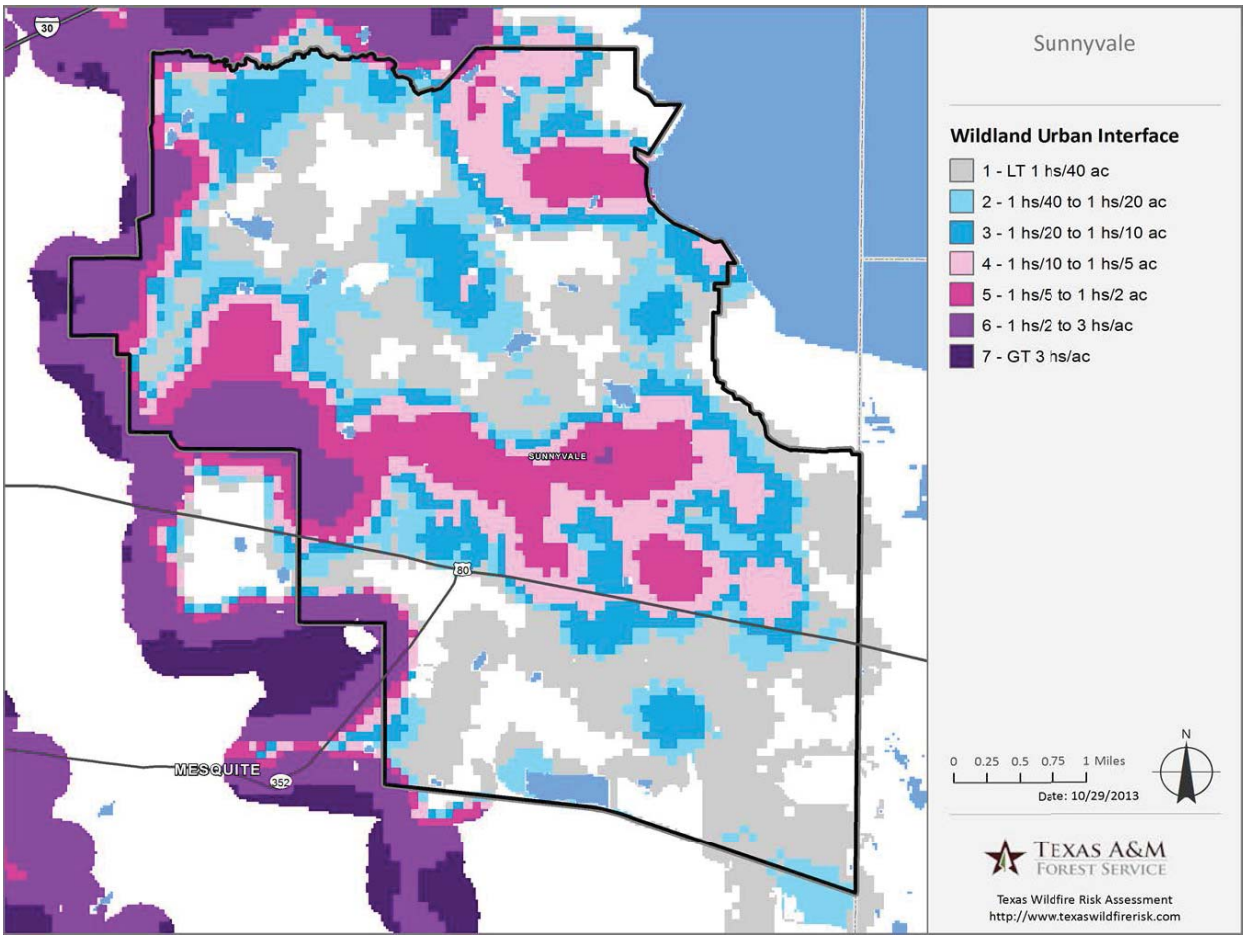
Map TOS 1: Floodplain and Zoning Map for the Town of Sunnyvale



B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 3,446 people or 99 percent of the total population of the Town of Sunnyvale live within the WUI. **Map TOS 2** depicts WUI for the Town of Sunnyvale.

Map TOS 2: Sunnyvale's Wildland Urban Interface



A wildfire vulnerability assessment, using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas A&M Forest Service, revealed that the wildfire threat for the Town of Sunnyvale ranges from Non-Burnable to Low.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

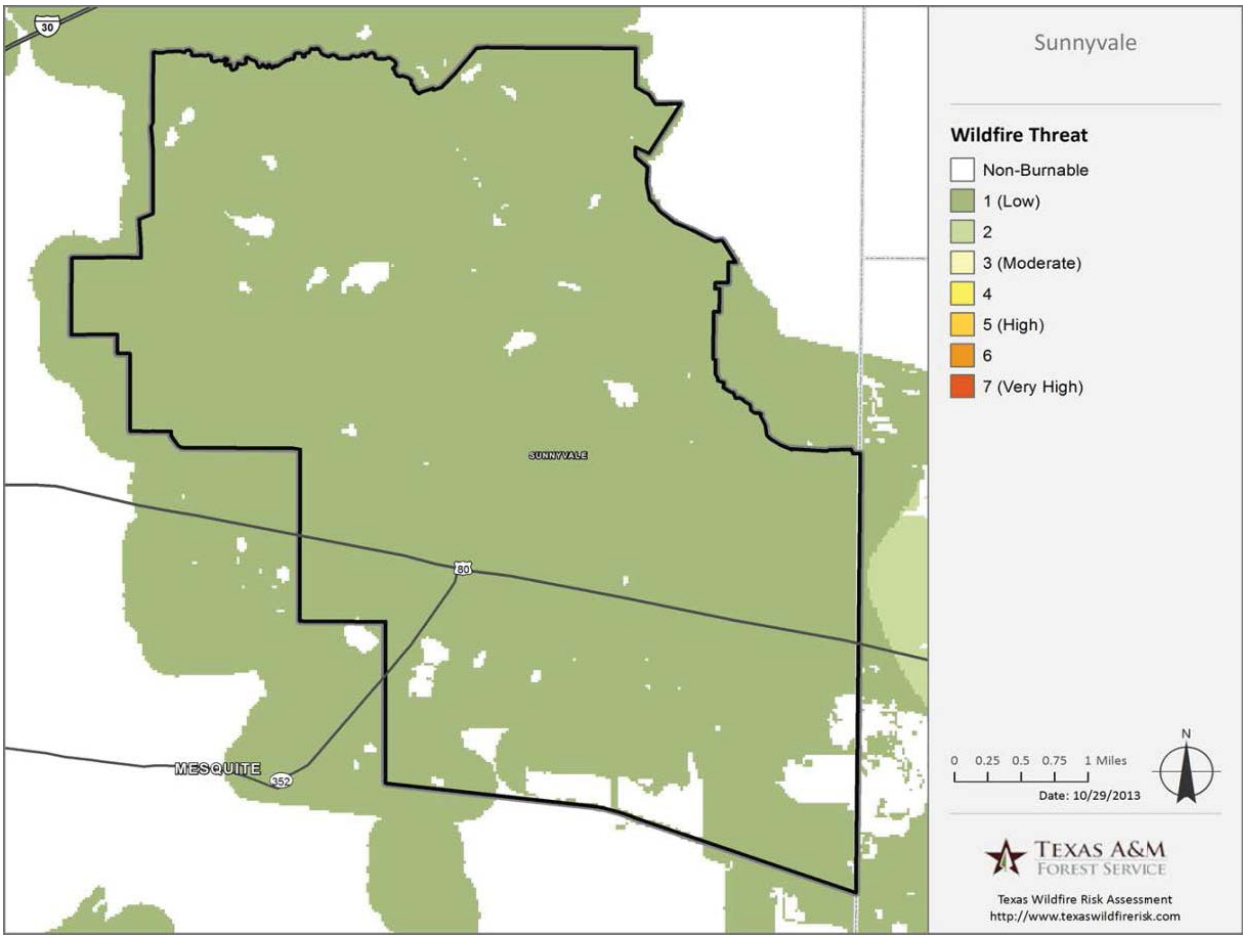
from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The wildfire threat **Map TOS 3** is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

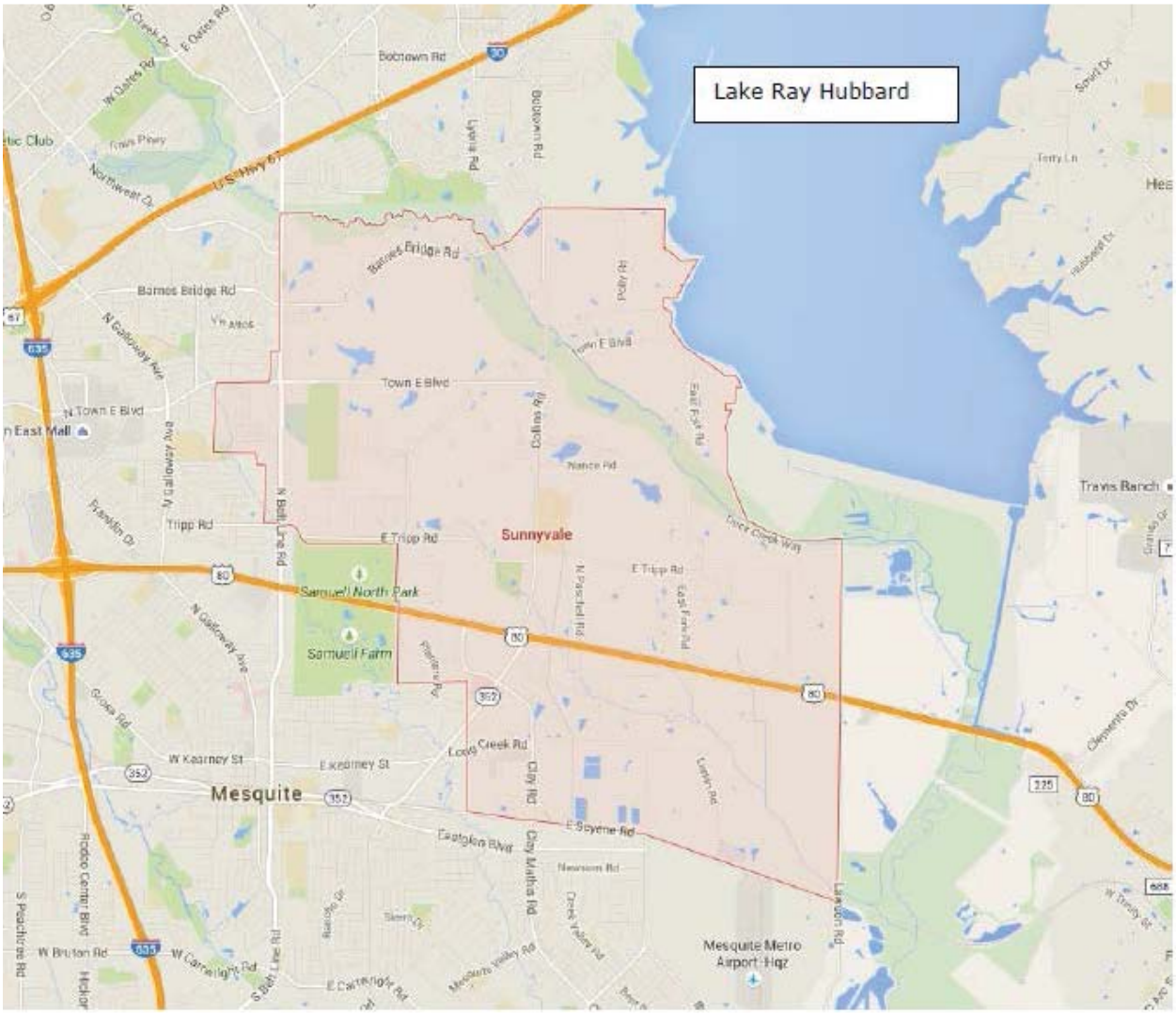
Map TOS 3: Sunnyvale Wildfire Threat



C. Dam and Levee Failure: There are no high hazard dams within the Town of Sunnyvale. Most dams within the town are privately owned, low hazard dams and do not pose any major risk to the town. Rockwall-Forney Dam, also referred to as the Lake Ray Hubbard, is located northeast to the Town of Sunnyvale and is classified as a high hazard dam. The Dam extends into four counties of Dallas, Kaufman, Collin, and Rockwall, on the East Fork Trinity River, a tributary of the Trinity River. The dam is owned and maintained by the City of Dallas.

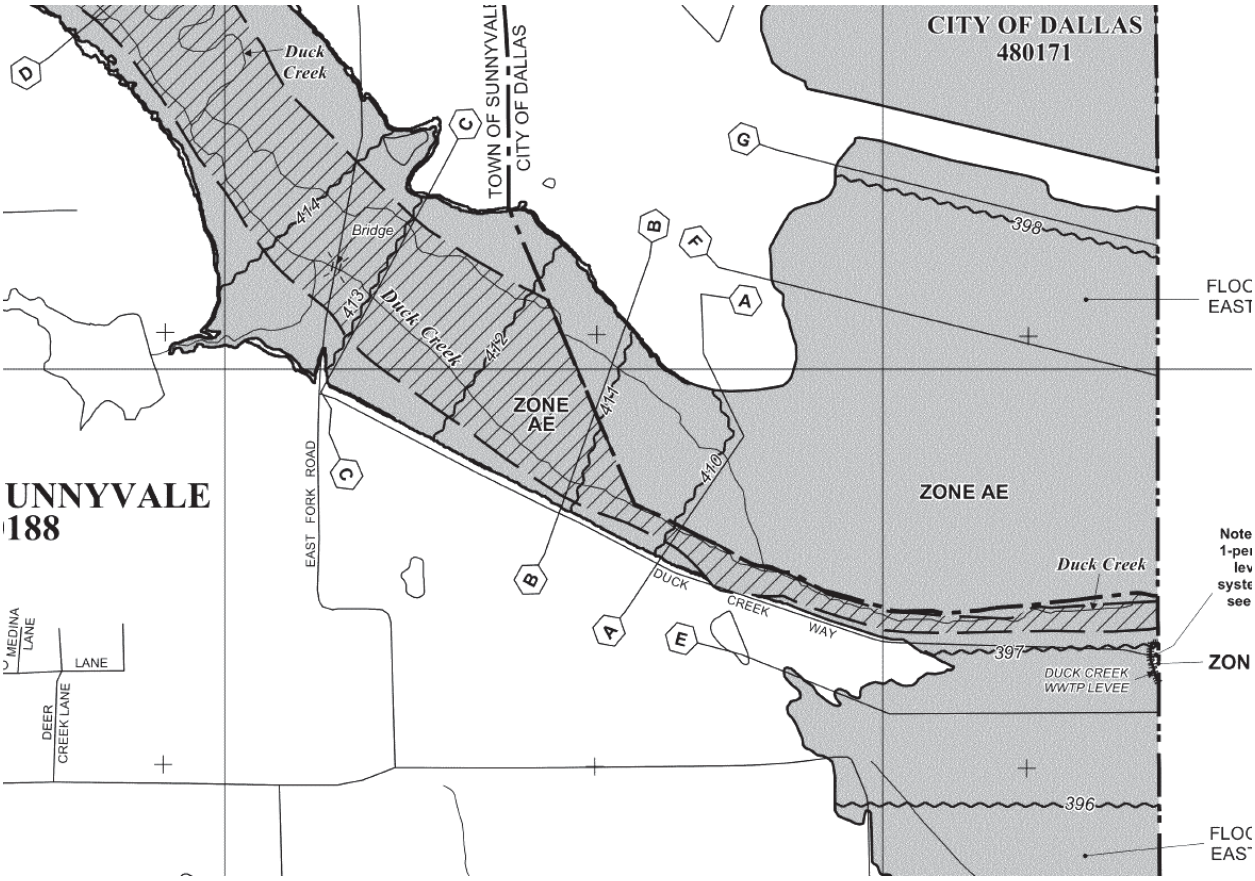
The extent of a failure of Lake Ray Hubbard Dam to the Town of Sunnyvale has not been determined. As a result the town has cited a deficiency of data as there is no data on the inundation levels. The Town of Sunnyvale does not own or maintain any data that would show the extent of a dam failure. The town has identified a mitigation action that involves conducting a study and working with the owner and operator of the dam to get a better understanding of the hazard and extent of inundation that it faces in the event of a dam failure.

Map TOS4 Location of Lake Ray Hubbard

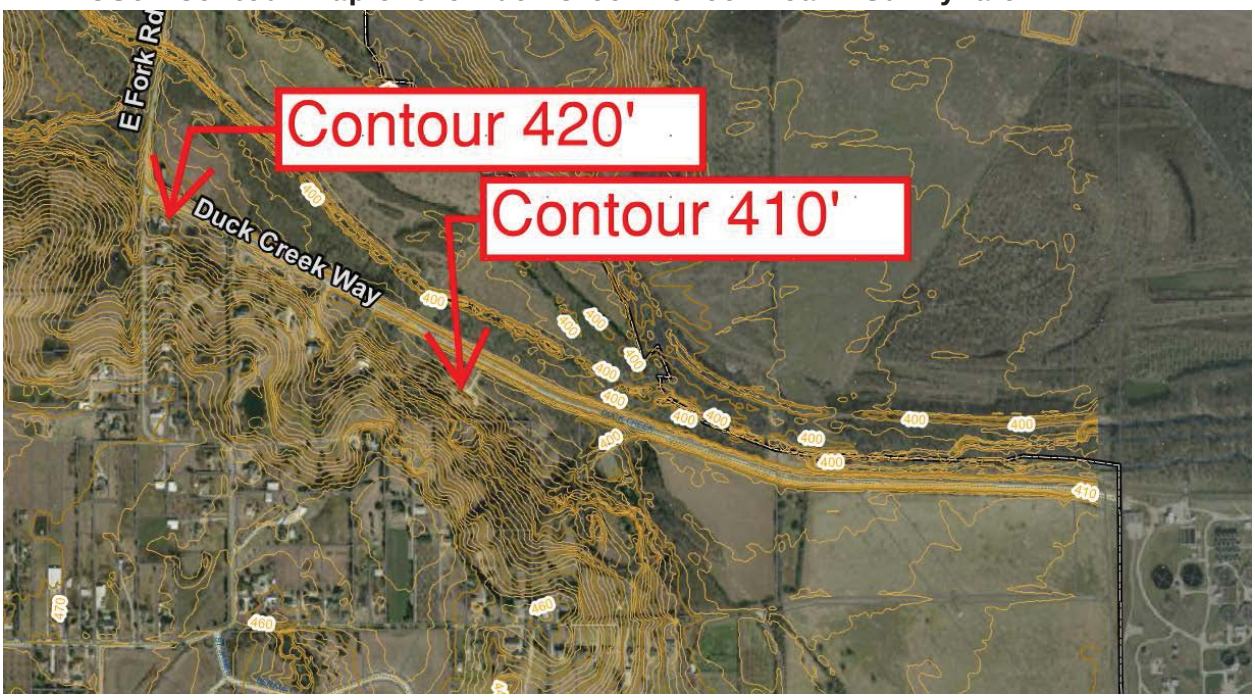


The Duck Creek Waste Water Treatment Levee is part of the flood plain management system that protects part of the town against the 100 year flood. The Duck Creek is situated from East Fork Road to the Town of Garland's Water Treatment Plant. The 100 year flood elevations for Duck Creek vary from 410' on the east end and 413' on the west end in the vicinity of Duck Creek Way. The flood map and contour maps below provided details of the level of elevation of the Duck Creek area in the Town of Sunnyvale. It is however assumed that if Duck Creek Levee was not elevated like it is, there would likely there would likely be some flooding of the roadway in the 100 yr. flood. The extent of this flooding could not be determined at the time as the town does not have the data. A data deficiency has been identified to conduct a study to get a better understanding of this hazard and extent of inundation that it faces in the event of a levee failure.

MAPTOS5: FEMA Flood Map of the Duck Creek Levee Area in Sunnyvale



MAPTOS6: Contour Map of the Duck Creek Levee Area in Sunnyvale



D. Earthquake: There are no known active geological faults and no historical data of earthquakes in the Town of Sunnyvale. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

E. Stream Bank Erosion: The Town of Sunnyvale has several miles of creek/streams. These streams, while well known in the community, have not been aggressively studied to assess the effects of stream bank erosion in the community. The Town of Sunnyvale is involved in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the Town of Sunnyvale. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the Town of Sunnyvale. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. All the population of Town of Sunnyvale is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property in the town is exposed to this hazard
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Sunnyvale. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings and the emergency facilities in Sunnyvale.
Critical Facilities	According to National Climatic Data Center (NCDC), there is no impact of extreme heat to buildings, and the critical facilities in Sunnyvale.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Sunnyvale.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. All the population of Town of Sunnyvale is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in Town of Sunnyvale. All improved property in the town is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Sunnyvale are exposed
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Sunnyvale are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Sunnyvale are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of Town of Sunnyvale is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the Town of Sunnyvale. All improved property in the town is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Sunnyvale are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Sunnyvale are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Sunnyvale are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in Town of Sunnyvale have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the Town of Sunnyvale. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Sunnyvale are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Sunnyvale are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Sunnyvale are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the Town of Sunnyvale. All the population of Town of Sunnyvale is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the Town of Sunnyvale. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Sunnyvale are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Sunnyvale are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Sunnyvale are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of Town of Sunnyvale is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for Town of Sunnyvale. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Sunnyvale indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Sunnyvale are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Sunnyvale are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the Town of Sunnyvale are exposed to this hazard.

Wildfire	
Population	Based on geographical data 99 % of the population in Town of Sunnyvale lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no improved valued properties in the Town's areas at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	100 % of water treatment works, and 100 % waste water treatment facilities are at risk from the 100-year storm event. Many of these structures are designed to traverse or be located within the floodplain. Additionally, treated wastewater is typically discharged towards streams, which makes portions of wastewater treatment facilities likely to be located within the floodplain.

Note: The period under review is from January 1, 2008 through November 30, 2013.

Essential Infrastructure Summary Report for the Town of Sunnyvale

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Hospitals	• Texas Regional Medical Center at Sunnyvale 231 S Collins Rd Sunnyvale, TX 75182 32.7791803, -96.5687144 N32° 46.7508', W096° 34.1229'	1
Schools	• Sunnyvale High School 222 N Collins Rd Sunnyvale, TX 75182 32.802354, -96.558151 N32° 48.1412', W096° 33.4891' • Sunnyvale Middle School 216 N Collins Rd Sunnyvale, TX 75182 32.7966544, -96.5600395 N32° 47.7993', W096° 33.6024' • Sunnyvale Elementary School 416 Hounsel Lane Sunnyvale, TX 75182 32.8021865, -96.5591194 N32° 48.1312', W096° 33.5472'	3
Police Stations	• Dallas Sheriff's Department Sub-Station 537 Long Creek Rd Sunnyvale, TX 75182 32.780964, -96.5442659 N32° 46.8578', W096° 32.656'	1
Fire Stations	• Sunnyvale Fire Department Station 1 404 Tower Pl Sunnyvale, TX 75182 32.8139581, -96.5920557 N32° 48.8375', W096° 35.5233' • Sunnyvale Fire Department Station 2 127 N Collins Rd Sunnyvale, TX 75182 32.790334, -96.561972 N32° 47.42', W096° 33.7183' • Sunnyvale Fire Department Station 3 537 Long Creek Rd Sunnyvale, TX 75182	3

Essential / Critical Facilities	Locations (GIS Coordinates)	Count
	32.780964, -96.5442659 N32° 46.8578', W096° 32.656	
Emergency Operations Facilities	• Sunnyvale Town Hall 127 N Collins Rd Sunnyvale, TX 75182 32.790334, -96.561972 N32° 47.42', W096° 33.7183'	1
Dams/Levees	• Stoney Creek Sub-Division: Sampeck Lake - Dam 32.8067939, -96.5552683 N32° 48.4076', W096° 33.3161' • Duck Creek - Levee 32.7965182, -96.5303813 N32° 47.7911', W096° 31.8229' • Glazer Sons Real Estate property on Tripp Road (private) – Dam 32.797739, -96.573932 N32° 47.8643', W096° 34.4359' • Lupton Lake (private) – Dam 32.816799, -96.583603 N32° 49.0079', W096° 35.0162' • Mathew Lake (private) – Dam 450 Nance Rd. Sunnyvale, TX 75182 32.801622, -96.545908 N32° 48.0973', W096° 32.7545'	5
Hazardous Materials Sites	• Dallas Water Treatment Plant 405 Long Creek Rd Sunnyvale, TX 75182 32.7726262, -96.5524401 N32° 46.3576', W096° 33.1464' • Garland Waste Water Treatment Plant 750 Duck Creek Way Sunnyvale, TX 75182 32.7929869, -96.519266 N32° 47.5792', W096° 31.156'	2

The tables below provide a summary of properties and structures that are vulnerable to Flooding and Wildfire within the Town of Sunnyvale

Structure / Property and Wildfire Vulnerability

Category of Property	Total Value of Property	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Public	$215,940,423	Within	Within	Low
Commercial	$317,601,355	Within	Within	Low
Residential	$561,706,289	Within	Within	Low

Structure / Property and Flood Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within / Outside
Residential	$1,348,216	100	Within
Commercial	$2,214,000	100	Within
Industrial	-	-	-
Government / Public	$200,000	100	Within

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation for the Town of Sunnyvale

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

Town of Sunnyvale Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

Town of Sunnyvale Action Item	Implement a program that preserves floodplains as Open Space by developing an open space acquisition, reuse, and preservation plan targeting hazard areas
Objective(s) Addressed	1-C, 2-A, 5-B, 5-C
Hazard(s) Addressed	Flooding and stream bank erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	$20,000
Potential Funding Sources	Town Budget, State and Federal grant funds
Lead Agency/Department Responsible	Town of Sunnyvale Economic Development
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is low compared to the benefits of the program
Discussion	Preserving natural areas and vegetation benefits natural resources while also mitigating potential flood losses

Town of Sunnyvale Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

Town of Sunnyvale Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms to Sunnyvale residents
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, Town Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	Town of Sunnyvale Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

Town of Sunnyvale Action Item	Implement a mass notification system that can provide residents and businesses within the town early warning information on hazards as well as status on hazards. The system could also be used to notify residents of mitigation steps they can take.
Hazard(s) Addressed	Tornado, High Winds, Hail, Flooding, Wildfire, Dam/Levee Failure, drought, lightning, extreme heat, winter storms
Goal/Objective	3-A
Priority	Medium
Estimated Cost	$50,000
Potential Funding Sources	Town Budget,
Lead Department	Town of Sunnyvale Fire Department – Emergency Management
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	Mass notification provides decision makers and emergency service personnel a means to communicate vital information to the public. The system can be used not only to warn of danger, but to keep them informed and guide them to safety

Town of Sunnyvale Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

Town of Sunnyvale Action Item	Protect Infrastructure that is located in the floodplain
Objective(s) Addressed	1-C, 2-A, 5-B, 5-C
Hazard(s) Addressed	Flooding and stream bank erosion
Priority (High, Medium, Low):	Medium
Estimated Cost	To be determined
Potential Funding Sources	Town Budget, State and Federal grant funds
Lead Agency/Department Responsible	Town of Sunnyvale Development Services
Implementation Schedule	2 years after funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Cost is low compared to the benefits of the program
Discussion	Mitigation techniques can be implemented to help minimize losses to infrastructure from flood events can include Flood proofing the water treatment facility located in flood hazard areas and using bioengineered bank stabilization techniques

Town of Sunnyvale	Install backup generators UPS systems to all town facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, Town budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Sunnyvale Fire Department & Public Works
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

Town of Sunnyvale Action Item	Purchase a series of lightning prediction devices to be deployed around Parks and Schools. Not only would these provide advance warning to those in the area but the cumulative data collected by these devices will allow Sunnyvale to identify additional action items tailored to mitigating the lightning hazard.
Hazard(s) Addressed	Lightning
Goal/Objective	5-A
Priority	Medium
Estimated Cost	$30,000
Potential Funding Sources	Town Budget, HMGP, PDM
Lead Department	Development Services, Public Works and Fire Department
Implementation Schedule	Within one year of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	The purchase of this equipment could save lives by providing the public more time to react and prepare appropriately during hazardous weather conditions.

Town of Sunnyvale Action Item	Participate in Firewise Program
Objective(s) Addressed	1-A, 1-C
Hazard(s) Addressed	Wildfire
Priority (High, Medium, Low):	Medium
Estimated Cost	No Cost
Potential Funding Sources	No cost other than enforcing the code
Lead Agency/Department Responsible	Development Services
Implementation Schedule	24 months
Effect on Old Buildings	Old buildings may not be affected by this
Effect on New Buildings	New regulations will require safer construction and incorporation of wildfire mitigation considerations into the permitting process
Cost Effectiveness	Cost of implementing this program is low compared to the benefits of the program
Discussion	The Firewise program provides a series of steps that individual residents and their neighbors can take to keep their homes and neighborhoods safer from fire. This can include Joining the Firewise Community recognition program sponsored by the National Wildlife Coordination Group (firewise.org); Sponsoring Firewise workshops for local officials, developers, civic groups and neighborhood associations, encouraging or requiring best firewise practices in the Town

Town of Sunnyvale Action Item	Implement water-wise program for the Town of Sunnyvale. This program will include purchasing water saving equipment and fixtures in all Town facilities
Objective(s) Addressed	2-B, 3-B, 3-C, 4-A
Hazard(s) Addressed	Drought
Priority (High, Medium, Low):	Medium
Estimated Cost	$20,000
Potential Funding Sources	General Budget
Lead Department Responsible	Developmental Services
Implementation Schedule	Within 24 months of approval and receipt of funding
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	Reducing water consumption is one of the easiest and most inexpensive ways of achieving cost savings.
Discussion	Water conversation standards is always important and especially during extreme temperature and limited rainfall duration. Retrofit the water supply systems to improve water supply and delivery systems and save water

City of Seagoville	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Seagoville

Sunnyvale Action Item	Conduct studies to develop inundation maps for Lake Ray Hubbard and Duck Creek Levee and how it affects the Town of Sunnyvale. These studies will be done in coordination with the owners and operators of the dam as well as relevant consultants. Data obtained from the studies will assist the town in developing the most appropriate mitigation actions to save lives and property.
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A
Priority	High
Estimated Cost	$20,000
Potential Funding Sources	General Revenue
Lead Department	Public Works and Transportation
Implementation Schedule	Short Term
Effect on Old Buildings	Protection of structures by mitigating damaging flood waters.
Effect on New Buildings	Protection of structures by mitigating damaging flood waters.
Cost Effectiveness	Will benefit structures and lives downstream of dams/levee.
Discussion	As noted in this annex a data deficiency was identified for Lake Ray Hubbard and Duck Creek Levee. Such a study can include procedures for tracking high water marks, developing a thorough watershed analysis of the dams and reservoirs and developing and maintaining a database to track community exposure to flood risk

Plan Maintenance

The Town of Sunnyvale Fire Department – Emergency Management Division will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator will lead the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
Town of Sunnyvale	Emergency Management Coordinator	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Emergency Management Coordinator will call the Sunnyvale Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

Sunnyvale Fire Department will report the outcomes of the HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Town Council. The Fire Department will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the Town of Sunnyvale or its communities, legal changes, and other events may trigger a meeting of the Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The Town of Sunnyvale is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Town of Sunnyvale will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the town will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the Town of Sunnyvale will engage stakeholders in community emergency planning.

Plan Incorporation

The Town of Sunnyvale has other plans which were considered during the mitigation planning process. These include Federal Emergency Management Agency (FEMA) maps, Town of Sunnyvale comprehensive plan, future land use and thoroughfare plans, emergency operations plan, Capital Improvement Program (CIP) including current zoning plan, adopted building codes and amendments and Town of Sunnyvale ordinances. The Hazard Mitigation Team will continue to use these plans as guidance in determining gaps in the capabilities of

the Town as well as developing goals and mitigation action items in response to the vulnerability assessment.

The planning integration table below illustrates the integration process of this plan into other city documents and plans.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
Town of Sunnyvale	Town Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	Town Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Town Administrator	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. Meeting Documentation

b. Outreach Materials

Appendix TOS A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Town of Sunnyvale
Hazard Identification and Risk Assessment (HIRA)
Date: October 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	3	2	3	4.5	2	2	1	5	90%
Hail	4	2	3	6.0	2	2	1	5	120%
Lightning	3	2	3	4.5	2	2	1	5	90%
Winter Storms	2	1	2	4.0	2	2	1	5	80%
Tornado	3	1	3	9.0	3	3	1	7	130%
Flooding	1	1	1	1.0	1	1	1	3	30%
Extreme Temperatures/Heat	4	3	4	5.3	3	3	2	8	70%
Wildfire	4	2	4	8.0	1	3	3	9	90%
Terrorist Attack	1	1	4	4.0	4	3	3	10	40%
Urban Fire	2	1	4	8.0	2	2	2	6	130%
Earthquake	1	1	1	1.0	1	1	1	3	30%
Levee/Dam Failure	1	1	3	3.0	1	1	1	3	30%
Drought	1	1	1	1.0	1	1	1	3	30%
Stream Bank Erosion	1	1	1	1.0	1	1	1	3	30%

NB: This Town of Sunnyvale HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix TOS B-1: Meeting and Outreach Documentation



Search

You are here: Home > Town Departments > Fire > Dallas County Hazard Mitigation Action Plan

Dallas County Hazard Mitigation Action Plan

Contact Information

Equipment

Online Payments

Report a Concern

Blackboard Connect

New Residents

Dallas County Hazard Mitigation Action Plan

Dallas County Multi-jurisdictional Hazard Mitigation Action Plan (HazMAP) Update

Dallas County Office of Homeland Security and Emergency Management (HSEM) announces a 14 day Public Review and Comment for the Update Dallas County Hazard Mitigation Action Plan (HazMAP).

Dallas County Office of Homeland Security and Emergency Management, in conjunction with participating jurisdictions within Dallas County, has completed a draft of the Updated Dallas County Multi-jurisdictional HazMAP and has scheduled a 14 day public comment period of the updated Hazard Mitigation Action Plan.

This plan was made possible through a grant provided by the Federal Emergency Management Agency (FEMA) and administered by the Texas Division of Emergency Management (TDEM) and the North Central Texas Council of Governments (NCTCOG).

Click the link below to access the draft plan:

- City Annex Draft

This comment period will give the public the opportunity to review the draft and make comments regarding the draft plan for Dallas County and the participating jurisdictions to include in the plan. We are asking that the public take this opportunity to make comments regarding the draft plan. Any comments or suggestions can be emailed to Richard Adkins.

You may also print, fill out and forward the Public Comment Form to:

Dallas County Office of Homeland Security and Emergency Management
Attn: Michael Gaciri
509 Main Street
Dallas, TX 75202

The plan will be available for public comment until January 03, 2014. All comments received by this date will be reviewed and considered.

Home Contact Us Calendar Site Map Accessibility Copyright Notices Powered by Facebook Twitter Mayor's Blog

City of University Park Annex

This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of University Park participated in the Countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of University Park. In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of University Park. It contains capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction



University Park is located at 32.5058 N and 96.4731 W. It sits directly in the middle of Dallas County. University Park is bordered on the north, east and west by the city of Dallas and on the south by the Town of Highland Park. The city is home to Southern Methodist University.

University Park began as a cluster of homes located near the Southern Methodist University (SMU) campus. Starting in 1915, this small community was supported by SMU's utility services until 1924 when the community became too big for the university to support. Member of the community voted to allow University Park to become incorporated as a city on April 2, 1924.

The population of the city as of 2010 U. S. Census was 23,068 plus approximately 13,000 students and staff at SMU with 8,005 households, and 5,291 families residing in the city.



The racial makeup of the city is 94.33% White, 1.43% African American, 0.22% Native American, 2.23% Asian, 0.02% Pacific Islander, 0.93% from other races, and 0.84% from two or more races. Hispanic or Latino of any race was 3.10% of the population. The estimated median income is $146,848 with the estimated per capita income at $65,572. The mean value of a single family home is $1,093,015. According to the U.S. Census Bureau (2010), the city has a total area of 3.7 square miles. There are 8,492 housing units at an average density of 2,282.5 per square mile.

The City of University Park operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and resolutions approved by the City Council. In addition, the City Manager is responsible for all

personnel matters in the city and for preparing and submitting an annual budget for Council review.

The economic development of University Park can be contributed to the ever-growing population of Southern Methodist University's students and staff. Its location directly within the City of Dallas makes it easier for commuting to and from places of employment.

Internal Planning Process:

The Emergency Manager (Fire Chief) for the City of University Park conducted a risk assessment for the city in February of 2012. The assessment is based on three hazard types: Natural, Technological, and Security. This document became the basis for the city's contribution to the Dallas County Hazardous Mitigation Plan review that began by the county beginning in the spring of 2013.

A hazard mitigation planning team was created in May of 2013 to begin the process. The members of the team are: Fire Chief, Fire Marshal and the Assistant Public Works Director. The team reviewed the assessment that was conducted in February of 2013 and determined that the document would be the foundation for the current review of the city's hazards as part of the county's HazMAP process. The county gave the city access to a survey instrument on the county's website for citizen input. The city council conducted a public hearing for citizen input regarding the city and Dallas County's hazardous mitigation efforts.

The table below lists members of the *City of University Park* Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of University Park.

Name	Title / Department or Agency	Role
Randy Howell	Fire Chief, City of University Park	Hazard Identification, capabilities assessment, plan development
Mike Nolen (retired)	Fire Marshal, City of University Park	HMPT Coordinator; Hazard Identification, capabilities assessment, plan development
Jacob Speer	Assistant Public Works Director, City of University Park	Submission of Flood Plain Documentation; Advisory from Public Works perspective; Hazard Identification, capabilities assessment, plan development

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources referenced in obtaining the various data components included the Dallas County Appraisal Data, North Central Texas Regional Hazard Assessment Tool (RHAT), Texas Water Board Development Authority, NOAA National Climatic Data Center, Texas A&M Forest Services Wildfire Assessment Portal, city ordinances. A summary of the sources used and the purpose for which it was used is provided below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
Texas Forest Service/Texas Wildfire Risk Assessment Summary Report	Wildfire Threat and Urban Interface	Mapping and Wildfire Vulnerability data
National Dam Inventory	Dam information	High Hazard Dam list
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Date	Summary of Major Activity
April 2, 2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting; Discussed options for public input/comment. Posted request for input on City Website and placed on 6/4 City Council agenda. Discussed selection of Public Works representative. Created project benchmarks and completion dates. Set future meeting dates.
May 16, 2013	Reviewed benchmark progress; Reviewed current plan and recommended changes; Identified hazards and estimated potential losses from future hazard events. Conducted Capabilities Assessment
June 4, 2013	Completed like-kind reports; Complete HIRA Matrix; Public input for June 4 City Council meeting. Reviewed action items from previous plan and determined status of action items. Updated, developed, and prioritized new mitigation actions to address the identified risks`

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. The City of University Park notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through the city's website as well as public meetings and announcement at city's Council Meeting in the month of June 2013. The notices and announcements directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results

The City of University Park made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the city's website and public outreach program was implemented to solicit public input. The purpose of the survey was to:

1) Solicit public input during the planning process, and

2) Help the town to identify any potential actions or problem areas

Despite outreach efforts, no input was provided through the survey or public comment forum at the City Council meetings. As a result, information collected was not be statically valid and could not be incorporated into the City of University Park Annex of the Dallas County HazMAP.

Public Review Period

On January 7, 2014 the City of University Park announced the availability of the City's Annex Draft Plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was made through city's website. The announcement provided a 14 day public review and comment period and invited all relevant stakeholders and interested community members to participate. An external stakeholder invited to participate in the to the planning and review process of the City of University Park Annex was Southern Methodist University (SMU), Director in the Office of Risk Management, Emergency Management and Business Continuity.

The public comments were directed to the Michael Nolen the Fire Marshal and point of contact for the City of University Park.

Capability Assessment:

The City of University Park identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

Key Departments

Fire Department

The University Park Fire Department provides customer-oriented fire prevention, fire suppression, and emergency medical services to the residents of University Park and Southern Methodist University. The department is dedicated to protecting the lives and property of the citizens of University Park from fire, disaster, illness, or injury.



Equipment: In 2011, the University Park Fire Department commissioned its new fire engine. Manufactured by Pierce and equipped to UPFD specifications, the new engine replaced one that was in service for 20 years. Named the "Fighting Scot," it is adorned with fire-axe-wielding emblems of the famous Highland Park High School mascot. While the new engine will aid the department in its core objectives of protecting the lives and property of those who live and work in University Park, the department also saw its purchase as an opportunity to support the youth of the community and commend HPISD for its ongoing excellence. Engine enhancements and benefits:

- ✓ Increased equipment reliability and reduced time out of service for necessary repair
- ✓ Increased storage space allowing firefighter/paramedics access to a wider variety of medical, rescue and fire-related equipment at emergency scenes
- ✓ Upgraded compressed air foam system for quicker knock-down of structural fires
- ✓ Improved braking and handling, making the engine safer to navigate through congested streets and intersections
- ✓ Improved roadway and on-scene safety features, making the engine more visible to motorists

Emergency Management: Emergency Management in the City of University Park is under the Fire Department. The overall purpose of Emergency Management is to coordinate the activities of various city departments responsible for continued operations during disasters, coordinate inter-local agreements for resource utilization, communicate with state and federal agencies, and provide education and training. Ultimately, the purpose of emergency management is to increase the city's capabilities to respond to a hazard or incident and prevent or reduce the impact of the various hazards on the city.

Emergency management is based on an "all hazards" model that is broad in scope and applies to all city departments. The city's emergency management plan has four basic tenets:

Mitigation: Actions taken before an event occurs to prevent or lessen the impact the event has on life and property. Some examples of mitigation:

- ✓ Building codes
- ✓ Zoning ordinances
- ✓ Grant funding
- ✓ Training

Preparedness: Activities, actions, procurements, planning, training and inter-jurisdictional cooperation designed to increase response readiness to identified hazards.

Response: Mobilization of resources to meet the needs of the city in response to the nature of the disaster. Mobilization includes local, county, state and federal resources as necessary. Response is usually associated with the period of time immediately after the event and necessary to ensure life safety. Examples include fire and EMS services, search and rescue, debris removal, public works activities and law enforcement.

Recovery: Long term mobilization of support operations in returning the city to its pre-event condition. This period is usually when social services and volunteer organizations tasked with relief efforts ramp up their efforts with the following in mind – "the greater the magnitude of the disaster, the greater the recovery effort."

Public Works: The Public Works Department's mission is to manage and maintain the following services and facilities that are vital to the community's health, safety, and welfare:

- ✓ Engineering
- ✓ Facilities Maintenance
- ✓ Traffic Sign, Signal, and Pavement Markings
- ✓ Streets
- ✓ Water, Sanitary, and Storm Sewer Utilities
- ✓ Sanitation
- ✓ Right-of-Way Management







The Public Works Department is comprised of five divisions with responsibilities for engineering; maintenance of city buildings; installation and maintenance of traffic signs, signals and pavement markings; street and alley maintenance; residential and commercial refuse collection and disposal and residential recycling and commercial recycling; and installation and maintenance of the city's water distribution and sanitary and storm sewer collection systems. The five divisions of the Public Works Department are:

Engineering Division: The City Engineer is responsible for the design and construction of the Capital Improvements Program (CIP). Much of this work is centered on the replacement of water and sanitary sewer mains. This division is responsible for maintaining all official city maps and permanent records of easements, rights-of-way, and

city limit boundaries. The Engineering Division also includes the Director of Public Works and provides technical support to other city operations.

The Traffic Control Division installs and maintains all traffic signs and pavement markings in accordance with the Manual of Uniform Traffic Control Devices. The city has approximately 6000 traffic signs, including 1,374 street name signs. The division also installs, operates, and maintains traffic signals at 32 intersections throughout the city. These signals are linked via radio interconnect to a computer at the service center. With proper security codes, the signals can be controlled by modem from any remote location. The signals are also equipped with video detection systems to help improve traffic flow. The signals are also equipped with a battery backup system that allows the signals to continue operating for a couple of hours during a power outage. Additionally, the Traffic Control Division provides the following services:

- ✓ Maintains 113 antique-style street lights and 120 LED back-lit street name blades
- ✓ Maintains 14 school flashers and two speed feedback signs by spread spectrum
- ✓ radio system controlled at the service center
- ✓ Maintains 5 speed limit feedback signs
- ✓ Maintains 3 in ground lighted pedestrian crosswalks
- ✓ Maintains 2 flashing beacon pedestrian crosswalks
- ✓ Makes all city signs
- ✓ Performs traffic counts as requested
- ✓ Delivers block party signs, temporary “No Parking” signs, installs mirrors and
- ✓ speed bumps in alleys as requested
- ✓ Maintains 13 city owned newspaper racks
- ✓ Maintains barricades for all city projects and events

The Facility Maintenance Division maintains the electrical, mechanical, and plumbing systems for all municipal buildings. Additionally, staff arranges work requiring painting, minor carpentry, and floor coverings for the facilities. Facility Maintenance uses a computerized Energy Management System (EMS) to control HVAC equipment and improve energy efficiency in city buildings. The Division maintains over 147,000 square feet of city facility space

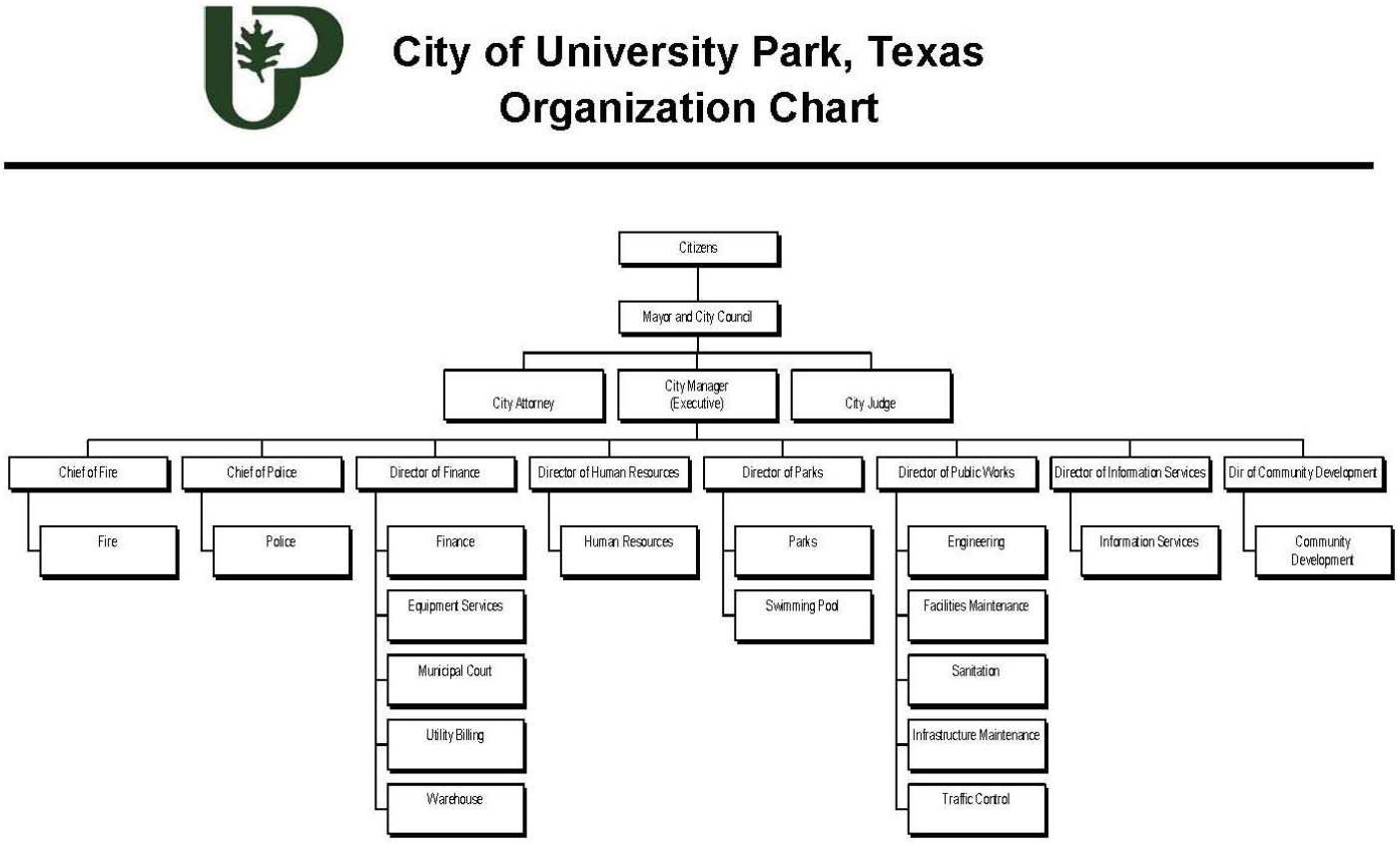
Sanitation Division’s responsibilities include the collection and disposal of residential, commercial, and SMU refuse, yard wastes, and operation of a recycling program. Residential and commercial refuse are taken to the landfill owned and operated by the City of Garland. Through an inter-local agreement, Garland charges a significantly reduced rate to the city (through 2027) as part of the agreement. Yard waste, separate from the regular household garbage, is taken to the City of Mesquite composting facility. The city also collects recycling materials and began a contract in January 2007 with Community Waste Disposal (CWD) for processing. The city also participates in a Dallas County-sponsored Household Hazardous Waste program.

The Infrastructure Maintenance Division provides minor repair and /or replacement of deteriorated curbs, street pavement, and alley pavement. Large-scale projects (i.e., complete street or alley reconstruction) are designed and bid out to private contractors

through the Engineering Division. The Infrastructure Maintenance Division provides the following street services:

- ✓ Curb, Alley Pavement and Street Pavement Repair
- ✓ Handicapped Accessible Sidewalk Ramps
- ✓ Street Sweeping

Figure UP1: City of University Park Organizational Chart



Summary of Capabilities

Planning and Regulatory

Regarding land use planning and ordinances, the city has a zoning ordinance in place along with a floodplain ordinance to ensure an appropriate review process is conducted to reduce the impacts of hazards.

The city has a Capital Improvements Plan that is examined several times each budget year and will be used when a significant issue such as hazard mitigation idea/project is brought forward to staff and the City Council. Other instruments that can be used for addressing hazards and mitigation strategies at the city level are: the emergency management plan, the continuity of operations plan, the transportation plan (through NCTCOG), storm water management plan (filed with TCEQ). The city is currently enforcing the 2009 International Codes (fire, building, etc.) and has a current Public Protection Classification "2" through ISO. The city will enforce the best practices in fire and building code enforcement and keep the city codes at the highest level possible.

Administrative and Technical

The city has the staff and technical capabilities to identify and mitigate hazards within the community.

The city has a zoning and planning holds public hearings to consider rezoning requests, replant requests (involving 4 or more lots) and amendments to the University Park Zoning Ordinance. The Parks Department and Public Works Department coordinate city maintenance programs such as tree trimming, clearing drainage areas, etc. throughout the calendar year. Mutual aid agreements with Dallas County and the North Texas region (fire, EMS, public works, etc.) are in place for manpower and equipment in case of larger emergencies. The city staff that assists in mitigation planning are as follows: Chief Building Code Official, Floodplain Administrator (Chief Planning Official), Emergency Manager (Fire Chief), Community Development Director, City Engineer, Public Work Director, and GIS Coordinator. The city will hire more staff as permitted by funding to help improve on its capabilities. The city has an outdoor warning siren system and the CodeRED system to notify the residents of the city.

Financial

The city has ability to use the following funding sources for hazard mitigation when approved by city staff and the city council: capital improvements project funding, taxes, and water & sewer fees. The Finance Department is a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

The city has implemented the Community Emergency Response Team (CERT) with twenty members trained as of September of 2013 with ten citizens in the current CERT training due to graduate by November of 2013. CERT team members have had a positive impact in their neighborhoods encouraging neighbor's participation in disaster planning and identifying hazards.

The city is currently seeking the public's input on hazard identification within the community through a hazard mitigation survey on the Dallas County website. The link to the county's website is found on the city's website. The results of the survey are forwarded to the city so the information can be reviewed by staff for hazard identification and mitigation.

The city has numerous emergency management links on the city's website page to assist citizens in gathering information on preparedness and mitigation of hazards that could impact the city.

The city has obtained the StormReady certification through the National Weather Service.

The City Council for the City of University Park, including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Hazard Assessment and Risk Assessment

The conclusion drawn by City of University Park HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking provided by the Dallas County HazMAP Working Group. The categories for City of University Park are as follows:

High Risk (over 65% on HIRA)	High Winds
Moderate Risk (41%- 65% on HIRA)	Tornado Hail Winter Storms Flooding Extreme Temperatures/Heat
Low Risk (12 %-40% on HIRA)	Drought Lightning Earthquake
No Risk (Below 12% on HIRA)	Stream Bank Erosion Wildfire Dam/Levee Failure

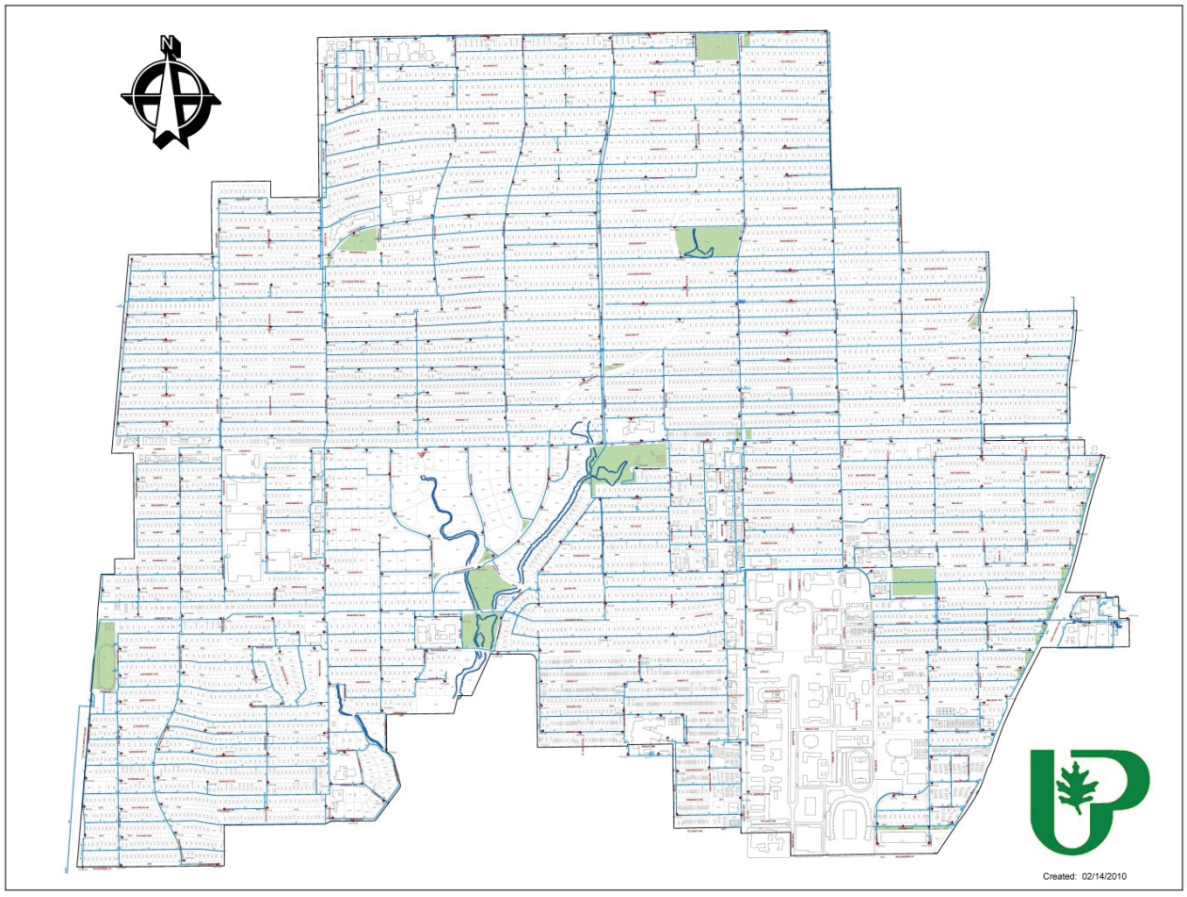
Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure. Stream bank erosion, dam/levee failure and wildfire were not considered as risks as there are no structures, property or people that have been identified as being at risk from these hazards in the jurisdiction.

Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of University Park. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in University Park**.**

A. Flood: Flooding could be significant hazard due to the fact that a tributary of Turtle Creek runs through the city on a north-south axis. See the water Systems Map below.

Water System Map

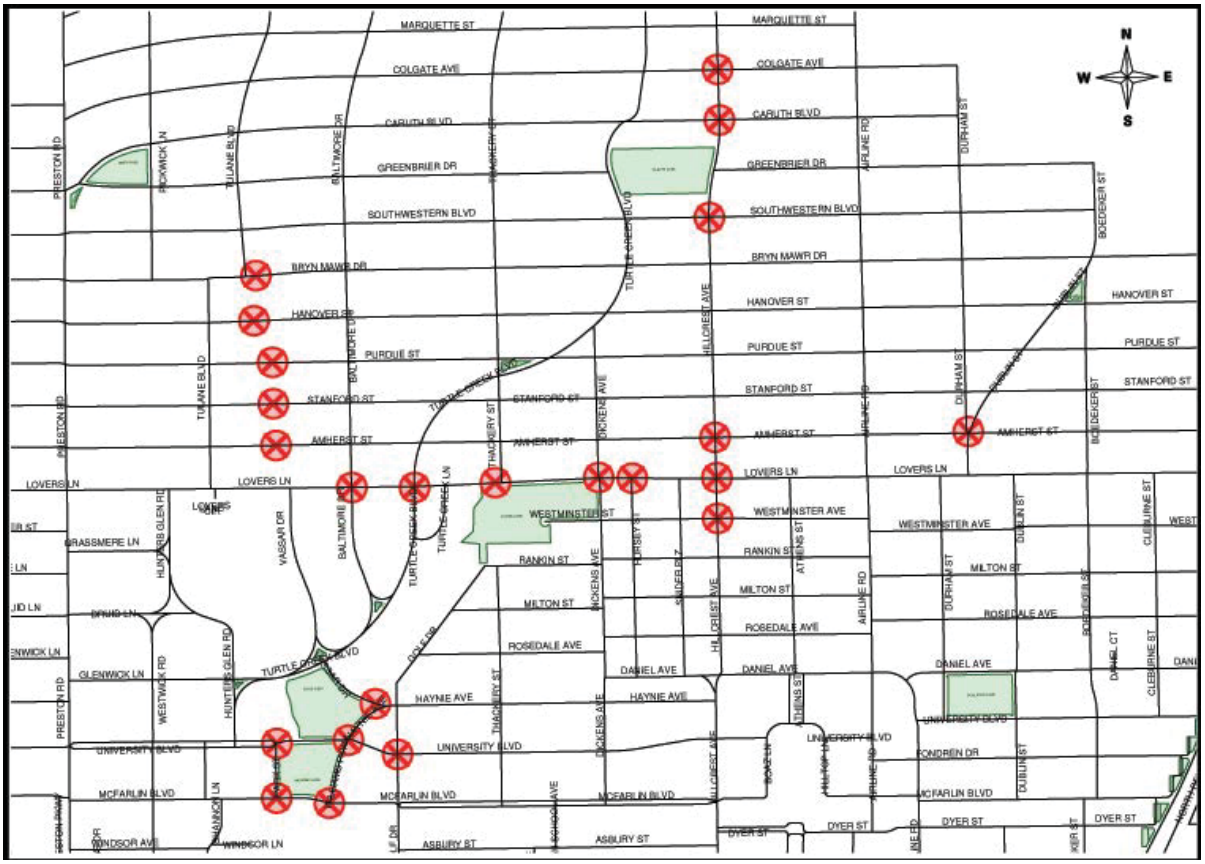


The critical point is where the creek crosses McFarlin Blvd. in 3800 block. The bridge that crosses over the creek was built in the 1930s-1940s time-frame. Due to the construction type of bridge, water is hampered from flowing freely during heavy rainfall, thereby causing water to flow over the street and bridge.

The City of University Park has identified high water areas that have problematic flooding issues in the instance of heavy rains over short periods of time. If enough prior warning is given for potential flooding, then these areas should be blocked off from vehicle traffic beforehand to prevent vehicles and citizens from becoming trapped.

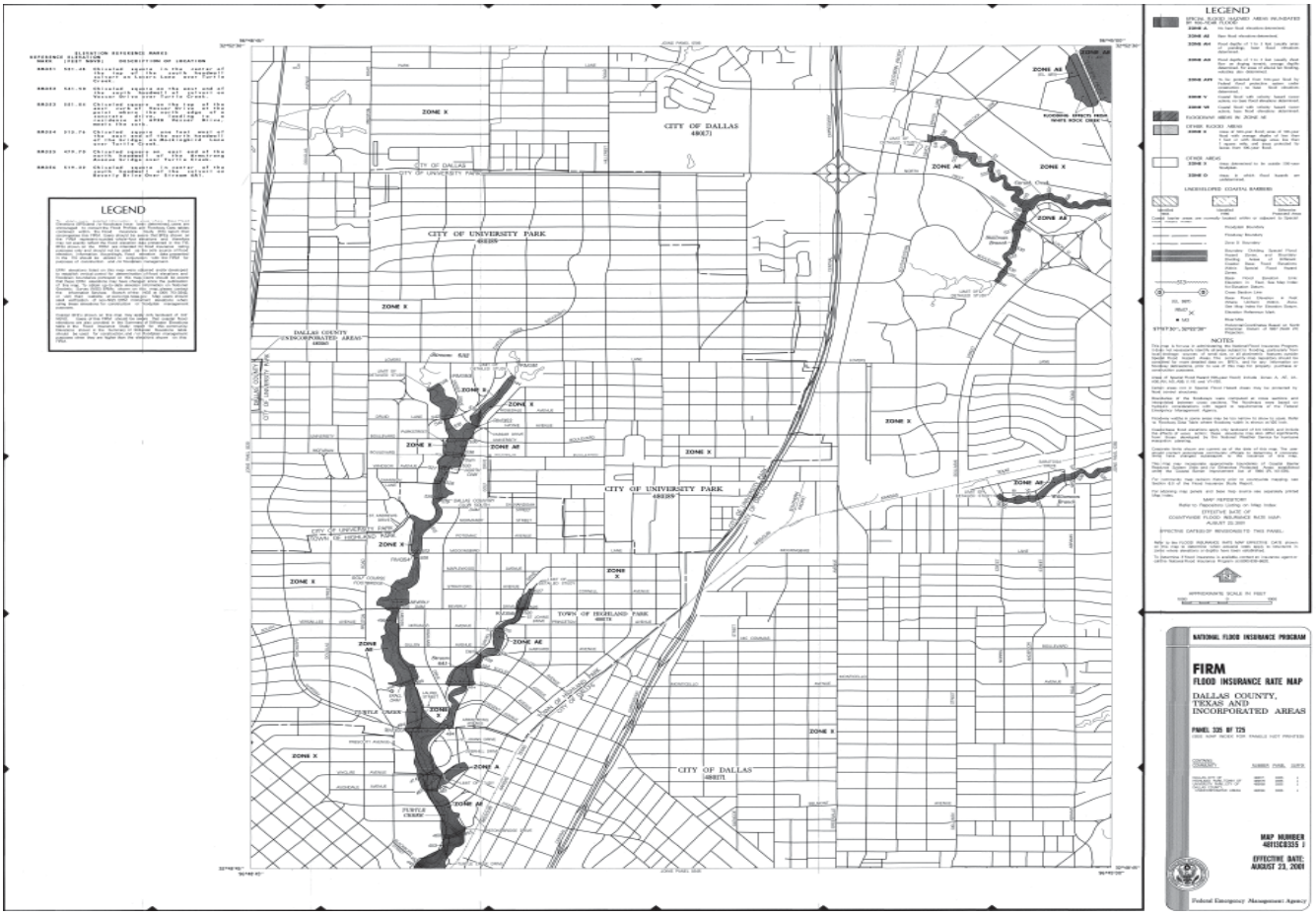
Locations: These high water point areas are depicted in **Map UP1** below.

Map UP1: City of University Park High Water Areas



Map UP2 depicts the floodplain Insurance Rate Maps for the City of University Park. In the event an emergency such as when there is heavy rain the streets listed above are barricaded on a priority basis as follows:

Map UP2: City of University Park Floodplain Areas



National Flood Insurance Program (NFIP): The City of University Park does participate in the National Flood Insurance Program (NFIP) and is in good standing. There no outstanding compliance issues as the city reviews the programs compliance requirements on a regular basis.

The City does not have any structures that have been repetitively flooded over the years, and thus repetitive flooding is not an issue for the city.

1ST GROUP

1. McFarlin @ Williams Parkway (Westbound) 4 barricades with lights
2. McFarlin @ Park Street (Eastbound) 4 barricades with lights
3. University @ Park Street (Eastbound) 4 barricades with lights
4. University @ Williams Parkway (Westbound) 4 barricades with lights

2nd GROUP

5. Hillcrest @ Southwestern (Northbound) 2 barricades with lights
6. Hillcrest @ Caruth (Southbound) 2 barricades with lights
7. Amherst @ Durham (All 5 ways) 5 barricades with lights

3rd GROUP

8. Turtle Creek @ Caruth (Southbound) 1 barricade with light
9. Turtle Creek @ Southwestern (Northbound) 1 barricade with light
10. Turtle Creek @ Vassar (Eastbound) 1 barricade with light
11. Vassar @ Haynie (Westbound) 1 barricade with light

4th GROUP

12. Westchester @ Lovers Lane (Northbound) 1 barricade with light
13. Westchester @ Amherst (Southbound) 1 barricade with light
14. Dickens @ Amherst (Southbound) 1 barricade with light
15. Dickens @ Westminster (Northbound) 1 barricade with light

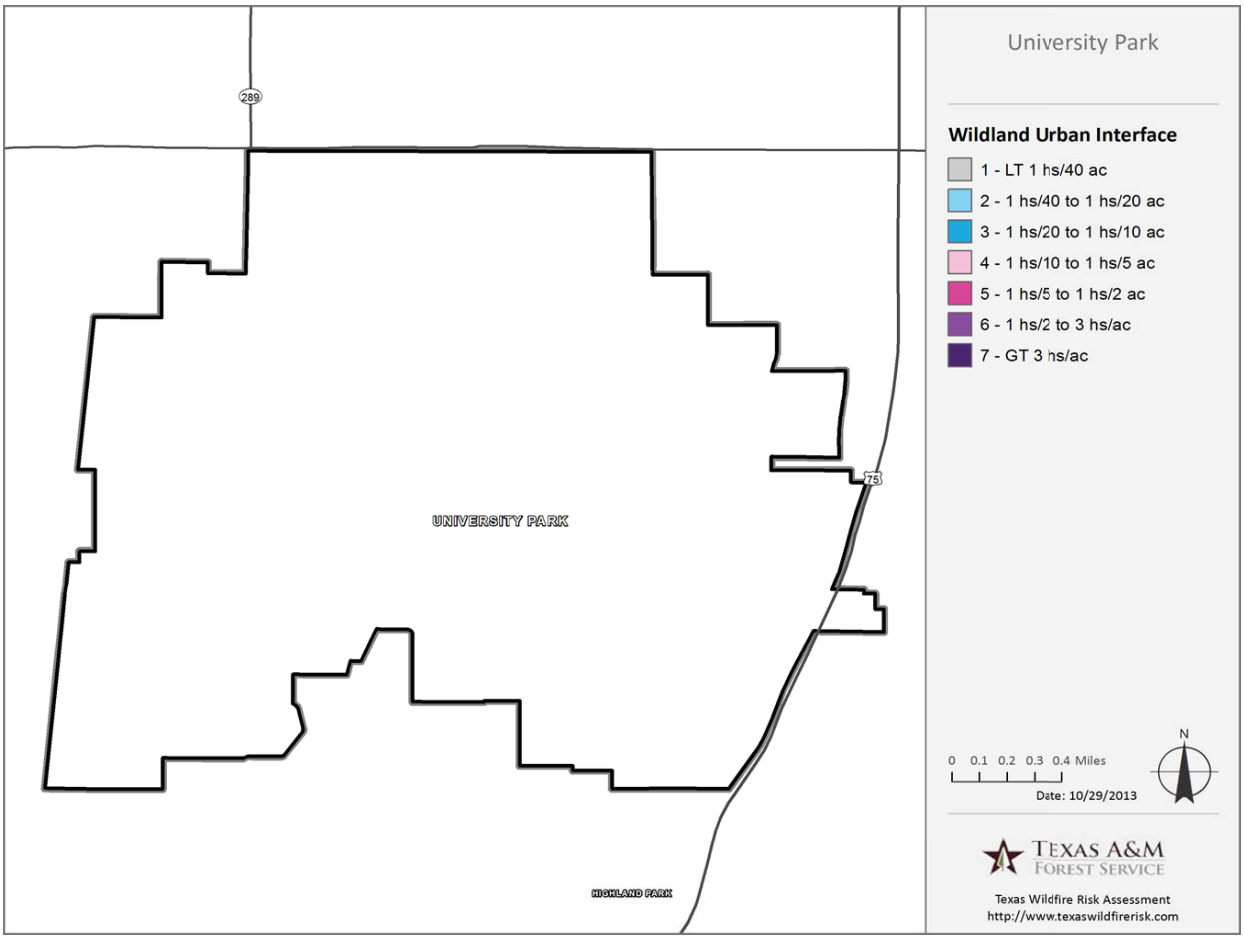
B. Wildland Urban Interface (WUI): According to the Texas A&M Forest Service none of the population of the City of University Park lives within the WUI. **Map UP3** reflects the WUI for the city, while **Map UP4** depicts the wildfire threat rating.

WUI is not considered as a hazard that affects the City of University Park and will not be discussed further in this plan, but its risk potential will be re-evaluated as needed.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

MAP UP3: University Park Wildland Urban Interface



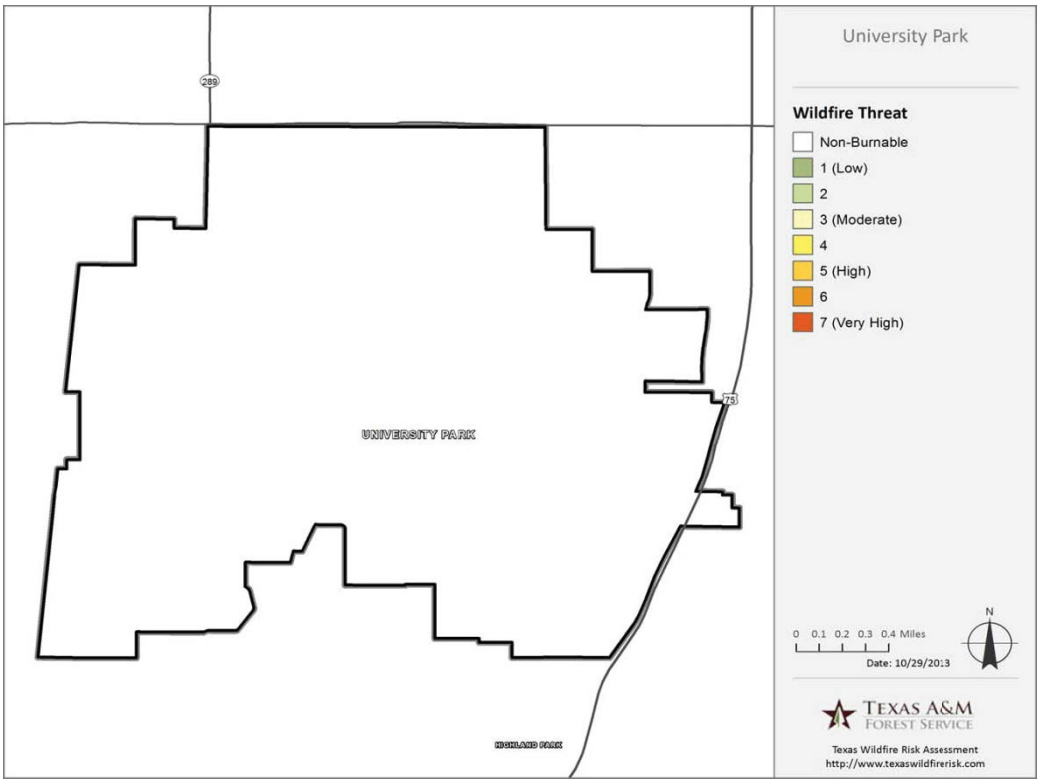
The threat map below is derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.

C. Dam and Levee Failure: Dam/levee failure is not a threat to the City of University Park as there are no dams**.** None of the properties within the city are in the inundation areas of any dam.

D. Earthquake: There are no known active geological faults and no historical data of earthquakes in the City of University Park. The increase in earthquake activity in Dallas County warrants further study of this hazard and its probable causes. A data deficiency has been recognized and action items have been identified accordingly.

E. Stream Bank Erosion: The City of University Park doesn't have any major creeks or streams. Stream bank erosion is not considered a risk in the City of University Park.

MAP UP4: City of University Park Wildfire Threat



Vulnerability Assessment

The inventory of the city' assets were provided and can be referenced in Section 5 of the Base Plan. Five asset categories were identified and evaluated across Dallas County and participating jurisdictions. These included population, improved property, emergency facilities, critical facilities and critical infrastructure.

For the analysis of these assets, the City of University Park has been divided into 4 geographic quadrants. These are as follows:

A. **Quadrant I** – East side of Dallas North Tollway running north from Lovers Lane to Greenbriar. East on Greenbriar to north on Douglas and running east again just north of Colgate until reaching Preston road. Running north on Preston until Northwest Hwy and running east until reaching Turtle Creek. Running south on Turtle Creek Blvd. until reaching Lovers Lane.

B. **Quadrant II** – Running east on Lovers Lane starting at Turtle Creek Blvd. extending until Boedeker. Running north on Boedeker until the middle of Boedeker before reaching Amherst. Running east until getting to Willard and then running north until right past Hanover. Running west until reaching Boedeker again and then heading west until right past Southwestern. Continuing west until reaching Durham and then going north until halfway after Caruth and before Colgate. Running west until

reaching Airline and going north on Airline until Northwest Hwy. Turning west on Northwest Hwy. until reaching Turtle Creek

C. **Quadrant III** – The western boundary is Dallas North Tollway going north/south from Lovers Lane until Mockingbird. The southern boundary is Mockingbird until reaching Preston. Then north on Preston until Saint Andrews which follows east until curving north until reaching Shannon and going east until reaching a line that follows north to Turtle Creek (see map for further explanation). This comprises the eastern edge until reaching Lovers Lane which marks the northern boundary of this sector running west until reaching Dallas North Tollway.

D. **Quadrant IV** – The western boundary is Turtle Creek running south from Lovers Lane and ending at Shannon. From Shannon, the boundary runs northeast to McFarlin until reaching Golf then going south. This ends at Binkley which runs east until Key and then going south until Potomac. It follows Potomac east until Mockingbird which finishes the southern boundary until it hits North Central Pkwy which is the eastern boundary heading north until Lovers Lane. Lovers Lane is the northern boundary from North Central Expressway until reaching Turtle Creek.

Special Facilities and properties located in each Quadrant

Each quadrant has special facilities that need to be addressed and identified. These include schools, churches, governmental buildings and historical buildings and areas. Each sector will be broken down and listed with what special facilities are included in each.

A. Quadrant I

- ✓ Schools - Hyer Elementary School – 3920 Caruth
- ✓ Churches
  - o University Park United Methodist Church – 4024 Caruth
  - o Park Cities Baptist Church – 3933 Northwest
- ✓ Businesses – Preston Center – located south of Northwest Hwy and east of Preston road
- ✓ Parks
  - o Smith Park – 4000 Caruth
- ✓ Other
  - o Water tower – 3525 Northwest Hwy.

B. Quadrant II

- ✓ Schools – University Park Elementary School – 3505 Amherst
- ✓ Churches – None
- ✓ Businesses – no large shopping areas
- ✓ Parks
  - o Coffee Park – 3400 Northwest
  - o Caruth Park – 3400 Caruth
- ✓ Other – None

C. Quadrant III

- ✓ Schools
  - o Highland Park High School – 4220 Emerson
  - o Highland Park ISD Administration Building – 7015 Westchester
- ✓ Churches
  - o Church of Christ – 6409 Preston
  - o Highland Park Presbyterian Church – 3821 University
  - o First Unitarian Church – 4015 Normandy
- ✓ Businesses – No large shopping areas
- ✓ Parks
  - o Germany Park – 4500 University
- ✓ Other
  - o YMCA – 6000 Preston

D. Quadrant IV

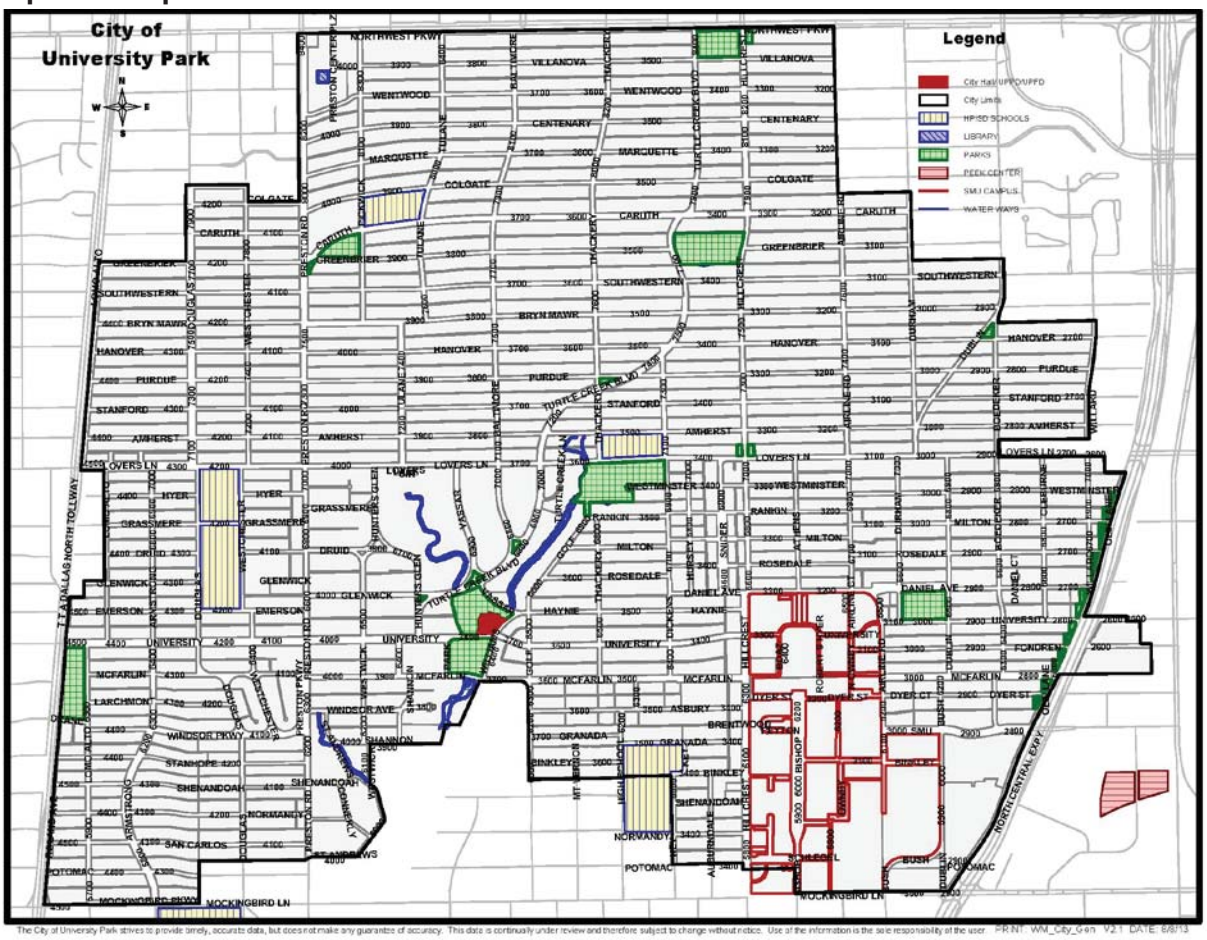
- ✓ Schools
  - o McCullough Intermediate School – 3555 Granada
  - o Southern Methodist University – 6425 Boaz
- ✓ Churches
  - o Christ Lutheran Church – 3001 Lovers
  - o St. Christopher's Episcopal Church – 2600 Westminster
  - o Highland Park United Methodist Church – 3300 Mockingbird
- ✓ Businesses
  - o Snider Plaza – corner of Hillcrest and Lovers. Located in Snider Plaza:
    - ▪ Park Cities Medical Plaza – 6901 Snider Plaza
    - ▪ Park Cities Postal Center – 6929 Snider Plaza
- ✓ Parks
  - o Williams Park – 3800 University
  - o Goar Park – 3800 University
  - o Curtis Park – 3500 Lovers
  - o Burleson Park – 3000 University
- ✓ Other
  - o City Hall – 3800 University
    - ▪ Fire Department
    - ▪ Police Department
    - ▪ Communications Center
    - ▪ Executive Group – Mayor, City Manager & City Council
    - ▪ Primary location for EOC
  - o Daniel Cemetery – Airline at Milton
  - o Historical Buildings – the following are listed in the National Register as historical buildings (Georgian Revival Buildings of SMU)
    - ▪ Perkins Hall of Administration – 6425 Hillcrest
    - ▪ Patterson, Stanley Hall – 3128 Dyer
    - ▪ McFarlin Memorial Auditorium – 6405 Hillcrest
    - ▪ Snider Hall – 3305 Dyer
    - ▪ Virginia Hall – 3325 Dyer
    - ▪ Clements, Dallas Hall – 3200 Dyer

- Florence, Fred Hall – 3330 University
- Hyer Hall – 6424 Hill

o Transfer Station – 2500 block of University
- Sanitation

o Water tower – 2600 Fondren
o George Bush Presidential Library

Map UP5: Special Facilities Locations



Hazard Impact and Extent

This is a summary of the hazards that have the possibility of impacting the City of University Park. Included in this is how likely the hazard is to take place, the estimated impact upon the population and the estimated impact upon the city & private property.

	Likelihood of Occurrence*	Estimated Impact on Public Health & Safety			Estimated Impact on Property		
Hazard Type:	**(See below)**	**Limited**	**Moderate**	**Major**	**Limited**	**Moderate**	**Major**
Natural							
Drought	OCCASIONAL	LIMITED			LIMITED		
Earthquake	UNLIKELY	LIMITED			LIMITED		
Flash Flooding	LIKELY		MAJOR			MODERATE	
Flooding (river or tidal)	LIKELY		LIMITED			MODERATE	
Hurricane	UNLIKELY	LIMITED			LIMITED		
Tornado	HIGHLY LIKELY			MAJOR			MAJOR
Winter Storm	OCCASIONAL		MODERATE				MAJOR
Technological							
Energy/Fuel Shortage	UNLIKELY	LIMITED			LIMITED		
Hazmat/Oil Spill (fixed site)	HIGHLY LIKELY	LIMITED			LIMITED		
Hazmat/Oil Spill (transport)	LIKELY		MAJOR		LIMITED		
Major Structural Fire	HIGHLY LIKELY		MODERATE				MAJOR
Water System Failure	UNLIKELY		MAJOR			MODERATE	
Electrical System Failure	HIGHLY LIKELY			MAJOR			MAJOR
Aircraft Emergencies	UNLIKELY			MAJOR			MAJOR
Security							
Civil Unrest	OCCASIONAL			MAJOR			MAJOR
Terrorism							
Chemical/Biological	UNLIKELY			MAJOR		MODERATE	
Active Shooter	LIKELY			MAJOR			MAJOR
WMD (explosive device)	UNLIKELY			MAJOR			MAJOR

* **Likelihood of Occurrence**: Unlikely, Occasional, Likely, or Highly Likely

Other information to consider:

Land Area-3.72 square miles

Elevation-550 feet

Population Density - 6,792 people per square mile

Total population – 25,269

Median Age - 31

- ✓ Male – 11,768 (46.6%)

- ✓ Female – 13,501 (53.4%)
- ✓ Median age – 31.2
- ✓ Aged up to 19 years – 9,071 (35.9%)
- ✓ Aged 20 to 59 – 13,493 (53.4%)
- ✓ Aged 60 to 85 and older – 2,703 (10.7%)

Race

- ✓ White – 22,024 (90.4%)
- ✓ African-American – 252 (1%)
- ✓ American Indian – 59 (0.2%)
- ✓ Asian – 874 (3.6%)
- ✓ Hispanic or Latino – 923 (3.8%)
- ✓ Two or more races – 220 (0.9%)

Households

- ✓ Households with individuals under 18 – 3,314 (41.4%)
- ✓ Households with individuals 65 and over – 1,375 (17.2%)
- ✓ Average household size – 2.59
- ✓ Average family size – 3.26

Housing Units

- ✓ Total occupied housing units – 8,013
- ✓ Owner-occupied housing units – 5,517 (69%)
- ✓ Renter-occupied housing units – 2,496 (31 %)
- ✓ Housing Density-2,285 houses per square mile
- ✓ Estimated House Value-$917,648

In looking at these statistics and using them for emergency management purposes, it is important to look upon those households with small children, large families, and senior citizens. These are the households that would require special attention should a disaster occur and the need for evacuation and/or sheltering would be required.

Conclusions

When examining the risks that threaten the city of University Park, the main issues facing the city and the threat of disasters are (in order of most dangerous and likely to the least):

- ✓ Major structural fire
- ✓ Tornadoes
- ✓ Flooding (from slow, continuous rains)
- ✓ Flash flooding (from quick, heavy downpours)
- ✓ HazMat incident (from either transport to/from SMU or an incident on site)
- ✓ WMD/civil unrest (GBPL)

These are the main issues facing the city of University Park. While there are other possibilities for hazards and risks from those hazards, those listed above are the ones that pose the most immediate and probable issues in the city. With this information, it is now possible for the city to develop and implement a hazard mitigation plan to lessen the vulnerability that these hazards possess.

Below is a summary of the vulnerability assessment methodology conducted in Section 5 of the base plan for the City of University Park. The period under review is from January 1, 2008 through November 30, 2013.

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events in the City of University Park. There are no personal losses expected from drought events. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in the City of University Park. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property in University Park.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in the City of University Park
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in the City of University Park
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in the City of University Park

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures are exposed to this hazard.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Dallas County are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries have been recorded. All the population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning. . All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Dallas County are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Dallas County are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for the City of University Park indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures are exposed to this hazard.

Wildfire	
Population	Based on geographical data, 0% of the population lives in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. No property in the city is exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding. None of the City's population is at risk of flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the city area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are **no** critical facilities located within the 100-year storm event.
Critical Infrastructure	**0 %** of railways/highways and bridges, **0** % of dams, **0** % of water treatment works, and **0** % waste water treatment facilities are at risk from the 100-year storm event. High water points have been identified (see Map UP1) and there is a process in place to address these roads following heavy rain.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of University Park. All the population of City of University Park is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of University Park. All improved property in the City is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in University Park are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in University Park are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in University Park are exposed to this hazard.

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the Plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
  - o Replace the bridge on McFarlin Blvd that crosses Turtle Creek to increase water flow capacity at that point to decrease the flood potential in that area.
  - o Identify roads or utilities that need strengthening for inclusion in the Capital Improvement Program to reduce/eliminate the effects of flooding.
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
  - o Increase awareness of severe weather conditions through the city's web page.
  - o Increase enrollment of the CodeRED system.
  - o Implement a community program that deals with high winds and the use of the outdoor warning siren system.
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Continue to build capacity for hazard mitigation for the City of University Park

- ✓ ***Objective 4-A*****:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 4-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 4-C*****:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of University Park Action Item	Replace the bridge on McFarlin Blvd that crosses Turtle Creek to increase water flow capacity at that point to decrease the flood potential in that area
Objective(s) Addressed	2-A
Hazard(s) Addressed	Flooding
Priority (High, Medium, Low):	Medium
Estimated Cost	$5.3 Million
Potential Funding Sources	Hazard Mitigation Grant Funding; City Budget
Lead Agency/Department Responsible	City Engineer
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The reconstruction of the bridge and added features incorporated in the design will remove all affect properties from the 100 year floodplain and mitigate against flooding for several properties downstream
Effect on New Buildings	There will no properties in the floodplain following the reconstruction of the bridge and its added features
Cost Effectiveness	Cost of construction is low compared to the benefits of buying the properties in question, and will also improve the drainage in the community
Discussion	Replacement of the McFarlin Bridge, placement of a collapsible dam, and the removal of silt accumulated in the primary water collection area. These efforts will increase water flow capacity thus removing the threat of major flooding.

City of University Park Action Item	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of University Park Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of University Park Action Item	Implement the Texas Safe Room Rebate Program to provide safe rooms to the residents of University Park
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, 4-A, 4-B
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of University Park Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of University Park Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	University Park Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of University Park Action Item	Develop a Weatherization Outreach Program
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	None
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Outreach Program will assist households particularly the elderly, disabled and persons will special needs in making sure that have the needed energy during extreme weather conditions. This program can saves lives
Discussion	The Weatherization Outreach Program would provide assistance to eligible households through a community outreach program to ensure that they are safe especially during extreme temperature.

City of University Park Action Item	In conjunction with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

University Park Action Item	Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities
Hazard(s) Addressed	Drought
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought

Plan Maintenance

The City of University Park Fire Department (UFDP) will be responsible for ensuring that this plan is monitored on an on-going basis. The Emergency Management Coordinator/Fire Chief or his/her designee will be the point of contact for leading, the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of University Park	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

UPFD will call the University Park Hazard Mitigation Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

UPFD will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the University Park City Council. Emergency Operations Center will also focus on evaluating the plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of University Park or its communities, legal changes, and other events may trigger a meeting of the University Park Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of University Park is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of University Park will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City of University Park will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of University Park will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of University Park	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	Public Works Director	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. Appendix UP A–1: HIRA Matrix City of University Park, TX

b. Appendix UP B–1: Meeting Documentation

c. Appendix UP C–1: Outreach Materials

d. References

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: September 5, 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4.00	2	2	2	6	67%
Hail	4	4	3	3.00	1	3	1	5	60%
Lightning	4	4	2	2.00	1	3	1	5	40%
Winter Storms	2	3	3	2.00	2	1	1	4	50%
Tornado	4	4	4	4.00	2	3	2	7	57%
Flooding	3	3	4	4.00	1	3	3	7	57%
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire	1	2	1	0.5	1	1	3	5	10%
Utility Failure									
Energy/Fuel Shortage	1	1	3	3.00	4	2	1	7	43%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Urban Fire	4	4	4	4.00	2	2	2	6	67%
Earthquake	1	1	3	3.00	3	4	3	10	30%
Levee/Dam Failure	1	1	2	2.00	1	1	3	5	10%
Drought	4	3	2	2.66	2	4	4	10	28%
Aircraft Accident	1	1	2	2.00	3	3	3	9	22%
Stream Bank Erosion	1	2	1	0.5	1	1	3	5	10%

NB: This City of University Park HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix UP B-1: Meeting Documentation

AGENDA MEMO
6/4/2013 Agenda

TO: Honorable Mayor and City Council

FROM: Randy Howell, Fire Chief

SUBJECT: Public Hearing for citizen input regarding Dallas County HazMAP

BACKGROUND:

In compliance with federal and state hazard mitigation plan regulations, the Dallas County Office of Emergency Management is updating the Dallas County Local Mitigation Strategy.

Participating jurisdictions are required to identify local community hazards and report those hazards to the County in the form of a HazMAP plan. Allowing citizen input is a requirement of this process.

RECOMMENDATION:

Open the floor to allow public input regarding hazards in the community that should be included in this report to the County.

3800 UNIVERSITY BOULEVARD UNIVERSITY PARK, TEXAS 75205 TELEPHONE (214) 363-1644

\\insitefiles\granicus_nas\insite\files\UPTE\Attachments\04fd3e1b-63f0-4e5e-aca5-10ee1a95f8df.docx 12:09 PM 05/3

City of University Park

City Hall
3800 University Blvd.
University Park, TX 75205

Meeting Agenda

City Council

Tuesday, June 4, 2013 | **5:00 PM** | **Council Chamber**

PRE-MEETING WORK SESSION(S)

4:00 - 5:00 P.M. The City Council will convene into open work session to receive agenda item briefings from staff. No action will be taken. Council Conference Room, 2nd floor, City Hall.

TO SPEAK ON AN AGENDA ITEM

Anyone wishing to address the Council on any item must fill out a green "Request to Speak" form and return it to the City Secretary. When called forward by the Mayor, before beginning their remarks, speakers are asked to go to the podium and state their name and address for the record.

I. CALL TO ORDER

A. INVOCATION: City Attorney Robert L. Dillard, III

B. PLEDGE OF ALLEGIANCE: City Attorney Dillard / Boy Scouts

C. INTRODUCTION OF COUNCIL: Mayor W. Richard Davis

D. INTRODUCTION OF STAFF: City Manager Bob Livingston

II. AWARDS AND RECOGNITION

A. 13-138 RECOGNITION: of Fire Department Honor Guard members

Attachments: Honor Guard Recognition memo
Honor Guard 642013

III. CONSENT AGENDA

A. 13-117 Consider and act on an Ordinance abandoning Preston Road Fresh Water District Easement

Attachments: Agenda Memo PRFWD Easement 060413
264abandon easement58593
PRFWDW 0001

D. 13-102 CONSIDER AND ACT: on proposed amendments to the Ordinance regulating park facilities usage

Attachments: Agenda Memo
Park Regulations Ordinance
Summary of amendments

E. 13-134 DISCUSS: FY2014 budget calendar

Attachments: FY2014 budget calendar agenda memo

V. PUBLIC COMMENTS

Anyone wishing to address an item not on the Agenda should do so at this time. Please be advised that under the Texas Open Meetings Act, the Council cannot discuss or act at this meeting on a matter that is not listed on the Agenda. However, in response to an inquiry, a Council member may respond with a statement of specific factual information or a recitation of existing policy. Other questions or private comments for the City Council or Staff should be directed to that individual immediately following the meeting.

VI. ADJOURNMENT

As authorized by Section 551.071(2) of the Texas Government Code, this meeting may be convened into Closed Executive Session for the purpose of seeking confidential legal advice from the City Attorney on any Agenda items listed herein.

CERTIFICATE:
I, Elizabeth Spector, City Secretary, do hereby certify that a copy of this Agenda was posted on the City Hall bulletin board, a place convenient and readily accessible to the general public at all times, and on the City's website, www.uptexas.org, in compliance with Chapter 551, Texas Government Code.

DATE OF POSTING:_____

TIME OF POSTING:_____

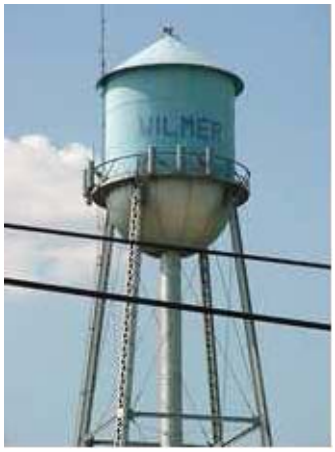
_____
Elizabeth Spector, City Secretary

LOCAL MITIGATION STRATEGY PUBLIC MEETING SIGN-IN SHEET			
Jurisdiction:	City of University Park	Meeting Date:	6-4-13
Facilitator:	City Council Meeting	Place/Room:	City Council Chambers

ATTENDEE SIGN IN				
Name	Title	Company/Address	Phone	E-Mail

No Input Rec'd.

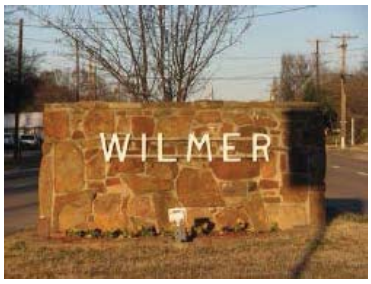
City of Wilmer Annex



This annex was prepared in 2013 as part of an update to the Dallas County Multi-Jurisdictional Hazard Mitigation Action Plan. The City of Wilmer participated in the countywide Dallas County HazMAP Working Group. This is a new hazard mitigation plan and the first to be submitted to FEMA for the City of Wilmer.

In addition to the countywide hazards and strategies discussed in the previous section, this annex serves as a complete hazard mitigation planning tool for the City of Wilmer. It contains updated capability assessment information, a specific vulnerability assessment, and a complete mitigation strategy. The methodology and process for developing this annex is explained throughout the following sections.

Introduction



Wilmer is located at 32.3527 N and 96.4057 W. It sits at the southeast corner of Dallas County and it is east of Lancaster, west of Wilmer, north of Ferris, and south of Hutchins. It runs along both sides of Interstate 45.

Wilmer was originally known as Prairie Valley when the Houston and Texas Central Railroad arrived in 1872. In 1884, the post office in Prairie Valley was renamed Wilmer, after A.J. Wilmer, a conductor on the Houston and Texas Central line. A fire destroyed most of Wilmer's business district on July 4, 1929. The community's shallow wells were unable to pump the adequate amount of water needed to extinguish the blaze. Wilmer became incorporated in 1945.

According to the 2010 U.S. Census Bureau, the population of Wilmer is approximately



3,682. The racial makeup of the city as 21.5% White, 0.4% African American, 0.2% Native American, 0.1% Asian, 0.1% Pacific Islander, 0.2% from other races and 1.4% from two or more races. Hispanic or Latino of any race is 50.9%. The city has a total area of 6.4 square miles with all of it being land. There are approximately 1,312 housing units in the city consisting of single-family, multi-family, and other semi-permanent structure (i.e. mobile homes, manufactured housing, boats, and RVs) units.

The City of Wilmer operates under the Council-Manager form of government. Council-Manager governments function with the City Manager appointed by the Council. The Manager is responsible for the day-to-day management of city activities. The Council sets policy for the city, adopts the annual budget, appoints committee members, and addresses requests from the community. The City Manager then administers the ordinances and

resolutions approved by the City Council. In addition, the City Manager is responsible for all personnel matters in the city and for preparing and submitting an annual budget for Council review.

The City of Wilmer is currently working on a new economic plan that is proposed to be complete by 2030. Its focus encompasses retail, commercial and industrial recruitment and retention, economic diversification, and strategic opportunities for community development.



Internal Planning Process:

The table below lists members of the City of Wilmer Hazard Mitigation Planning Team (HMPT). These individuals collaborated to identify the city's critical facilities, provide relevant plans, report on progress of mitigation actions and provide suggestion for mitigation actions for the City of Wilmer.

Name	Title / Department or Agency	Role
Douglas Jistel	Public Works Director	Submission of Flood Plain Documentation, Hazard Identification, capabilities assessment; Provided guidance on issues such as building codes, land use, and city's critical infrastructure
Renee Revilla	Water Department Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Mark Hamilton	Fire Chief	HMPT Coordinator, Hazard Identification, capabilities assessment
Victor Kemp	Police Chief	Hazard & Plan development, Hazard Identification, capabilities assessment
Connie Sanders	Wilmer Citizen	Hazard & Plan development, Hazard Identification, capabilities assessment

The Hazard Mitigation Planning Team (HMPT) met regular during the planning process data needs and to organize data collection. Sources used to obtain the data needed for the plan are provided in the table below:

Source	Data Incorporation	Purpose
City and County Appraisal Data 2012	Population and demographics	Population counts, parcel data and land use data
Regional Hazard Assessment Tool and Dallas County Local Mitigation Strategy 2009 (DaLMS)	Hazard occurrences	Mapping for all hazards but wildfire
National Climatic Data Center (NCDC)	Hazard occurrences	Previous event occurrences and mapping for all hazards
International Building Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
International Fire Codes, 2009	Local codes and ordinances	Ensure buildings meet applicable mitigation standards
National Dam Inventory	Dam information	High Hazard Dam list

Source	Data Incorporation	Purpose
FEMA DFIRM Flood Zones	Flood Zone Maps	GIS mapping of flood zones

A summary of the HMPT meetings are listed below:

Meeting Dates	Summary of Discussions
0/5/2013	Overview of the Hazard Mitigation Planning Process and understanding of the Planning requirements. Kickoff meeting
08/20/2013	HMPT prepared for HIRA meeting and data compilation. Prepared and forwarded survey and invitation for public input and participation in the planning process to City Secretary to post on City Notice Board. Reviewed the Dallas County HIRA and conducted a risk assessment for the City of Wilmer in respect to the Dallas County HIRA. Identified hazards and estimated potential losses from future hazard events. Identified vulnerable areas in the community. Completed HIRA form
09/29/2013	Review of the Hazard Mitigation Deliverables provided by Dallas County HSEM. Discussed potential mitigation actions to address the identified risks. Agreed on the Mitigation Goals and Objectives. Key staff completed draft capabilities assessment
09/29/2013	Review action items and completed Mitigation Strategy forms. Reviewed public input. Key staff assisted in the development of the first draft of Wilmer's Annex to the HAzMAP. Invited for public comment on the draft plan. Forwarded information to IT department, library and water billing offices to include announcements for public input and participation in the draft annex
02/13/2014	Finalized on action items and updated plan

Public Involvement

In April 2013, an online survey was distributed county-wide to solicit public input regarding the concern for risk to natural hazard events and suggestions for how the county could help minimize the risk. The City of Wilmer notified residents and businesses in the county about the opportunity to participate or provide input during the plan development through their city's website, public notices in their utilities bill as well on the notice boards at City Hall and the Public Library. The notices directed the public to the online survey. The survey was made available in both English and Spanish. Copies of city's outreach materials are included in Appendix Section.

Survey Results Overview

The City of Wilmer made available a public survey that asked a wide range of questions concerning the opinions of the public regarding natural and man created hazards. The survey questions were developed and approved by the Dallas County Hazard Mitigation Working Group. The survey was linked to the Dallas County website and public outreach program was implemented to solicit public input.

A total of seven (7) survey responses were collected, the results of which are analyzed in this section. As has been stated earlier the purpose of the survey was to:

1) Solicit public input during the planning process, and
2) Help the city to identify any potential actions or problem areas.

The majority of the survey respondents from the City of Wilmer identified five hazards that were deemed as most likely to occur in their jurisdiction. These included tornadoes, hail, high winds, and drought as the hazards that were rated the most likely to occur (had an average rating of above 3.00) and have the highest impact on the community. Overall the Wilmer Hazard Mitigation Planning Team determined that all these hazards identified by the community were significant and matched to a large extent the planning considerations of the team. The responses regarding hazard concern will help the city improve messaging and outreach efforts regarding realistic risk of these hazards.

The results of the survey provide valuable information for the City of Wilmer hazard mitigation efforts. These responses may be used as a bench mark for future measurements of improvement. The survey allowed the city an opportunity to expand the list of stakeholders. As the city continues to increase awareness of hazard mitigation, the suggested stakeholders will be considered for involvement in future mitigation planning discussions.

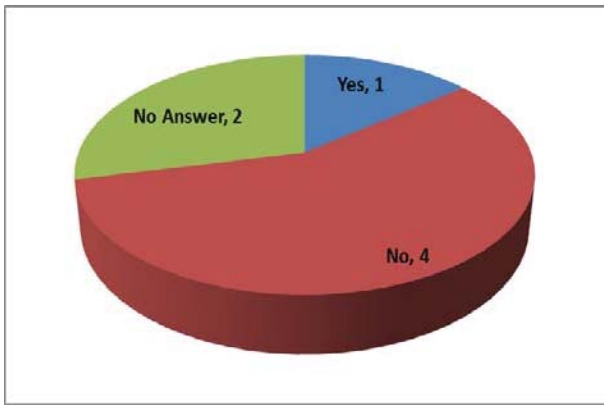
The City of Wilmer will consider the recommendations provided by the survey respondents regarding how the local government can help residents prepare for an event, throughout the life of this plan and prioritize those that can be implemented efficiently and effectively.

A summary of the survey results are depicted below showing the responses and the number of respondents for each answer. Detailed responses to the survey are provided in Appendix C-2 of this annex.

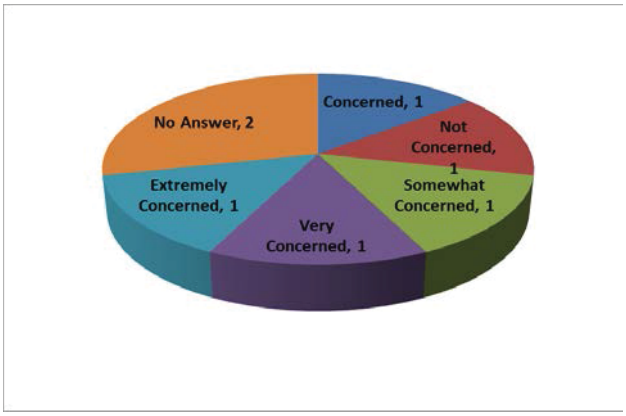
Survey Summary

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.
    - ✓ City of Wilmer (7 responses)

2. Have you ever experienced or been impacted by a disaster?



3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?



4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

✓ Unlikely ✓ Likely
✓ Occasional ✓ Highly Likely

	Unlikely	Occasional	Likely	Highly Likely	Skipped	Total Answered	Average Rating
Earthquake	4	0	0	0	3	4	1
Tornado	0	2	1	2	2	5	3
Hail	0	2	0	2	3	4	3
High Winds	0	1	1	3	2	5	3.4
Winter Storms	1	1	0	2	3	4	2.75
Summer Heat	0	0	2	2	3	4	3.5
Drought	0	1	2	2	2	5	3.2
Flooding	2	0	2	0	3	4	2.00
Dam Failure	5	0	0	0	2	5	1.0
Stream Bank Erosion	3	0	1	0	3	4	1.5
Levee Failure	3	0	0	0	4	3	1

5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

✓ Limited ✓ Minor
✓ Major ✓ Substantial

	Limited	Minor	Major	Substantial	Skipped	Total Answered
Earthquake	2	1	1	0	3	4
Tornado	0	0	2	2	3	4
Hail	0	2	0	2	3	4
High Winds	0	0	1	3	3	4
Winter Storms	0	2	0	2	3	4
Summer Heat	0	1	1	2	3	4
Drought	0	1	1	2	3	4
Flooding	0	2	1	1	3	4

	Limited	Minor	Major	Substantial	Skipped	Total Answered
Dam Failure	3	1	0	0	3	4
Stream Bank Erosion	1	3	0	0	3	4
Levee Failure	3	1	0	0	3	4

6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?

   - ✓ Yes (0)
   - ✓ No (5)
   - ✓ Skipped (2)

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	3
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	5
Implement the Texas Individual Tornado Safe Room Rebate Program:	4
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	4
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	5
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	2
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	4
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	3
Total Respondents:	7

List any other strategies you think should be included in the plan:

- ✓ No Responses

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ No Responses

Public Review Period

On December 7, 2014 the City of Wilmer announced the availability of the City of Wilmer Annex Draft plan as part of the Dallas County HazMAP Update for public review and comment. A public announcement was posted on the Notice Board at City Hall where other public notices and announcements are posted. The notice invited the public to provide input into both the Dallas County Base Plan and the City of Wilmer Annex Draft Plan and provided 14 day public review and comment period. Hard Copies of the Plans and Comment Forms were placed in the Foyer of City Administration Building for the public to review and comment. Invitations were also made to various external stakeholders via email these included Emergency Management Coordinators for Ellis County and the City of Hutchins. These invitations were emailed and access to the plan was also provided for these parties.

The public were encouraged to submit comments prior to December 31, 2013 for consideration and possible incorporation into this draft.

The public comments were directed to the Chief Mark Hamilton, the Fire Chief and Emergency Management Coordinator for the City of Wilmer and Michael Gaciri, Hazard Mitigation Specialist with Dallas County Office of Homeland Security and Emergency Management.

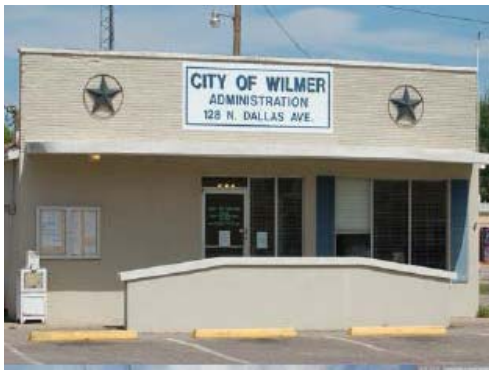
It was indicated that any comments received after the review process will be catalogued for consideration in future updates.

Capability Assessment:

The City of Wilmer identified current capabilities and mechanisms available for implementing hazard mitigation activities. The administrative and technical capacity section includes a summary of departments and their responsibilities associated with hazard mitigation planning as well as codes, ordinances, and plans already in place associated with hazard mitigation planning.

The key departments in the City of Wilmer that are responsible for hazard mitigation activities in the city include:

- ✓ City Mayor
- ✓ City Administrator
- ✓ Fire Department
- ✓ Public Works
- ✓ Water Department
- ✓ Police Department



The City Council for the City of Wilmer including the mayor and councilmembers has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

Summary of Capabilities

The tables below identify the current capabilities in the City of Wilmer.

Planning and Regulatory

Plans	Yes/No Year	Does the plan Address hazards? Does the plan identify projects to include in the mitigation Strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes	A Community Plan was adopted in 2009 Yes Yes Yes
Capital Improvements Plan	Yes 2010	Yes Yes Yes
Economic Development Plan	Yes	No No Yes
Local Emergency Operations Plan	Yes	Yes No Yes
Continuity of Operations Plan	Yes	No No No
Transportation Plan	No	N/A
Storm water Management Plan	Yes	Yes Yes Yes
Community Wildfire Protection Plan	No	N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	N/A	N/A

Building Code, Permitting, and Inspections	**Yes / No**	
Building Code	Yes	**Version / Year:** 2003 International Building Code
Building Code Effectiveness Grading Schedule (BGEGS) Score	No	**Score:**
Fire Department ISO rating	Yes	**Rating:** 6
Site Plan review requirements	Yes	Yes
Land Use Planning and Ordinances	**Yes / No**	**Is the ordinance an effective measure for reducing hazard impacts?** **Is the ordinance adequately administered and enforced?**
Zoning ordinance	Yes	No Yes
Subdivision ordinance	Yes	No Yes
Floodplain ordinance	No	Yes Yes
Natural hazard specific ordinance (storm-water, steep slope, wildfire)	Yes	Yes
Flood insurance rate maps	No	
Acquisition of land for open space and public recreation uses	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Enforce best practices fire and building codes and obtain the BGEGS score for the city		

Administrative and Technical

Administration	**Yes / No**	**Describe capability Is coordination effective?**
Planning Commission	Yes	Yes, the commission meets as needed
Mitigation Planning Committee	Yes	Yes
Maintenance programs to reduce risk (e.g., tree trimming , clearing drainage systems)	Yes	
Mutual aid agreements	Yes	
Staff	**Yes / No FT / PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Yes Consultant	
Floodplain Administrator	Yes	No No No
Emergency Manager	Yes	No Yes Yes
Community Planner	Yes; PT Consultant	No Yes Yes
Civil Engineer	Yes; PT Consultant	
GIS Coordinator	No	
Other		
Technical	**Yes / No**	**Describe capability Has capability been used to assess / mitigate risk in the past?**
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Emergency Sirens
Hazard data and information	No	
Grant writing	No	
HAZUS analysis	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

Financial

Funding Resources	Access / Eligibility (Yes / No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas or electric services	Yes	
Impact fees for new development	Yes	
Storm water utility fee	Yes	
Incur debt through general obligation bonds and/or special tax bonds	No	
Incur debt through private activities	Yes	
Community Development Block Grant	No	
Other federal funding programs		
State funding programs		
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

The City's administration plays a crucial component to managing the financial aspect of implementing mitigation actions.

Education and Outreach

Program / Organization	Yes / No	Describe program / organization and how relates to disaster resilience and mitigation. Could the program / organizations help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Environmental Protection
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	No	
Natural disaster or safety related school programs	No	
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Hire more staff and increase budget funding		

Safe Growth Audit

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	✓	
See land use map for the City of Wilmer		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	✓	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	✓	
Transportation		
1. Does the transportation plan limit access to hazard areas?	✓	
2. Is transportation policy used to guide growth to safe locations?	✓	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	✓	
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	✓	
The City of Wilmer does have portions of the Dallas County Open Space Program. The City has mapped out these areas and has them protected from development		
2. Do environmental policies maintain and restore protective ecosystems?	✓	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?		✓

Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	✓	
2. Is safety explicitly included in the plan's growth and development policies?	✓	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?		✓
Zoning Ordinance	**Yes**	**No**
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	✓	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	✓	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	✓	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	✓	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	✓	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	✓	
3. Do the regulations allow density transfers where hazard areas exist?	✓	

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	✓	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	✓	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?	✓	
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	✓	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	✓	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	✓	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?		✓

Questions adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association. http://www.planning.org/zoningpractice/open/pdf/oct09.pdf.

As noted earlier in this annex, the City Council for the City of Wilmer including the mayor and councilmembers, has the ability to implement and approve mitigation actions, expand existing mitigation actions, and integrate mitigation into existing policies and programs. Actions that expand and improve existing authorities, plans, policies, and resources including mitigation include budgeting and passing policies and procedures for mitigation actions, adopting stricter mitigation regulations, approving the hiring and training of staff for mitigation activities, and approving mitigation updates and additions to existing plans.

National Flood Insurance Program (NFIP)

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	According to information provided by the Texas Water Board Authority there are two NFIP policies in the City of Wilmer. The total premium paid on these properties in $2,239
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	The have been only one claim made in the city of will and it was closed without any payment
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	Could not be determined. This is a potential mitigation item
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Could not be determined. This is a potential mitigation item
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	Community FPA	Yes, The City Engineer
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Reviews and approves permits. Inspects and ensures compliance of any development taking place within the designated flood zone
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	None
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?		None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		The community has never had a CAV
Is a CAV or CAC scheduled or needed?		No

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book	09/17/1980
Are the FIRMs digital or paper?	Community FPA	Paper & digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	The floodplain developments meet and exceed the FEMA requirements
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual EMA CRS Coordinator, ISO representative CRS manual	See NFIP table in this annex section
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	NO
What is the community's CRS Class Ranking?	Flood Insurance Manual	N/A
What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative CRS manual	N/A

Hazard Assessment and Risk Assessment:

The conclusion drawn by City of Wilmer HMPT resulted in the classification of risk for each of the hazards identified in Section 5 of this plan into four categories: High Risk, Moderate Risk, Low Risk and No Risk. The rate risk rating was determined using the HIRA and the Risk Priority Ranking. The categories for City of Wilmer are as follows:

High Risk (over 65% on HIRA)	High Winds Tornado
Moderate Risk (41%- 65% on HIRA)	Hail Winter Storms Extreme Heat Flooding Wildfire
Low Risk (12 %-40% on HIRA)	Dam/Levee Failure Drought Lightning Stream Bank Erosion Earthquake
No Risk (Below 12% on HIRA)	

Only three hazards of the hazards identified in this plan, were determined to have specific or unique vulnerability and impact for the city. These included flooding, wildfire and dam/levee failure.

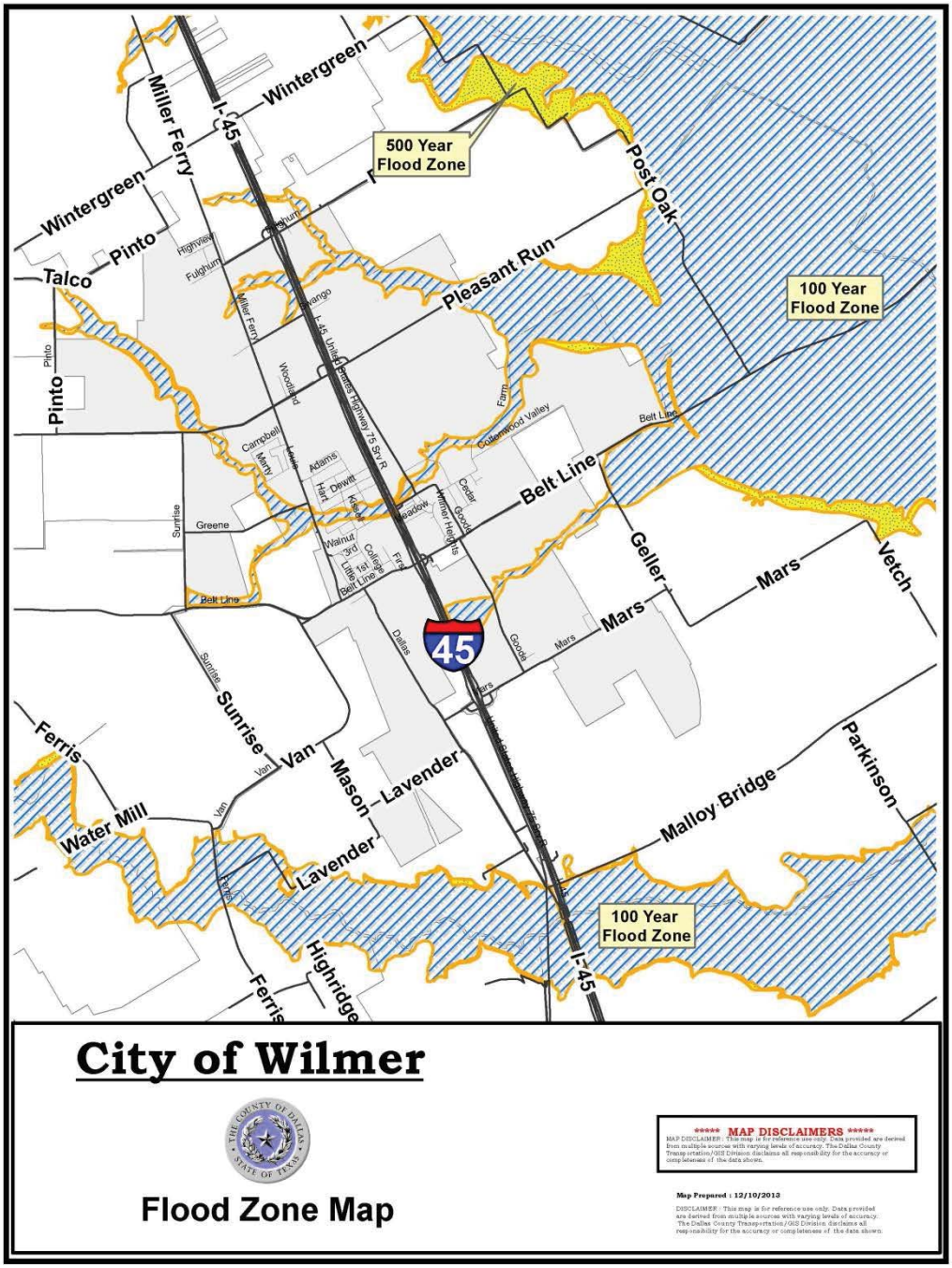
Most of the other hazards detailed in Section 5 of the Base Plan of this plan i.e. tornados, high winds, hail, extreme heat, winter storms, drought and lightning are all applicable to the entire planning area of Dallas County including the City of Wilmer. This is because these hazards are not geographically specific and can occur anywhere. There are no unique areas of vulnerabilities as in the case of flooding, wildfire and dam/levee failure hazards.

Below hazard and risk assessment discussion of the hazards identified as having unique vulnerability areas in Wilmer**.**

A. Flooding: The City of Wilmer is one of the communities that are part of the Ten Mile/Red Oak Creeks Watershed. The City of Wilmer initially joined the Federal Emergency Management Agency (FEMA) National Insurance Flood Program in September, 1980. The initial Flood Hazard Boundary Map (FHBM) was identified in February 1974.

The 100 year floodplain throughout the City of Wilmer provides both opportunities and challenges for future development and infrastructure planning as well as natural resource preservation. This is because the city is adjacent to the Trinity River. Other tributaries that run through the city include Cotton Creek tributary of Ten Mile Creek run through the City of Wilmer. There is a data deficiency in regards to flooding and inundation in the city's streets and a flood protection study can be conduct to determine the most appropriate mitigation actions. **Map CW.1** depicts the floodplain Map for the City of Wilmer.

Map CW.1: City of Wilmer FEMA Floodplain

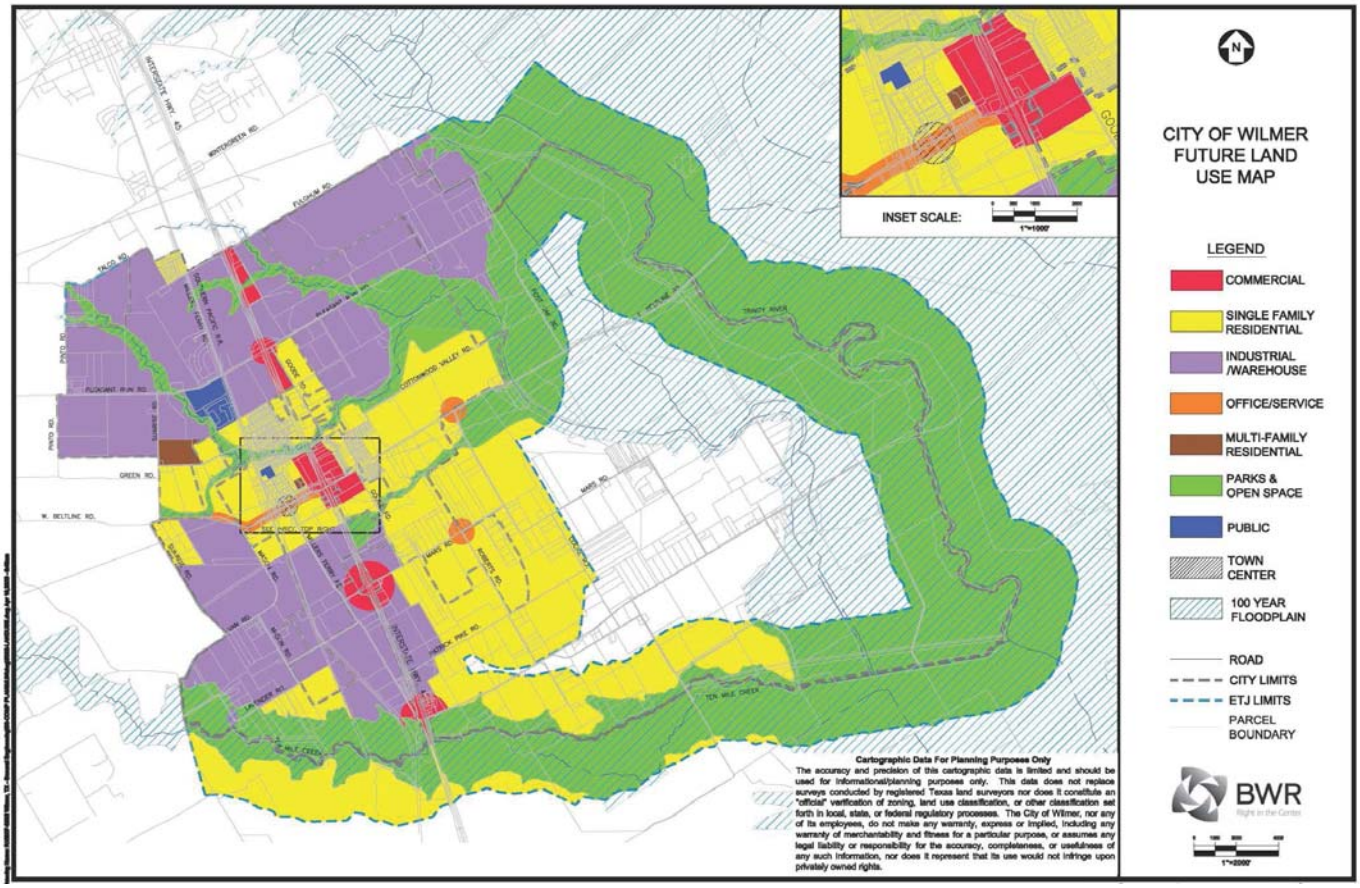


As has been indicated, the City of Wilmer participates in the National Flood Insurance Program and has identified their respective areas as vulnerable to flooding. It is complaint with NFIP requirements and has no outstanding issues. The City also does not have any repetitive loss or severe repetitive loss properties. See Table 5.8.1

Using this plan the City of Wilmer will be able to continue their compliance with NFIP by implementing damage control measures and take action to minimize the effects of flooding.

Jurisdiction	Community Floodplain Administrator	NFIP Activity	Activity Description	Enforcement
City of Wilmer	Floodplain Administrator	Complete and maintain FEMA elevation certificates for pre-FIRM and or post-FIRM buildings	Permits are issued through the Department of Planning and Building Inspection. The City of Wilmer requires-2 feet of freeboard above the base flood elevation for the top of bottom floor on residential structures and elevation certificate document non-residential structures requires 2 feet of free board above the Base Flood Elevation or Flood Proof Certificate Document that will be built on properties created or platted after the effective date of the Flood Damage Prevention Ordinance.	NFIP compliance is implemented and enforced through a process of floodplain identification using FEMA floodplain maps, permit issuance, building requirements, and compliance inspections pending approval. Failure to comply with the city requirements may be fined in accordance with the Texas Water Code for each violation per day.
		Floodplain development permits	Permits are required for any new construction in a floodplain.	
		Take action to minimize the effects of flooding on people, property, and building.	Public Works (City Road and Street Operations) department installs signs at low water crossings that indicate "When flooded turn around don't drown".	

City of Wilmer Future Land Use Map

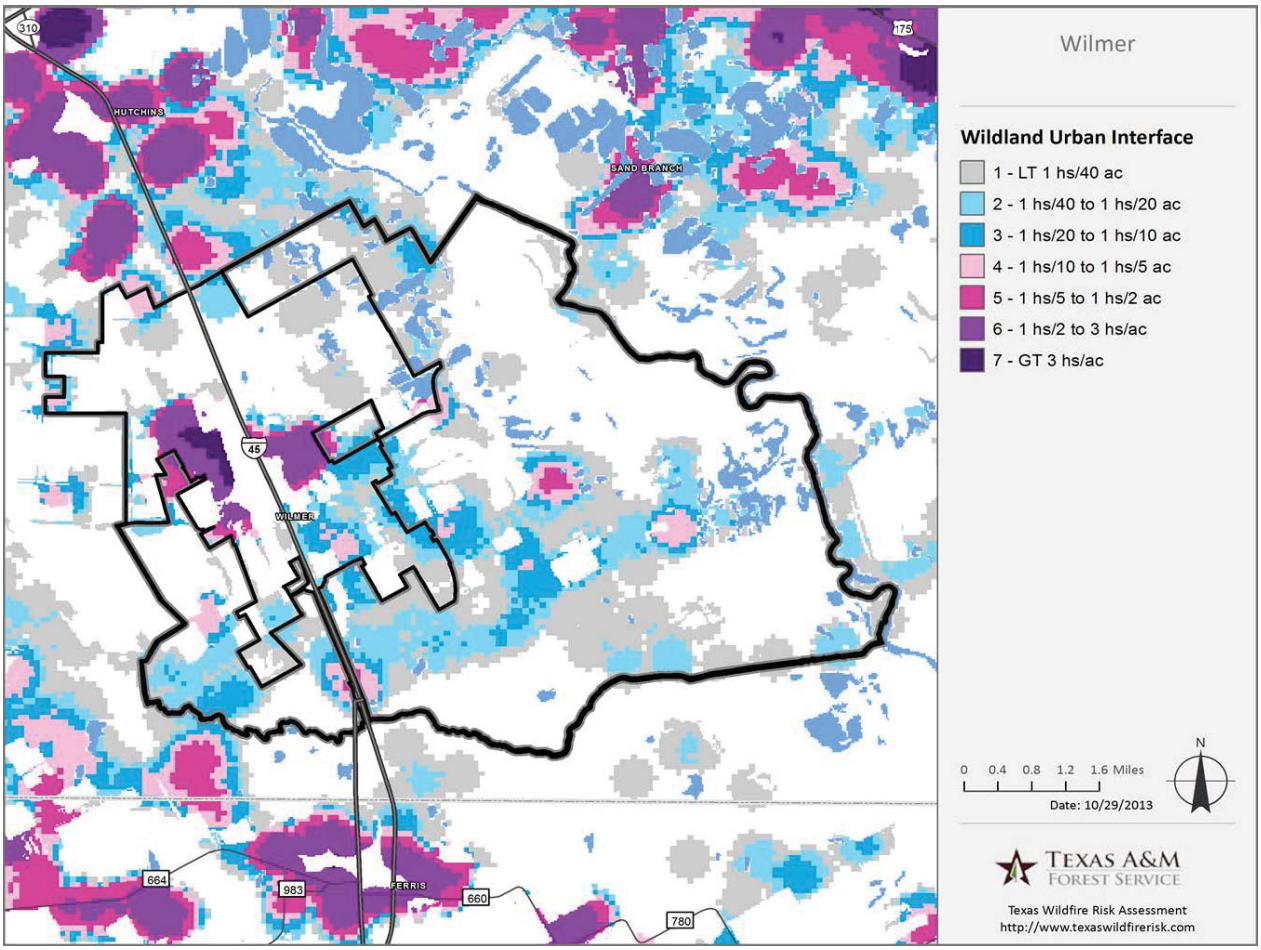


Source: Wilmer Community Plan 2030 - http://www.cityofwilmer.net/uploads/City_Of_Wilmer_Texas_Community_Plan_2030.pdf

B. Wildland Urban Interface (WUI): Texas is one of the fastest growing states in the Nation, with much of this growth occurring adjacent to metropolitan areas. This increase in population across the state will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire. In Texas nearly 85 percent of wildfires occur within two miles of a community.

According to the Texas A&M Forest Service an estimated 2,509 people or 61 percent of the total project area population (4,121) live within the WUI. **Map CW 1** depicts the Wildland Urban Interface (WUI) for the City of Wilmer.

Map CW 1: City of Wilmer Wildland Urban Interface



The wildfire threat for the City of Wilmer ranges from Non-Burnable to Low. This is according to the vulnerability assessment conducted using the Texas Wildfire Risk Assessment Tool (TxWRAP) developed by the Texas Forest Service.

Wildfire threat is the likelihood of a wildfire occurring or burning into an area. Threat is derived by combining a number of landscape characteristics including surface fuels and canopy fuels, resultant fire behavior, historical fire occurrence, percentile weather derived

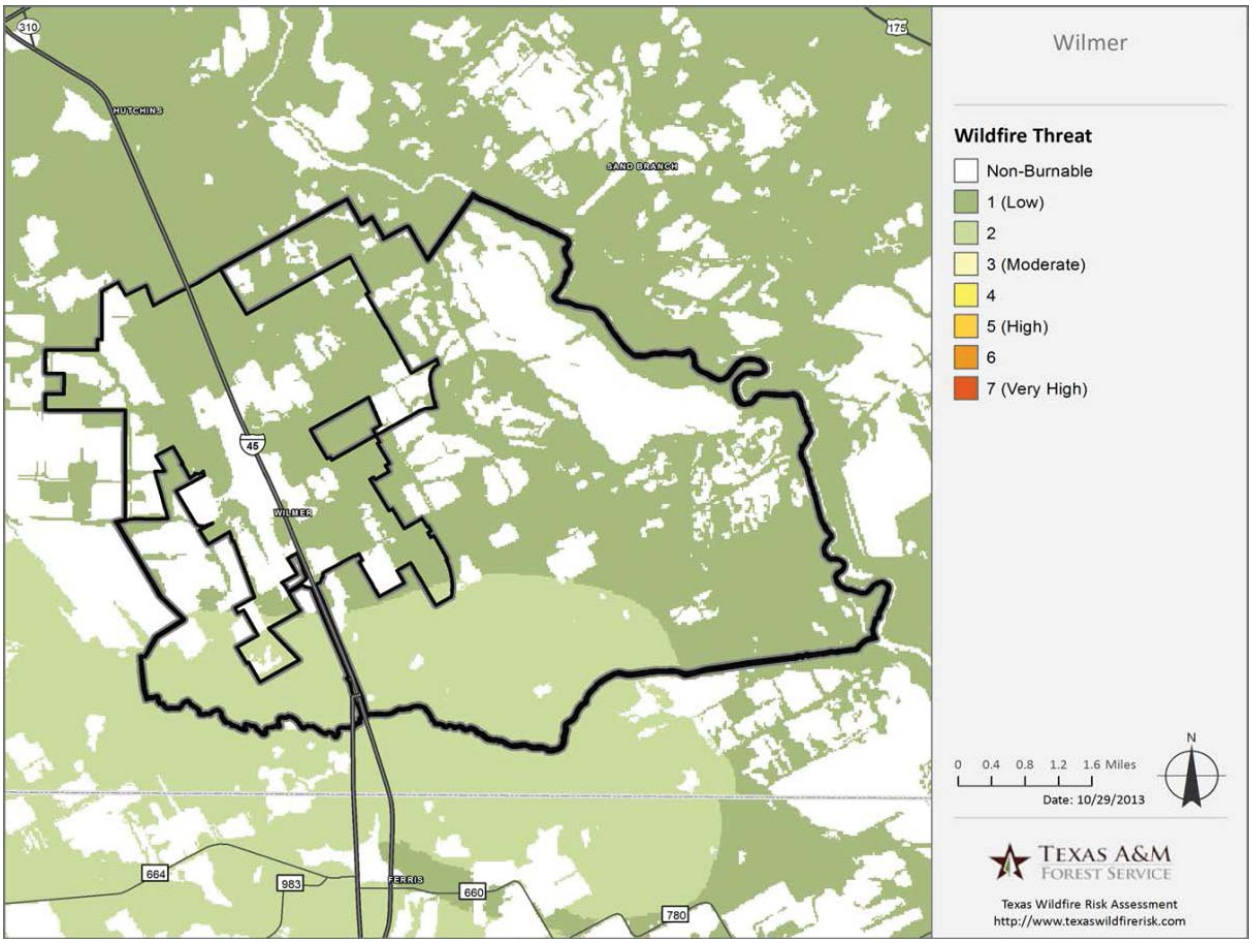
from historical weather observations, and terrain conditions. These inputs are combined using analysis techniques based on established fire science.

The measure of wildfire threat used in the Texas Wildfire Risk Assessment (TWRA) is called Wildland Fire Susceptibility Index, or WFSI. WFSI combines the probability of an acre igniting (Wildfire Ignition Density) and the expected final fire size based on rate of spread in four weather percentile categories. WFSI is defined as the likelihood of an acre burning. Since all areas in Texas have WFSI calculated consistently, it allows for comparison and ordination of areas across the entire state. For example, a high threat area in East Texas is equivalent to a high threat area in West Texas.

To aid in the use of wildfire threat for planning activities, the output values are categorized into seven (7) classes. These are given general descriptions from Low to Very High threat.

The wildfire threat **Map CW2** is derived at a 30 meter resolution in order to maintain consistency with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site-specific analysis, this resolution is appropriate for regional, county or local mitigation or prevention planning.

Map CW2: City of Wilmer Wildfire Threat



C. Dam and Levee Failure: Even though there are no dams or levees within the City of Wilmer, it is assumed that breaches or overflows from the Ten Mile Creek Dam in Unincorporated Dallas County and the Bois D'Arc Island Levee in Kaufman County, adjacent jurisdictions, could affect the City of Wilmer. The inundation maps of these dams are not available and it could not be determined at the time of writing this plan, what impact failure of these dams would have on the City of Wilmer. A data deficiency in the inundation areas affect has been recognized and action items have been identified accordingly.

D. Earthquake: Earthquakes in Wilmer is considered as a low risk threat. Earthquakes have only been recently recorded in Dallas County. To date there have been no injuries or fatalities or major damage recorded. The magnitudes experienced in Dallas County are considered minor only felt by humans but do not cause damage. Additionally there is data deficiency for earthquakes in Dallas County and will need to be researched and studied.

There are no known active geological faults within Wilmer and high magnitude earthquakes are considered a low risk threat. No historical data of earthquakes in the City of Wilmer exists.

E. Stream Bank Erosion: The City of Wilmer has at least 4 main streams these include Cottonwood Creek of Tenmile Creek, Stream 4A1, Stream 4A5 and Tenmile Creek. While there has been a stormwater assessment conducted on these mentioned streams, no stream bank erosion study or assessment has been conducted. The City of Wilmer participates in the North Central Texas Council of Governments (NCTCOG) Regional Stormwater Management Program. The program brings together regional partners seeking to implement a cooperative and comprehensive program to manage stormwater quality issues affecting the region. One of the programs is the *integrated Stormwater Management* (iSWM™) Program for Construction and Development. The iSWM Program for Construction and Development is a cooperative initiative that assists cities and counties to achieve their goals of water quality protection, stream bank protection, and flood mitigation, while also helping communities meet their construction and post-construction obligations under state stormwater permits

There is currently a data deficiency for Stream Bank Erosion in Dallas County including the City of Wilmer. Conducting a study on the effectiveness of this program and getting a better understanding of the stream inventories in an effort to identify and prioritize future drainage utility needs would be helpful. Since stream bank erosion occurs largely over time and can be exacerbated by a variety of factors, additional data gathering and studies must occur to determine the extent of loss in inches and/or feet.

Vulnerability Assessment

Base on the vulnerability assessment methodology conducted in Section 5 of the base plan, the tables below provide a jurisdictional specific analysis summary of the vulnerable assets, critical and essential infrastructure for the City of Wilmer. To identify the assets and vulnerable assessment the following five categories of vulnerable assets were used:

- ✓ **Population**: Includes the number of people residing in Dallas County as delineated by U.S. Census 2010 block data provided by NCTCOG population estimates
- ✓ **Improved property**: Includes all developed properties according to local parcel data from the Dallas County Central Appraisal District. The information has been expressed in terms of the total assessed value of improvements that may be exposed to the identified hazards.
- ✓ **Emergency facilities**: Includes fire stations, police stations and hospitals, provided by the Regional Hazard Assessment Tool (RHAT) and participating jurisdictions.
- ✓ **Critical facilities**: Includes schools and historic places provided by Regional Hazard Assessment Tool and participating jurisdictions. These are non-emergency facilities, but still provide critical services and functions for vulnerable sectors of the population.
- ✓ **Critical infrastructure**: Includes airports, natural gas facilities, wastewater facilities, portable water treatment facilities, wastewater treatment facilities, dams, and bridges. Data for all critical facilities was obtained from Regional Hazard Assessment Tool and participating jurisdictions

Drought	
Population	According to National Climatic Data Center (NCDC) no injuries or fatalities have been recorded for drought events. The entire population in the city is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses due to drought have been reported. All improved property is exposed to this hazard.
Emergency Facilities	No losses or direct impacts expected on emergency facilities due to drought events.
Critical Facilities	No losses or direct impacts expected on critical facilities due to drought events.
Critical Infrastructure	There are no losses or direct impacts expected on critical infrastructure due to drought events.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Wilmer. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Wilmer.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Wilmer.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Wilmer.

Winter Storm	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from winter storms. The entire population in the city is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses has been reported in City of Wilmer due to winter storm events. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of winter storms, all emergency facilities in Wilmer are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of winter storms, all critical facilities in Wilmer are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of winter storms, all critical infrastructures in Wilmer are exposed to this hazard.

Extreme Heat	
Population	According to National Climatic Data Center (NCDC), no injuries or fatalities have been recorded due to extreme heat in Wilmer. The population is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to developed areas and the improved property.
Emergency Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings and the emergency facilities in Wilmer.
Critical Facilities	According to National Climatic Data Center (NCDC), there is **no** impact of extreme heat to buildings, and the critical facilities in Wilmer.
Critical Infrastructure	According to National Climatic Data Center (NCDC there is no impact of extreme heat to critical infrastructure, and exposure to this hazard is considered minimal in Wilmer.

High Wind	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities from high wind events. All the population of City of Wilmer is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop damage has been recorded due to high wind events in the City of Wilmer. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of high winds, all emergency facilities in Wilmer are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of high winds, all critical facilities in Wilmer are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of high winds, all critical infrastructures in Wilmer are exposed to this hazard.

Lightning	
Population	According to National Climatic Data Center (NCDC), no deaths or injuries in City of Wilmer have been recorded. All the population of Dallas County is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), there have been no recorded property or crop losses resulting from lightning in the City of Wilmer. All improved property is exposed to this hazard.
Emergency Facilities	Because of the expected geographical widespread nature of lightning, all emergency facilities in Wilmer are exposed to this hazard.
Critical Facilities	Because of the expected geographical widespread nature of lightning, all critical facilities in Wilmer are exposed to this hazard.
Critical Infrastructure	Because of the expected geographical widespread nature of lightning, all critical infrastructures in Wilmer are exposed to this hazard.

Tornado	
Population	According to National Climatic Data Center (NCDC), there have been no recorded injuries or fatalities from tornado events in the City of Wilmer. All the population of City of Wilmer is exposed and vulnerable to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or crop losses have been reported from tornados in the City of Wilmer. All improved property is exposed to this hazard.
Emergency Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all emergency facilities in Wilmer are exposed to this hazard.
Critical Facilities	Because of the impossibility to predict the geographical area of impact for tornados, all critical facilities in Wilmer are exposed to this hazard.
Critical Infrastructure	Because of the impossibility to predict the geographical area of impact for tornados, all critical infrastructures in Wilmer are exposed to this hazard.

Hail	
Population	According to National Climatic Data Center (NCDC), no recorded injuries or fatalities have been recorded for hailstorm events. All the population of City of Wilmer is exposed to this hazard.
Improved Property	According to National Climatic Data Center (NCDC), no property or loss damage was reported for City of Wilmer. All improved property is exposed to this hazard. Although some crops are susceptible to hail hazards, available historical data for Wilmer indicates that there are no expected crop losses from this event.
Emergency Facilities	Because of the unpredictability of the geographical location of hailstorms, all emergency facilities in Wilmer are exposed to this hazard.
Critical Facilities	Because of the unpredictability of the geographical location of hailstorms, all critical facilities in Wilmer are exposed to this hazard.
Critical Infrastructure	Because of the unpredictability of the geographical location of hailstorms, all critical infrastructures in the City of Wilmer are exposed to this hazard.

Wildfire	
Population	Based on geographical data 61% of the population in City of Wilmer who live in the WUI areas.
Improved Property	Based on geographical data, no wildfires have been reported during the review period though no property or crops a loss were reported. All improved properties in the WUI areas are exposed to this hazard.
Emergency Facilities	Based on geographic information there are no fire stations at risk from wildfire events.
Critical Facilities	Based on geographic information there are zero schools at risk from wildfire events.
Critical Infrastructure	Based on geographic information there are no bridges, dams, wastewater treatment facility, or water treatment facility at risk from wildfire events.

Flooding	
Population	No fatalities and injuries have been reported due to flooding.
Improved Property	No property or crop loss due to flooding has been reported. There are no valued of improvements to the City of Wilmer area at risk from the 100-year storm event.
Emergency Facilities	There are no emergency facilities at imminent risk from the 100-year storm event.
Critical Facilities	There are no critical facilities located within the 100-year storm event.
Critical Infrastructure	There is no critical infrastructure located within the 100-year storm event.

Note: The period under review is from January 1, 2008 through November 30, 2013.

The tables below provide a summary inventory of the critical and essential infrastructure for the City of Wilmer.

Essential Infrastructure Summary Report for the City of Wilmer:

Essential/Critical Facilities	Locations (GIS Coordinates)	Count
Schools	211 S. Dallas Ave.	1
Police Stations	219 E. Beltline Rd.	1
Fire Stations	220 First St.	1
Emergency Operations Facilities	219 E. Beltline Rd.	1
Water Treatment Facility	1430 E. Malloy Bridge Circle.	1
Atmos Natural Gas Pipeline Pump Station	400 E. Beltline Rd.	1

Structure/Property and Flood Vulnerability

Category of Property in Jurisdiction	No. of Parcels	Total Value of Properties	FEMA Flood Zone 100 or 500	Flood Overlay Zone Within/Outside
Residential	25	$1,175,000.00	100	Within
Commercial	3	$1,000,00.00	100	Within
Industrial	-	N/A	N/A	Within
Government / Public	4	$ 100,000	100	Within

Structure / Property and Wildfire Vulnerability

Category of Property in Jurisdiction	Total Value of Properties	Fire Severity Zone Within / Outside	WUI Zone Within / Outside	Fire Threat Low / Moderate / High
Residential	$140,012,540	Outside	61% of the population in the City of Wilmer live within the WUI	Low
Commercial	$39,374,160	Outside	Within the WUI	Low
Industrial	-	-	-	-
Government / Public	-	-	-	-

Mitigation Strategies

Based on the results of the risk and capability assessments, the Dallas County Hazard Mitigation Planning Team developed a mitigation strategy for the plan update utilizing the results of both assessments as well as reviewing the goals and objectives that were included in the 2009 HazMAP. These strategies were similar to the goals identified in Section 6 by the Dallas County Hazard Mitigation Action Plan Working Group.

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ ***Objective 1-A***: Continue to enforce building codes and ordinances where applicable to ensure structures are more disaster resistant
- ✓ ***Objective 1-B***: Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ ***Objective 1-C***: Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ ***Objective 2-A:*** Identify areas where repetitive damages occur during chronic hazard events
- ✓ ***Objective 2-B:*** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ ***Objective 2-C:*** Expand and coordinate Early Warning Systems currently in use.

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ ***Objective 3-A:*** Provide public education materials to residents and private sector
- ✓ ***Objective 3-B:*** Encourage private sector participation in future mitigation efforts
- ✓ ***Objective 3-C***: Encourage public participation in future mitigation efforts
- ✓ ***Objective 3-D:*** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards

- ✓ ***Objective 4-A:*** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in the City of Wilmer

- ✓ ***Objective 5-A*:** Continue partnerships within the Hazard Mitigation Planning Team and other partners to enhance mitigation planning efforts
- ✓ ***Objective 5-B:*** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ ***Objective 5-C*:** Promote land use for public recreation

Action Items

Below is a list of the new actions items identified for the HazMAP update. Each of the actions in this section were prioritized based on FEMA's STAPLE+E criteria, which includes considering the social, technical, administrative, political, legal, economic and environmental factors necessary for the implementation of each action. As part of the STAPLE+E analysis economic considerations were weighed for each action. The action items that were said to be ongoing or deferred in the previous HazMAP were included as action items in the updated plan. The new actions items are as follows:

City of Wilmer Action Item	Work with Dallas County and other jurisdictions in Dallas County and participate in an earthquake study to help determine the levels of risk and mitigation strategies
Objective(s) Addressed	4-A
Hazard(s) Addressed	Earthquake
Priority (High, Medium, Low):	Low
Estimated Cost	$100,000
Potential Funding Sources	Grant funds received from the Hazard Mitigation Grant Program or other sources; County Budget;
Lead Agency/Department Responsible	Public Works in collaboration with Dallas County and other jurisdictions in Dallas County
Implementation Schedule	Within 24 months of approval and receipt of funding.
Effect on Old Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Effect on New Buildings	The study will not have any effect on buildings. However, the findings from the study may result in changes in the building and infrastructure
Cost Effectiveness	An effective study will lead to savings of lives and property and infrastructure. This is a very cost effective
Discussion	As noted in Section 5, there is a deficiency in earthquake data for Dallas County as earthquakes have only been experienced (recorded) since 2008. The magnitudes of these earthquake events are considered minor. While not injuries no injuries, fatalities or major damage recorded to date, there is still a need to conduct studies and collect data so as to obtain the information and data needed to make the most appropriate decision

City of Wilmer Action Item	Develop a Weatherization Assistance Program (WAP) similar to that of Dallas County
Objective(s) Addressed	4-B
Hazard(s) Addressed	Extreme Heat and Winter Weather
Priority (High, Medium, Low):	High
Estimated Cost	$50,000
Potential Funding Sources	Bond funding, general fund expenditures, and/or private, federal and state grant funds
Lead Agency/Department Responsible	Code Enforcement and Health Services
Implementation Schedule	As funding is made available
Effect on Old Buildings	Provides qualified families with an energy audit and installation of weatherization measures to increase their home's energy efficiency
Effect on New Buildings	No effect on buildings
Cost Effectiveness	The Weatherization Assistance Program helps low-income families; particularly the elderly, disabled and persons will special needs in controlling their energy costs by promoting conversation. This program saves lives especially during extreme weather conditions. It is a very cost effective
Discussion	The Weatherization Assistance Program (WAP) would provide assistance to income eligible households by weatherizing their homes, conserving energy and reducing high utility costs in the process. Eligible applications will be considered for assessments. Each dwelling will be assessed and audited before any work begins. The program could also equips homes with weather stripping, caulking, insulation, repaired or new doors and windows, solar screens, repaired or retrofitted heating and cooling units and duct work.

City of Wilmer Action Item	Install backup generators UPS systems to all city facilities that house critical infrastructure and equipment
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, winter storm, hail, earthquake, lightning
Goal/Objective	4-A, 4-B, 4-C
Priority	Mid
Estimated Cost	$120,000.00
Potential Funding Sources	Urban Area Security Initiative, HMGP, city budget
Potential Matching Sources	Additional Grant Programs
Lead Department	Wilmer Fire Department
Implementation Schedule	Within 6-12 months of funding being approved.
Effect on Old Buildings	Has no effect on structures.
Effect on New Buildings	Has no effect on structures.
Cost Effectiveness	The cost of installing the equipment is low compared to the benefits of the program
Discussion	Installing generators will help mitigate on those hazards that affect the power grid. This will help ensure that critical equipment and facilities are not compromised in the event of a hazard event.

City of Wilmer Action Item	Implement the Texas Safe Room Rebate Program to provide safe room programs to the residents of Wilmer
Hazard(s) Addressed	Tornado, High Winds
Goal/Objective	1-C, 2- A, and 4-C
Priority	Medium
Estimated Cost	50% (up to) $3,000 per shelter
Potential Funding Sources	Mitigation programs, County budget, City Budget, HMGP, PDM, Homeowner, Work-in-kind
Potential Matching Sources	Business donations
Lead Department	City of Wilmer Fire Department, Department of Building and Code
Implementation Schedule	Within one year of funds being approved
Effect on Old Buildings	Provides residents of existing building better access to safe shelters during severe weather
Effect on New Buildings	Provides safe shelter in new building during severe weather
Cost Effectiveness	Loss of life can be prevented through this program.
Discussion	The majority of funds will be used as direct rebates to residents and builders up to $3,000 possible rebates

City of Wilmer	Develop and implement a comprehensive public education and outreach program
Hazard(s) Addressed	Tornado, wildfire, extreme heat, high wind, flooding, drought, winter storm, hail, earthquake, lightning, dam/levee failure, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$10,000.00
Potential Funding Sources	Urban Area Security Initiative, State and Federal Grant Funds
Potential Matching Sources	Budget, Donations
Lead Department	City of Wilmer Fire Department
Implementation Schedule	1 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	Educate the public on potential hazards they may face and also set a realistic understanding of what will be provided and when. This program will include information on natural hazard mitigation programs and private mitigation projects

City of Wilmer	Buyout of remaining structures that are in the floodplain
Hazard(s) Addressed	Flooding
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	High
Estimated Cost	$1.5 Million
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Wilmer Administration, Public Works, Building and Code Departments
Implementation Schedule	1 Year
Effect on Old Buildings	Remove old structure
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	

City of Wilmer	Conduct Stream Bank Erosion Studies: Conduct a study to identify the vulnerability to stream bank erosion. Identify cost-effective action items
Hazard(s) Addressed	Flooding, stream bank erosion
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	Medium
Estimated Cost	$30,000.00
Potential Funding Sources	State and Federal Grant Programs
Potential Matching Sources	Budget, Donations
Lead Department	Public Works, Building and Code Departments
Implementation Schedule	2 Year
Effect on Old Buildings	This has no direct effect on structures.
Effect on New Buildings	This has no direct effect on structures.
Cost Effectiveness	This is extremely cost effective.
Discussion	As noted in this annex, there is a data deficiency when it comes to stream bank erosion. Conducting studies will help develop a database to track the community's vulnerability to stream bank erosion in Dallas County including the City of Wilmer

City of Wilmer	Improve Flood Assessment. This can be done by heightening awareness of flood risk within the high risk areas in the city
Hazard(s) Addressed	Flooding and dam/levee failure
Goal/Objective	2-A, 2-B, 2-C, 3-A, 3-B, 3-C, 3-D, 4-A, 4-B
Priority	High
Estimated Cost	$50,000
Potential Funding Sources	Funding sources could include mitigation grants from the federal government
Potential Matching Sources	Budget, Donations
Lead Department	City of Wilmer Administration and Public Works,
Implementation Schedule	1 Year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective compared to the cost of repetitive loss
Discussion	The assessment will involve conducting cumulative impact analyses for multiple development projects within the same watershed and developing and maintaining a database to track community exposure to flood risk.

Wilmer Action Item	Coordinate with levee owners in adjacent jurisdictions to attain proper inundation studies for dam safety and establish action items which prove to be more cost efficient
Hazard(s) Addressed	Flooding, Dam and Levee Failure
Goal/Objective	2-A, 2-C, 3-B
Priority	Low
Estimated Cost	Unknown - To be determined
Potential Funding Sources	City Funds
Lead Department	Public Works and City Manager's Office
Implementation Schedule	Within two years
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	The cost is low compared to the benefits
Discussion	As cited in the hazard assessment section of this annex, there is a deficiency of inundation data of the Ten Mile Creek and Bois'D Arc Island Levees that could potentially affect the City of Wilmer. The City will need to work the owners and operators of the dams/levees to conduct inundation studies to determine the most appropriate mitigation actions.

Wilmer Action Item	Incorporate of drought tolerant and xeriscaping practices for existing and new city facilities
Hazard(s) Addressed	Drought, Wildfires
Goal/Objective	5-A
Priority	Medium
Estimated Cost	TBD
Potential Funding Sources	City Budget
Lead Department	Code Enforcement
Implementation Schedule	Short Term, Within in one year
Effect on Old Buildings	None
Effect on New Buildings	None
Cost Effectiveness	This is extremely cost effective
Discussion	The use of landscape and design measures will help promote water conservation and reduce dependence on irrigation and mitigate against drought and wildfire where applicable.

Plan Maintenance

The City of Wilmer Fire Department (WFD) will be responsible for ensuring that this plan is monitored on an on-going basis. The Fire Chief will lead the monitoring, evaluation and update efforts of the plan. See table below:

Jurisdiction	Responsible Personnel	Activity	Update Schedule
City of Wilmer	Emergency Management Coordinator/ Fire Chief	Tracking implementation and action items	Biannually
		Evaluate Plan	Annually
		Update Plan	Once every 5 years

The Fire Chief will call the Wilmer Hazard Mitigation Planning Team (HMPT) together on an annual basis to review the mitigation actions set forth in this plan and discuss progress. During this meeting the HMPT will develop a list of items to be updated/added in future revisions of this plan.

The Fire Chief will report the outcomes of the annual HMPT to the Dallas County Office of Homeland Security and Emergency Management and when needed to the Wilmer City Council. Emergency Operations Plan will also focus on evaluating this plan in light of technological, budgetary, and political changes that may occur during the year or other significant events.

Major disasters affecting the City of Wilmer and its citizens, legal changes, and other events may trigger a meeting of the Wilmer Hazard Mitigation Action Plan Working Team. This working group will be responsible for determining if the plan should be updated.

The City of Wilmer is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City of Wilmer will be a strong advocate that jurisdictions within the Dallas County should continue to work together on updating this multi-jurisdictional plan. The City of Wilmer will integrate other planning mechanism to include comprehensive or capital improvement plans, floodplain ordinances, Emergency Action Plan and other contingency plan. The planning integration tables below shows how this will be done

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the city will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City of Wilmer will engage stakeholders in community emergency planning.

The Planning Integration Table

Jurisdiction	Responsible Personnel	Jurisdictional Plans	Integration Schedule	Integration Plan
City of Wilmer	City Council	Budget Meetings.	Annually	Integration of mitigation projects identified in HazMAP, grants, and other fiscal allowances for mitigation actions and related costs
	Emergency Management Coordinator	Emergency Action Plan updates	Reviewed Annually, updated as needed	EAP Mitigation annex updates based on HazMAP HIRA; update preparedness, response and recovery actions related to identified hazards
	Designated Floodplain Manager	Floodplain ordinances	As needed	Enhance mitigation of flood hazards using HazMAP flood data for floodplain management and community development.
	City Council	Capital improvement and Community Plans	Annually	Strengthen critical infrastructure and key resources based on HazMAP hazard analysis, incorporate vulnerability data and action items.
	City Manager	Drought Contingency plans	As needed	Integrate drought actions such as xeriscaping, water restrictions, and public education

Note: The process of integration and making changes involves the responsible party bringing the recommendations before the council/commissioners court and providing support for integration. Council /commissioner's court members will vote to integrate/adopt changes.

Appendices

a. HIRA

b. Meeting Documentation

c. Outreach Materials

d. Survey Results

Appendix CW1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/Unlikely Event probable next 10 years	1
Average/Occasional Event possible next 5 years	2
Medium/Moderate/Likely Event possible next 3 years	3
High/Highly Likely Event Possible next year	4

Scale	
Low	1
Medium/Moderate	2
High	3
Catastrophic	4

Hazard Identification and Risk Assessment (HIRA)

Date: October 2013

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds	4	4	4	4.00	1	2	2	5	80%
Hail	4	4	3	3.00	1	3	1	5	60%
Lightning	4	4	2	2.00	1	3	1	5	40%
Winter Storms	2	4	4	2.00	2	1	1	4	50%
Tornado	4	4	4	4.00	2	3	1	6	66%
Flooding	3	3	4	4.00	1	3	3	7	57%
Pandemic/Public Health Emergency	1	1	4	4.00	4	1	1	6	66%
Extreme Temperatures/Heat	4	4	2	2.00	2	1	1	4	50%
Hazardous Materials Incidents Nuclear /Radiological	4	4	3	3.00	2	2	2	6	50%
Wildfire	2	2	3	3.00	1	3	3	7	42%
Utility Failure	4	4	3	3.00	4	1	1	6	50%
Energy/Fuel Shortage	1	1	3	3.00	4	2	1	7	42%
Terrorist Attack	1	1	4	4.00	4	4	3	11	36%
Urban Fire	4	4	2	2.00	2	3	1	6	33%
Earthquake	1	1	3	3.00	3	4	3	10	30%
Levee/Dam Failure	1	1	2	2.00	1	3	3	7	28%
Drought	4	3	2	2.66	2	4	4	10	26%
Aircraft Accident	1	1	2	2.00	3	3	3	9	22%
Stream Bank Erosion	1	1	1	2.00	1	1	3	5	28%
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)	1	1	4	4.00	4	4	4	12	33%
Civil Disorder	2	2	3	3.00	2	2	2	6	33%

NB: This City of Wilmer HIRA only considered natural hazards as outlined in the Section 5 of the Dallas County HazMAP 2014 Plan

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	• Very few injuries, if at all none
Medium/Moderate	2	• Minor Injuries
High	3	• Multiple deaths/injuries
Catastrophic	4	• High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor (P/F)*S=RF.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	• Minor illness or injury to employees resulting in one day's absence • Does not violate laws • Little or minimal environmental damage
Medium/Moderate	2	• Injury or illness of resulting in one or more work days lost • Mitigable environmental damage where restoration activities can be done
High	3	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation
Catastrophic	4	• Results in partial permanent disability, injuries or illness of 3 employees or more • Reversible environmental damage • Violation of law/regulation

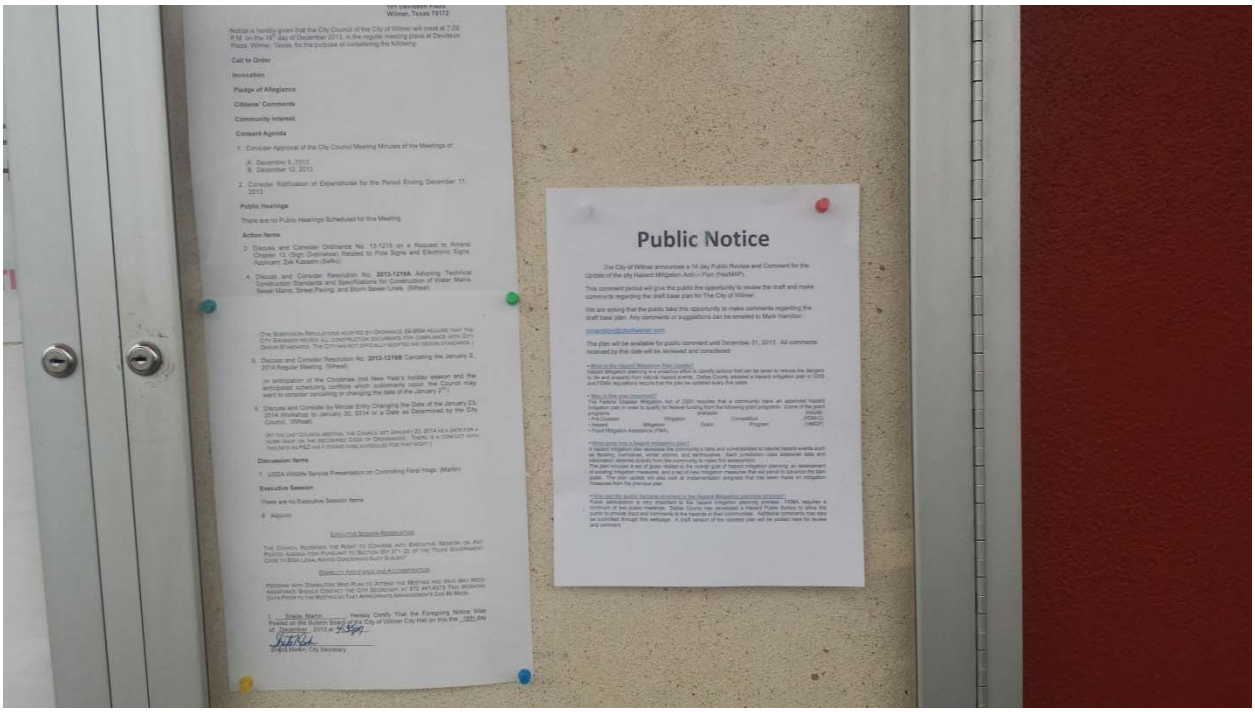
5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. (People + Property + Environment=Potential Damage (PD) or Dallas County Employees + Dallas County Facilities + Dallas County Business Processes=Potential Damage (PD)

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. Risk Factor (RF)/ Potential Damage (PD) = Vulnerability (V). The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
Probability	Unlikely/Low	Event Probable next 10 yrs.	1
	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
Life Impact	Low	Very few injuries, if at all none	1
	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
Property Impact	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
Spatial Extent	Negligible	Less than 1% of area affected	1
	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Appendix CW - B-1: Support Documentation



Public Notice

The City of Wilmer announces a 14 day Public Review and Comment for the Update of the city Hazard Mitigation Action Plan (HazMAP).

This comment period will give the public the opportunity to review the draft and make comments regarding the draft base plan for The City of Wilmer.

We are asking that the public take this opportunity to make comments regarding the draft base plan. Any comments or suggestions can be emailed to Mark Hamilton

mhamilton@cityofwilmer.com

The plan will be available for public comment until December 31, 2013. All comments received by this date will be reviewed and considered.

• **What is the Hazard Mitigation Plan Update?**
Hazard Mitigation planning is a proactive effort to identify actions that can be taken to reduce the dangers to life and property from natural hazard events. Dallas County adopted a hazard mitigation plan in 2009 and FEMA regulations require that the plan be updated every five years.

• **Why is this plan important?**
The Federal Disaster Mitigation Act of 2000 requires that a community have an approved hazard mitigation plan in order to qualify for federal funding from the following grant programs. Some of the grant programs available include:
• Pre-Disaster Mitigation Competitive (PDM-C)
• Hazard Mitigation Grant Program (HMGP)
• Flood Mitigation Assistance (FMA)

• **What goes into a hazard mitigation plan?**
A hazard mitigation plan assesses the community's risks and vulnerabilities to natural hazard events such as flooding, hurricanes, winter storms, and earthquakes. Each jurisdiction uses statewide data and information obtained directly from the community to make this assessment.
The plan includes a set of goals related to the overall goal of hazard mitigation planning, an assessment of existing mitigation measures, and a set of new mitigation measures that will serve to advance the plan goals. The plan update will also look at implementation progress that has been made on mitigation measures from the previous plan.

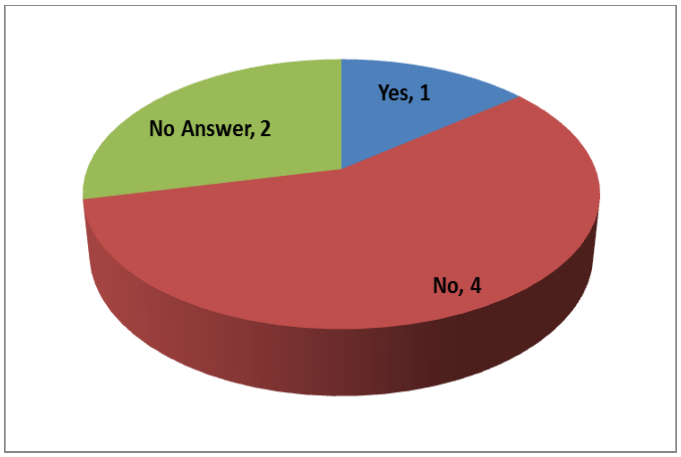
• **How can the public become involved in the Hazard Mitigation planning process?**
Public participation is very important to the hazard mitigation planning process. FEMA requires a minimum of two public meetings. Dallas County has developed a Hazard Public Survey to allow the public to provide input and comments to the hazards in their communities. Additional comments may also be submitted through this webpage. A draft version of the updated plan will be posted here for review and comment.

Appendix CW C-1: City of Wilmer Complete Survey Reponses

1. Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

    ✓ City of Wilmer (7 responses)

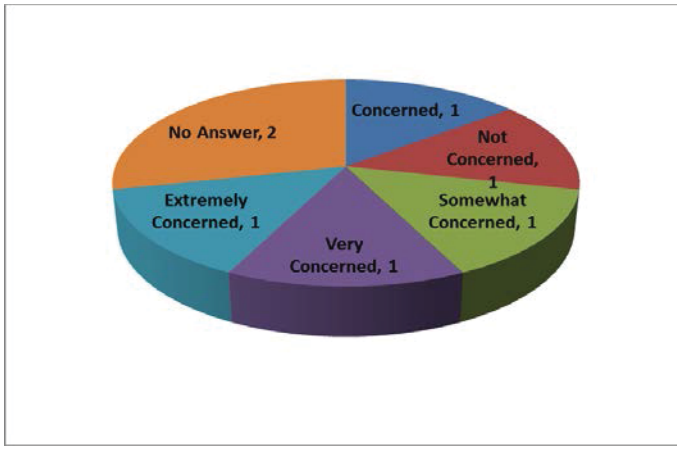
2. Have you ever experienced or been impacted by a disaster?



If "Yes", please indicate what hazard you have endured and where it occurred?

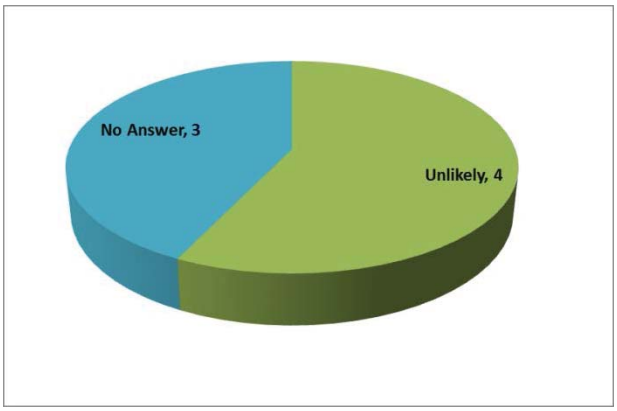
    ✓ "Major tornado in the City of Lancaster…just a few miles away from Wilmer…approximately 2 years ago."

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

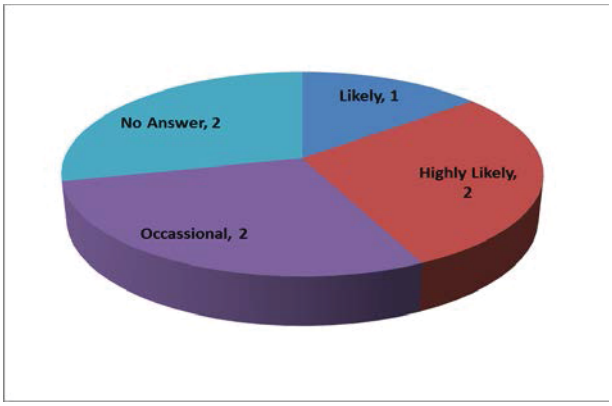


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion on the likelihood for each hazard to impact

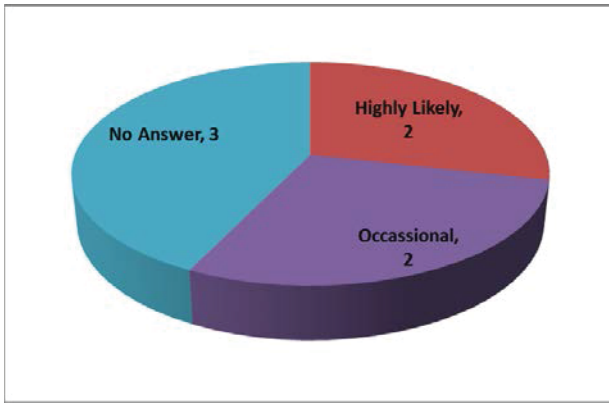
   a. Earthquake



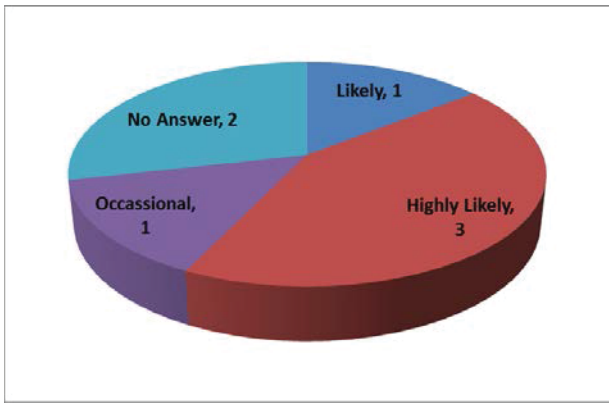
   b. Tornado



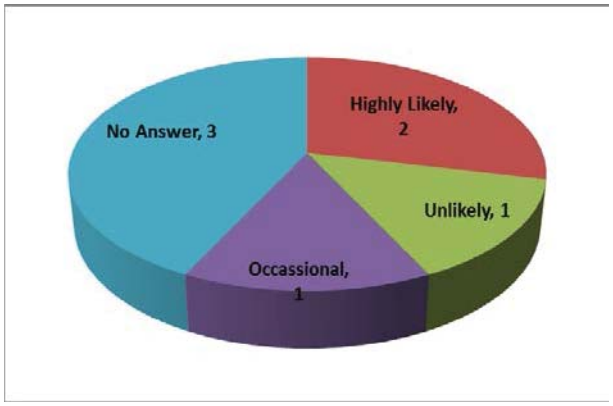
   c. Hail



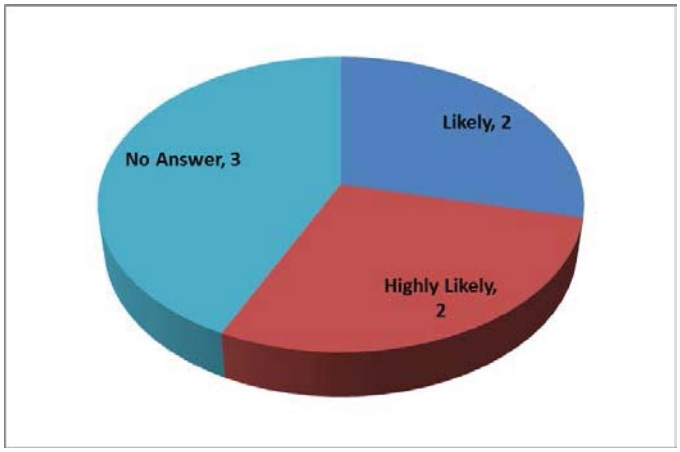
d. High Winds



e. Winter Storms



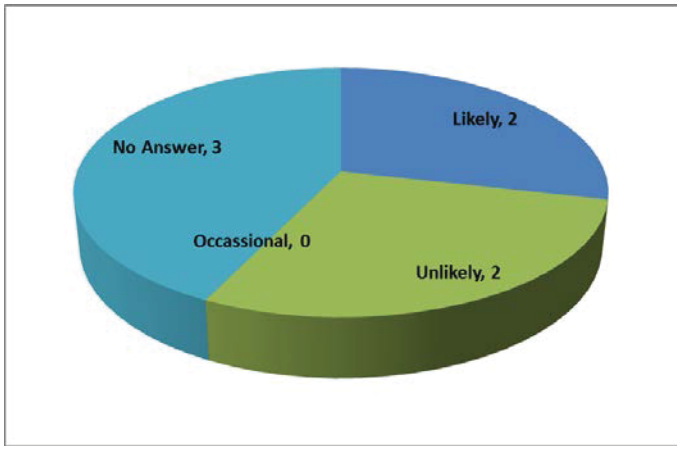
f. Extreme Heat



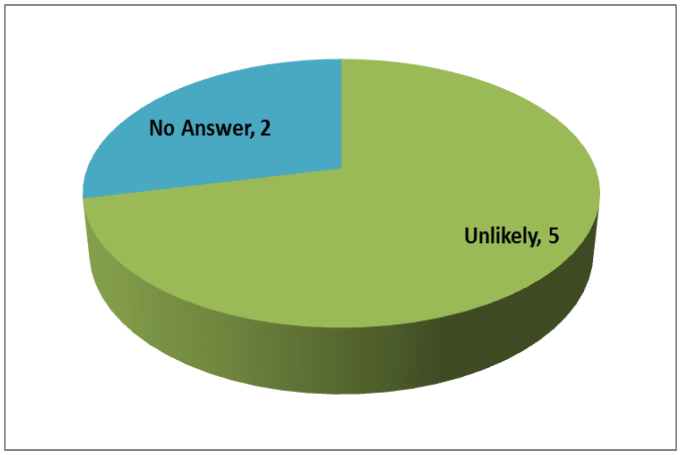
g. Drought



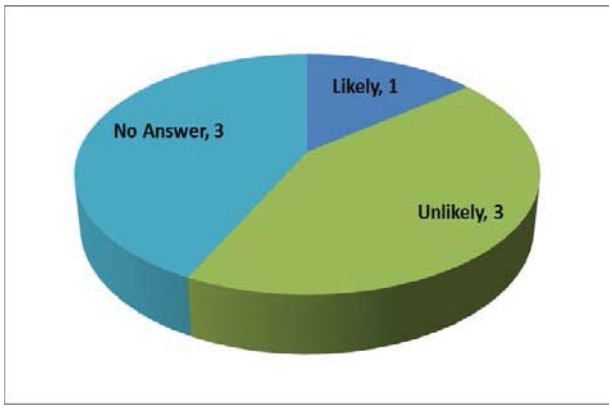
h. Flooding



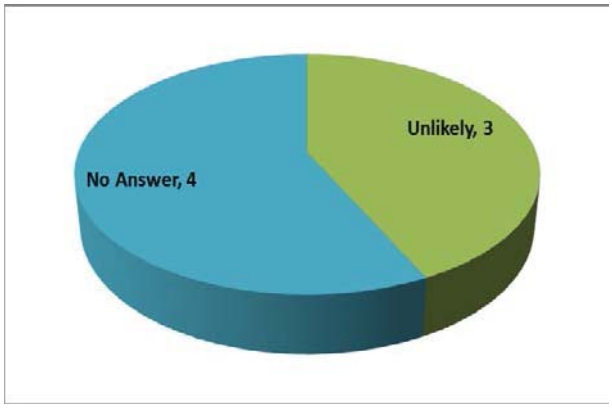
i. Dam Failure



j. Stream Bank Erosion

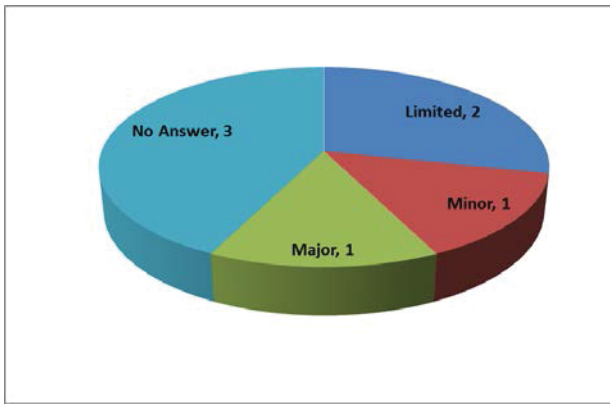


k. Levee Failure

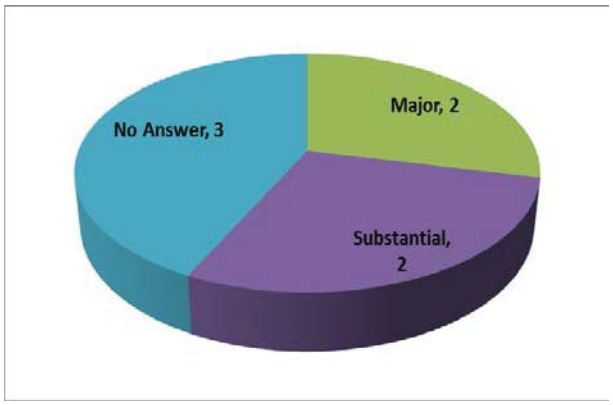


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

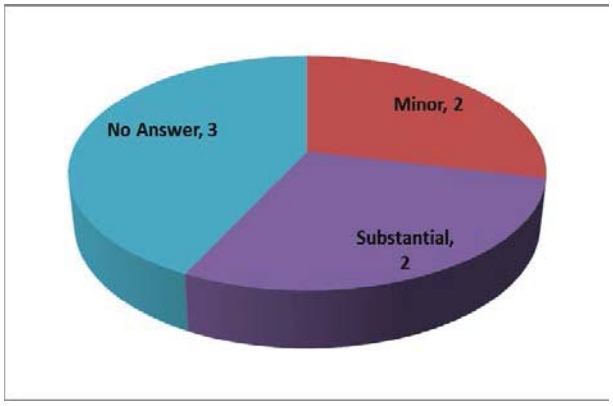
   a. Earthquakes



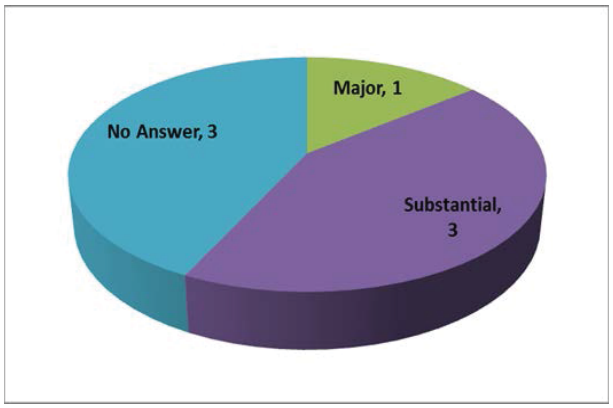
   b. Tornado



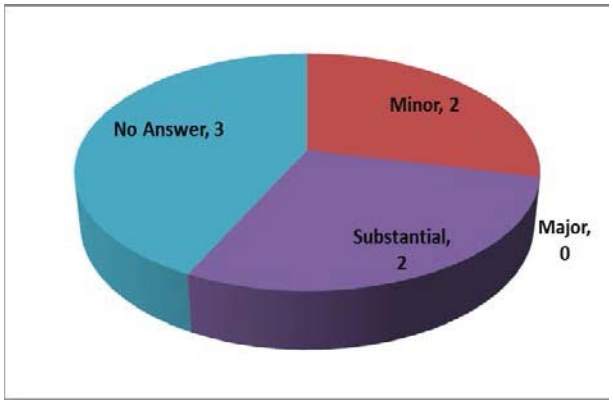
   c. Hail



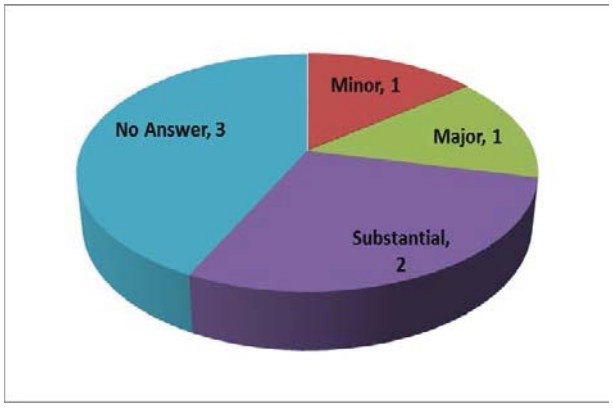
d. High Winds



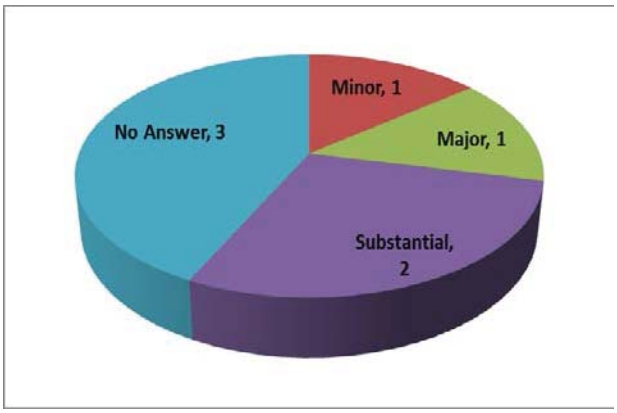
e. Winter Storms



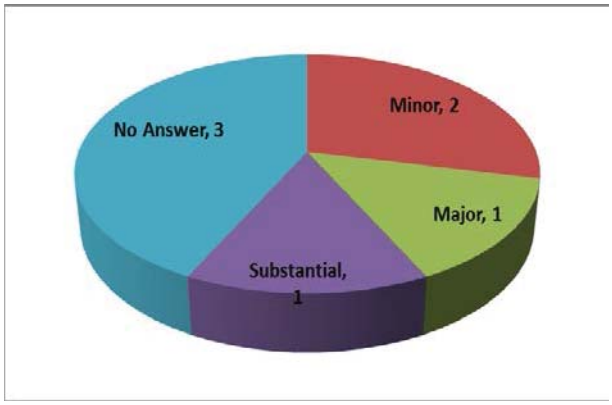
f. Extreme Heat



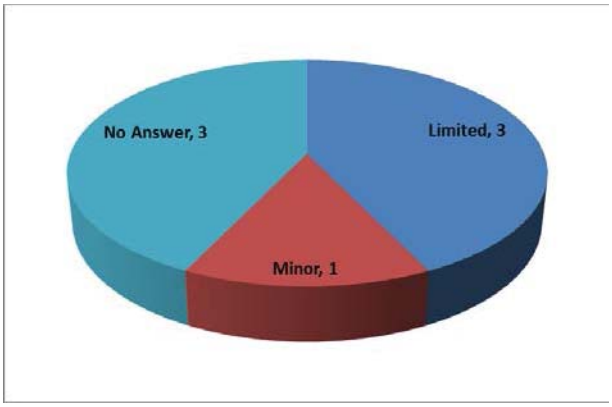
g. Drought



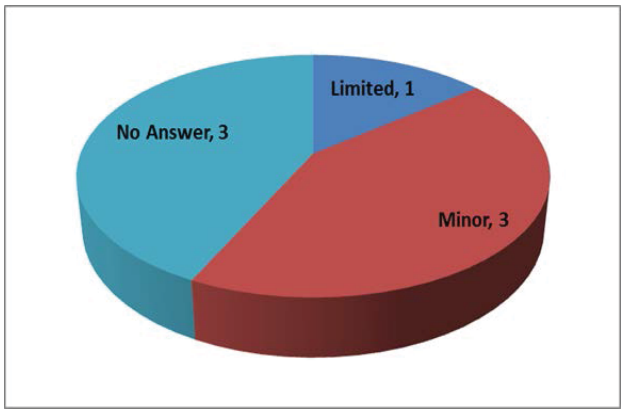
h. Flooding



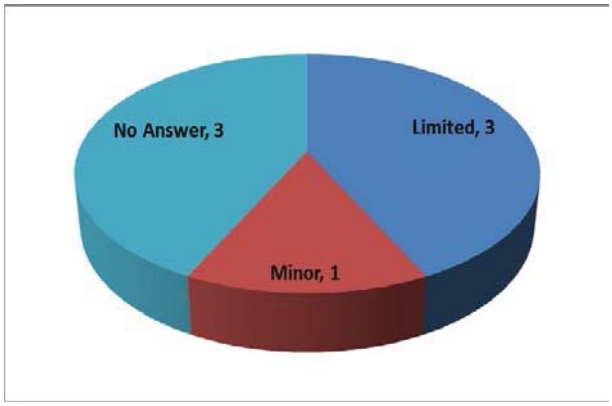
i. Dam Failure



j. Stream Bank Erosion



k. Levee Failure



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?
   - ✓ Yes (0)
   - ✓ No (5)
   - ✓ Skipped (2)



7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect Dallas County. In your opinion, please check which of these mitigation strategies do you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	3
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	1
Improve, adopt and enforce building codes:	5
Implement the Texas Individual Tornado Safe Room Rebate Program:	4
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	4
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	1
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the Nation Weather Service to monitor weather events:	5
Coordinate with Dam owners to conduct inundation studies of dams:	0
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	2
Purchase and improve on the Weatherization Assistance Program (WAP):	3
Conduct an earthquake vulnerability study:	0
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	4
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	3
Structural Retrofitting of Existing Buildings:	3
Total Respondents:	7

List any other strategies you think should be included in the plan:

- ✓ No Responses

8. Please comment on any other issues that the Dallas County Hazard Mitigation Planning Group should consider in developing a strategy to reduce future losses caused by hazard events:
   - ✓ No Responses

.

Appendix A: County Wide Survey Results

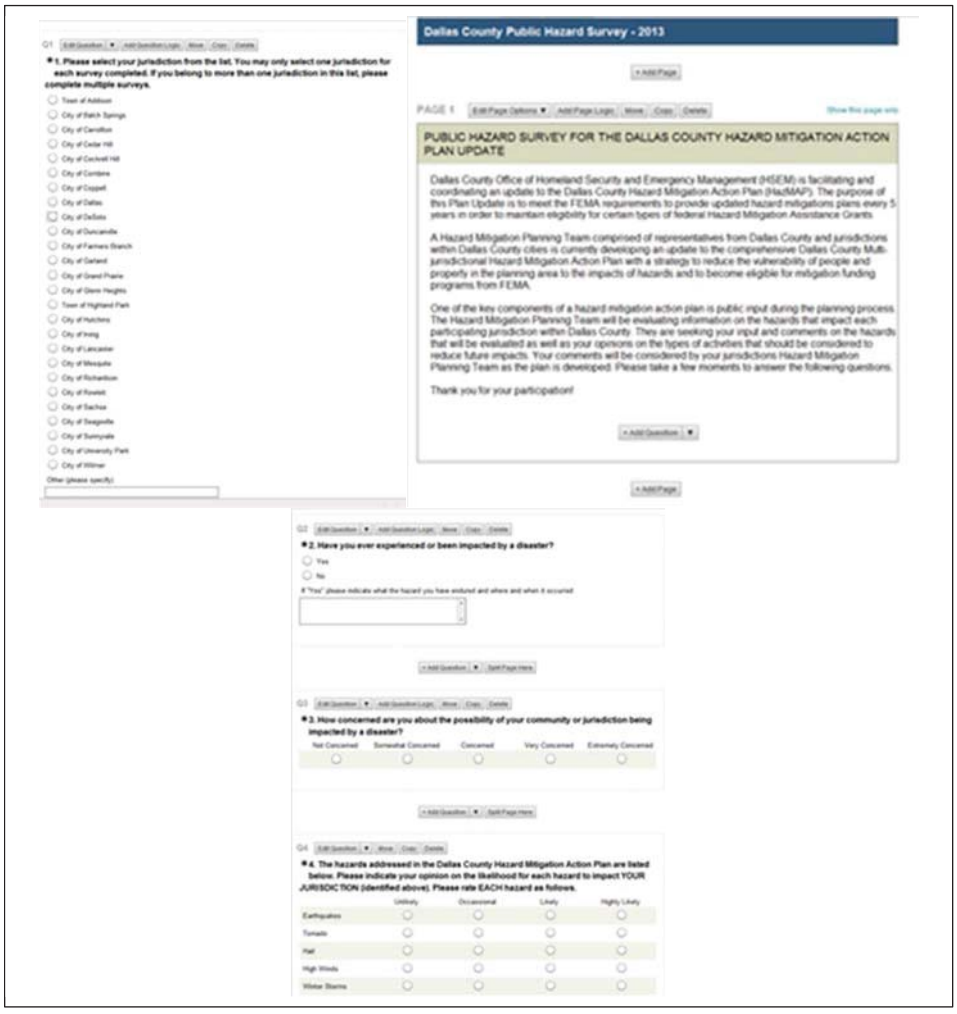
Overview

Dallas County Office of HSEM and the participating jurisdictions prepared public surveys that asked a wide range of questions concerning the opinions of the public regarding natural and man-caused hazards. This eight-question survey was made available on the websites through each jurisdiction's website. This survey was also distributed in hard copy format at public meetings and stakeholder events throughout the planning process.

A total of 527 surveys were collected, the results of which are analyzed in this section. The purpose of the surveys was twofold: 1) to solicit public input during the planning process and 2) to help the city to identify any potential actions or problem areas.

The online survey was the most accessible version. Survey results are depicted on the following pages, showing the number of responses for each answer. For questions that did not provide a multiple choice answer, or that required an explanation, comments are included as they were entered on the survey itself and are not in any particular ranking order.

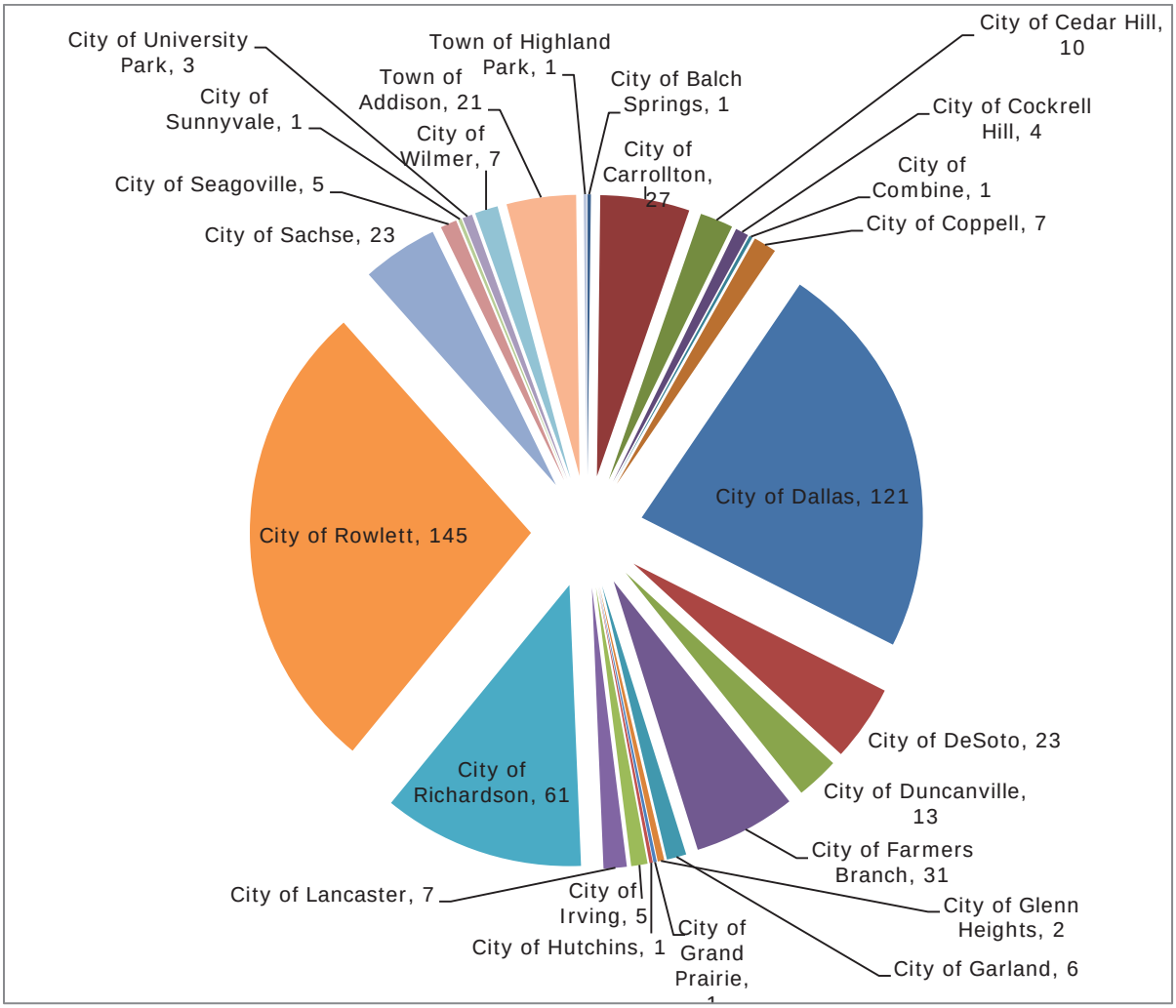
Figure A1: Screenshots of Public Survey



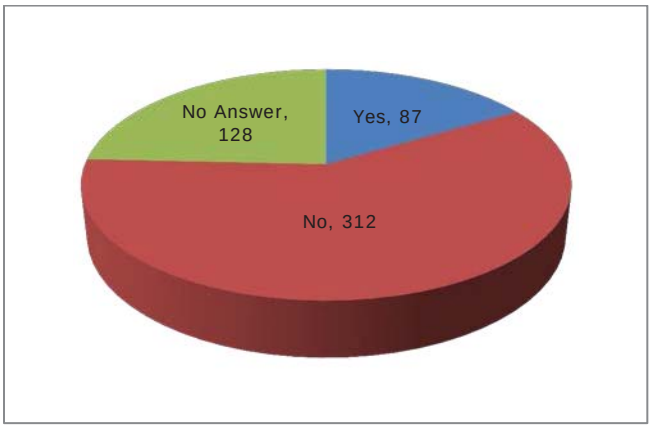
Survey Results:

1. **Please select your jurisdiction from the list. You may only select one jurisdiction for each survey completed**

   If you belong to more than one jurisdiction in this list, please complete multiple surveys.



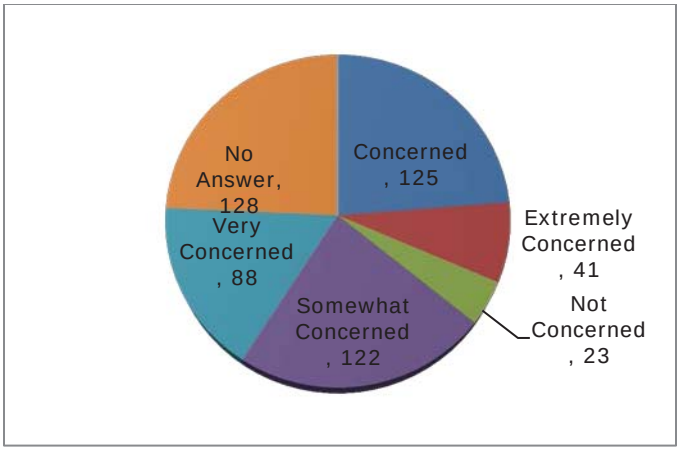
2. Have you ever experienced or been impacted by a disaster?



If yes, please indicate what the hazard you have endured and where and when it occurred.

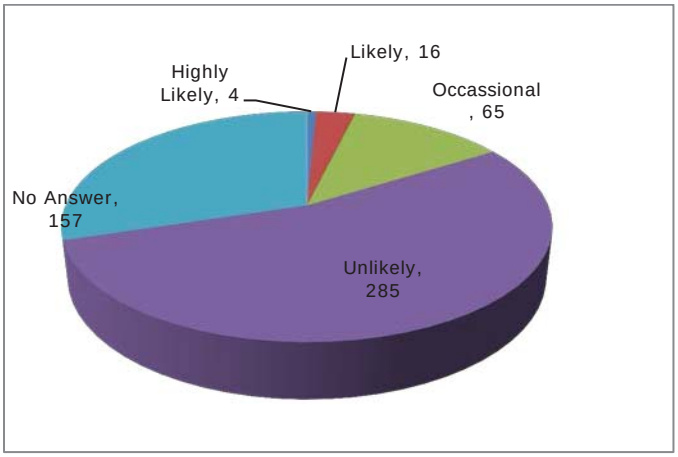
- ✓ *"Tornado"*
- ✓ *"Straight Winds/Wind Storms"*
- ✓ *"Flooding"*
- ✓ *"Hail"*
- ✓ *"Hurricane"*
- ✓ *"Earthquakes"*
- ✓ *"Winter/Snow Storms"*
- ✓ *"Wildfire"*
- ✓ *"Drought"*

3. How concerned are you about the possibility of your community or jurisdiction being impacted by a disaster?

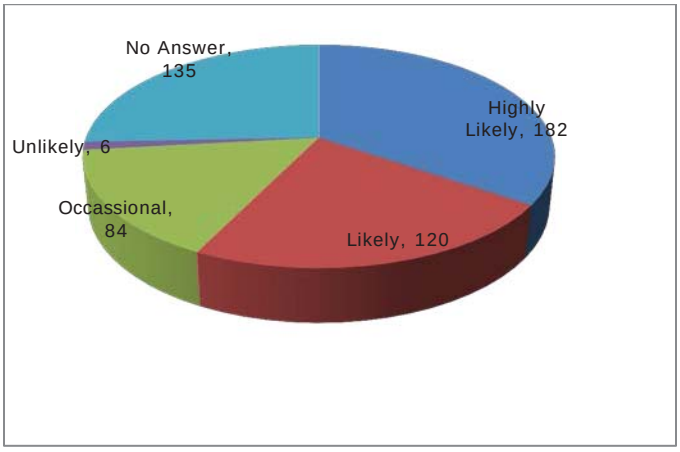


4. The hazards addressed in the Dallas County Hazard Mitigation Action Plan are listed below. Please indicate your opinion for each hazard to impact your jurisdiction (identified above). Please rate each Hazard as follows.

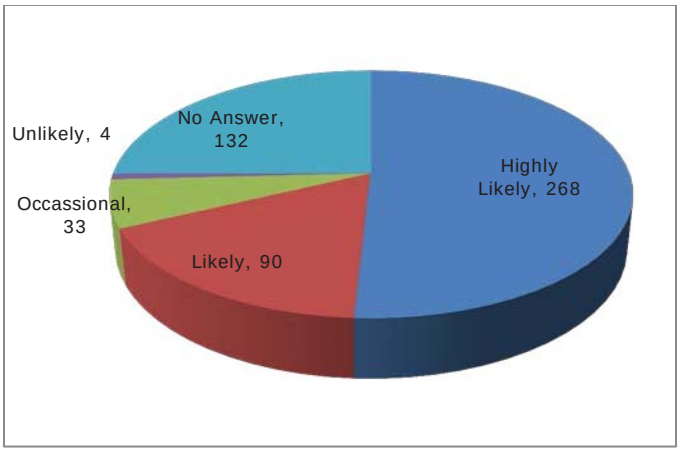
Earthquakes:



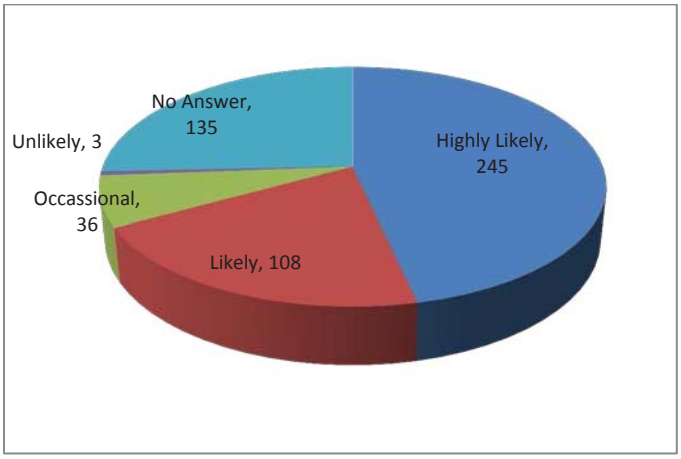
Tornado:



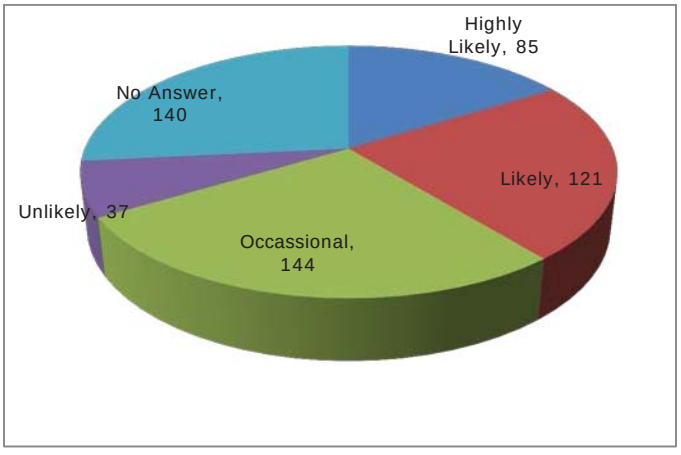
Hail:



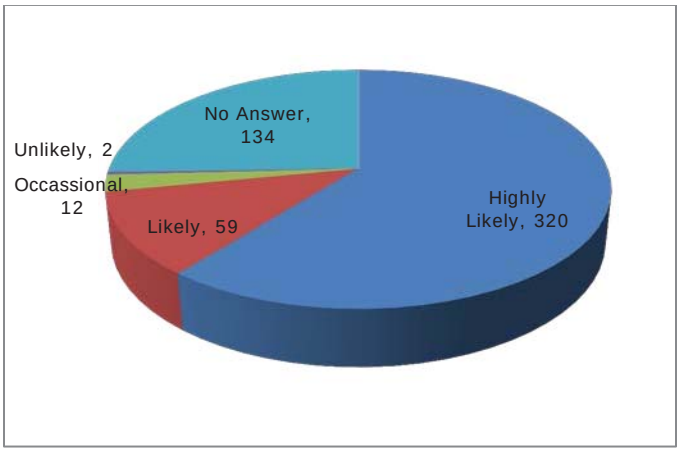
High Winds:



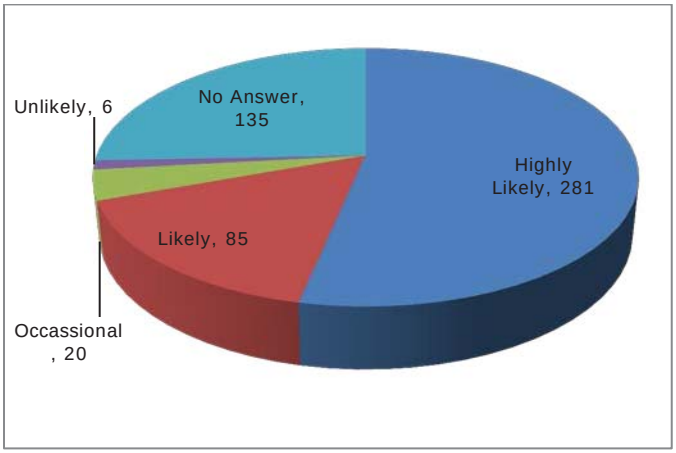
Winter Storms:



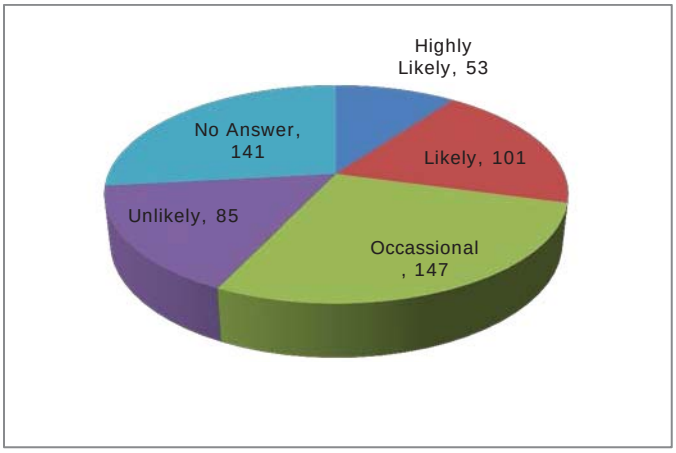
Extreme Heat:



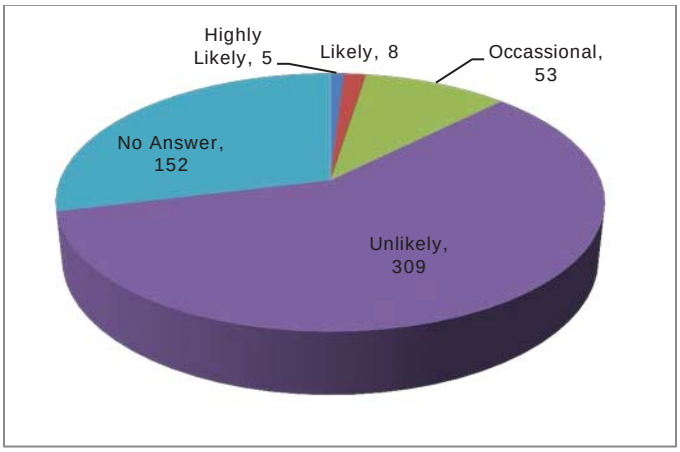
Drought:



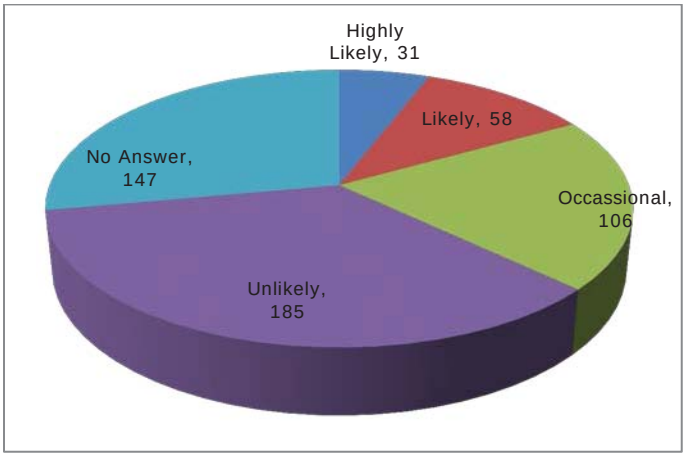
Flooding:



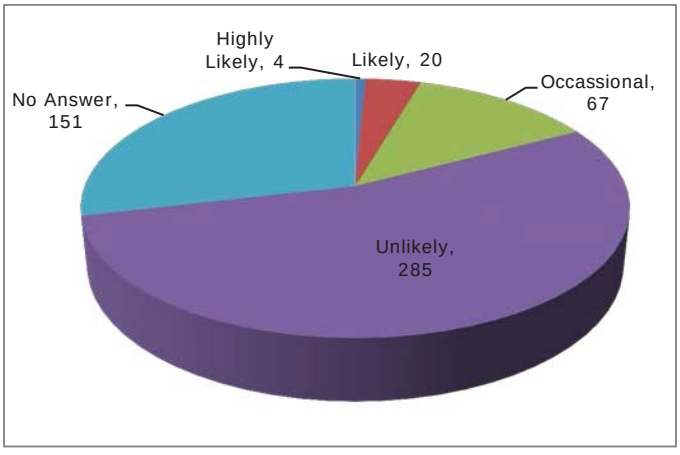
Dam Failure:



Stream Bank Erosion:

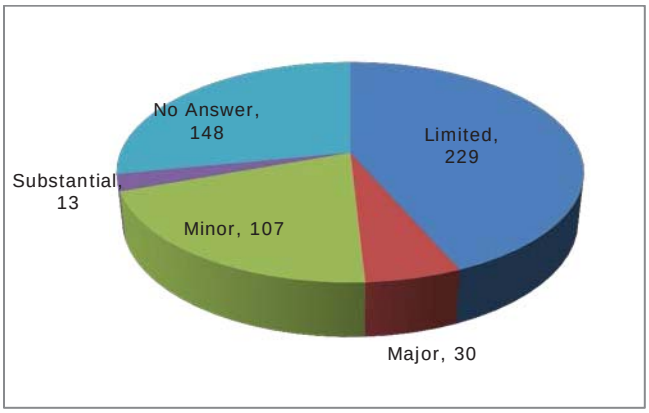


Levee Failure:

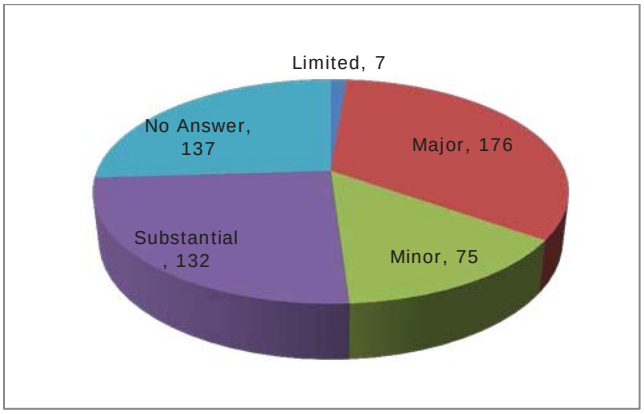


5. The hazards addressed in the Multi-Jurisdictional Hazard Mitigation Plan are listed below. Please indicate your opinion on the potential magnitude or impact of each hazard's impact on YOUR JURISDICTION (identified above). Please rate EACH hazard as follows.

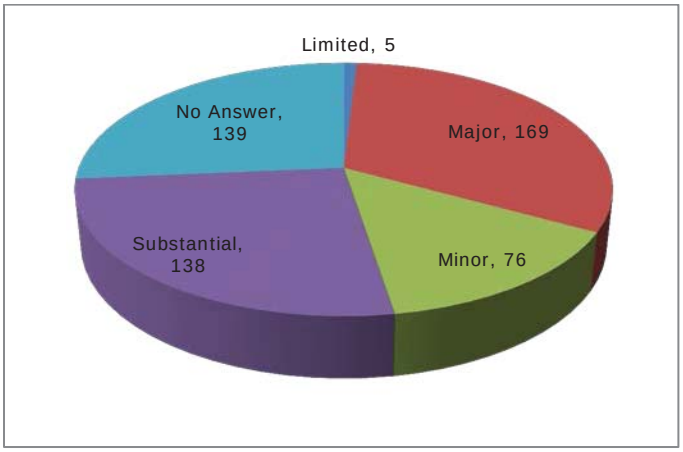
Earthquakes:



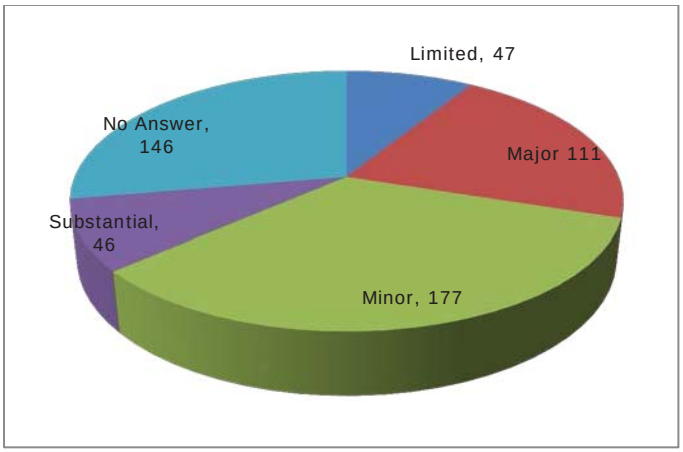
Tornado:



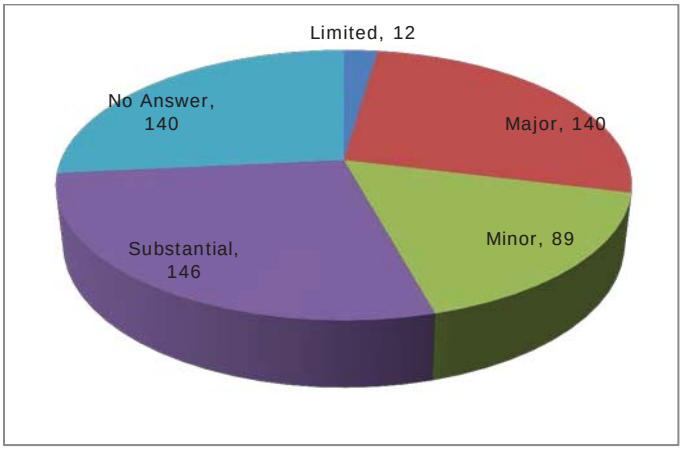
High Winds:



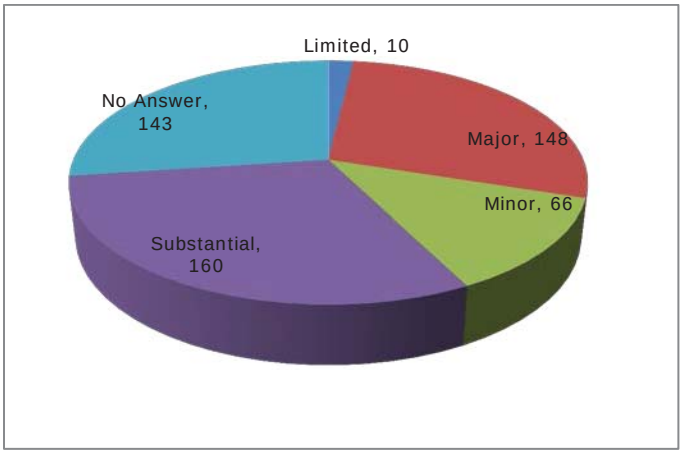
Winter Storms:



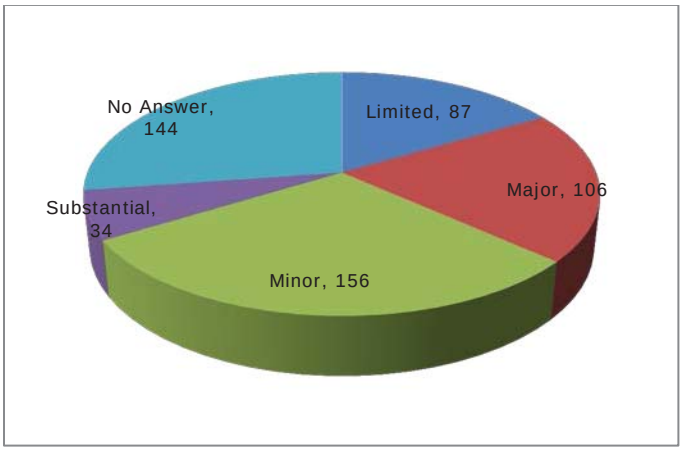
Extreme Heat:



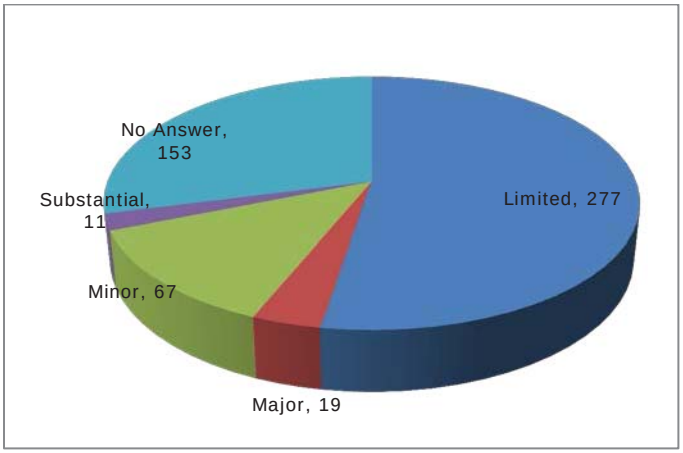
Drought:



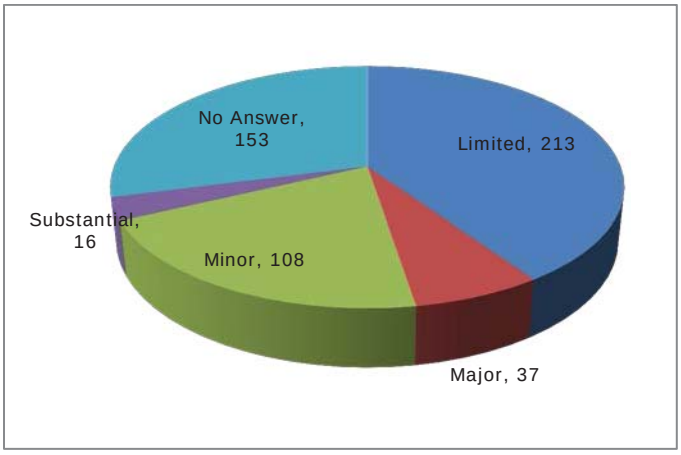
Flooding:



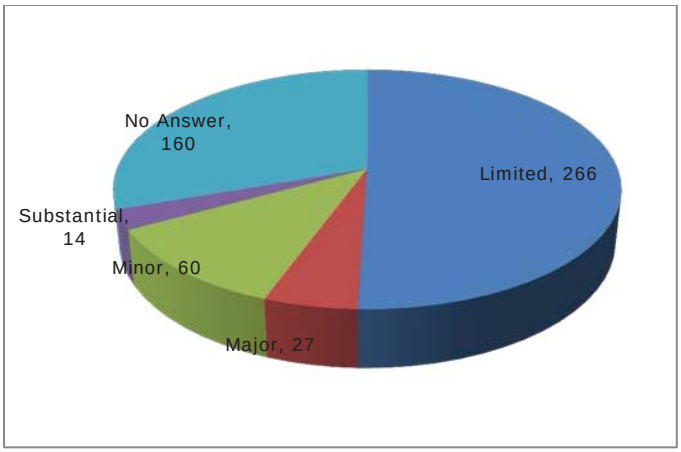
Dam Failure:



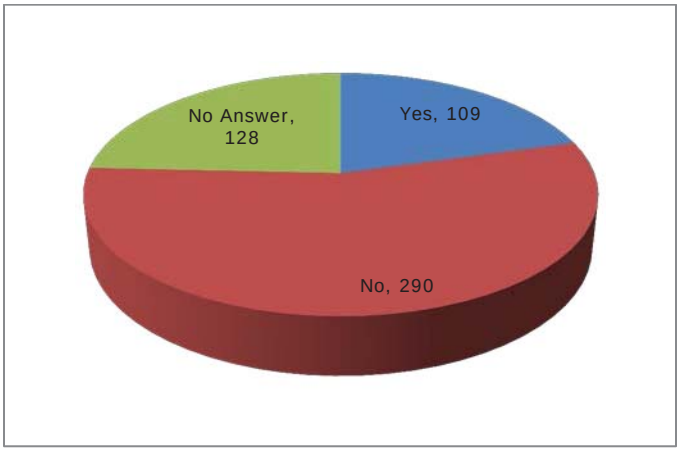
Stream Bank Erosion:



Levee Failure:



6. Is there another hazard not listed above that you think is a wide-scale threat to your jurisdiction?



If "Yes", please list the hazard(s) you think are a wide-scale threat that are not listed. Also rate each hazard you list above using the criteria description provided i.e. Occurrence (Unlikely, Occasional, Likely or Highly Likely); Severity or Impact (Low, Medium, High or Catastrophic); and Extent (Low, Medium, High or Catastrophic)

- ✓ Chemical/ HazMat"
- ✓ "Terrorism"
- ✓ "Train Derailment"
- ✓ "Already listed in Survey"
- ✓ "West Nile"
- ✓ "Power Outages"
- ✓ "Epidemic/Pandemic"
- ✓ "Civil Unrest"
- ✓ "Gas Pipeline Explosion"
- ✓ "Water Shortage
- ✓ Bridges Breaking"
- ✓ "Sink Holes"
- ✓ "Financial Crisis"
- ✓ "Fracking"
- ✓ "Water Contamination"
- ✓ "Industrial Accident"
- ✓ "Air Pollution"
- ✓ "Low Planes"
- ✓ "Zebra Mussel Invasion"
- ✓ "Climate Changes"
- ✓ "Water Main Breaks"

7. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies you believe could benefit your jurisdiction:

Answer Choices	Responses
Improve on Land Use Program:	117
Flood Plain Management to include Localized Flood and Soil Erosion Reduction Projects (storm water management or localized flood control projects, and Cast in Place (CIP) Erosion Control):	146
Improve, adopt and enforce building codes:	191
Implement the Texas Individual Tornado Safe Room Rebate Program:	279
Expand and improve on programs such as the Community Emergency Response Teams (CERT) Training, Public Education and Public Awareness Programs:	280
Participate in the National Flood Insurance Program (NFIP) and Community Rating System (CRS) program:	106
Expanded use of CodeRED and other mass notification systems including outdoor warning siren system, and working better with the National Weather Service to monitor weather events:	296
Coordinate with Dam owners to conduct inundation studies of dams:	43
Water conservation strategies to include passing resolutions restricting water use for lawn and landscape irrigation; provide low follow devices to property owners:	235
Purchase and improve on the Weatherization Assistance Program (WAP):	174
Conduct an earthquake vulnerability study:	78
Purchase and install lightning prediction and protection devices such as lightning arrestors and lightning rods to protect communications and utility infrastructure:	200
Purchase and install temperature monitoring devices on the elevated roadways that are susceptible to icing:	121
Structural Retrofitting of Existing Buildings:	92
Total Respondents:	388

List any other strategies you think should be included in the plan (themed responses)

- ✓ "Educate and Outreach"
- ✓ "Structural Improvements"
- ✓ "Expanding Warning Systems"
- ✓ "Improvement of Water Irrigation Systems"
- ✓ "Implementation Enforcement"
- ✓ "Better Communication"
- ✓ "Transportation/Evacuation Plan"

- ✓ "Research"
- ✓ "Safety Procedures"
- ✓ "Improvements of Gas Pipelines"

8. Below are broad mitigation strategies identified in the Dallas County Hazard Mitigation Action Plan (HazMAP) that are to address the hazards that affect the jurisdictions in the plan. In your opinion, please check which of these mitigation strategies you believe could benefit your jurisdiction: - List any other strategies you think should be included in the plan

- ✓ *"Include health epidemics"*
- ✓ "Thank you for caring."
- ✓ "Are you just listing threats of natural occurrences? I believe that there are other serious threats to our security that should be addressed and certainly prepare for the security of our citizens. Perhaps not your job to list this type. I worry about this more than some on your list. Thanks!"
- ✓ "More shade trees maintained and encouraged for Extreme Heat reduction."
- ✓ "More advertisements about how to stay informed about hazards and emergencies online."
- ✓ "Terrorist attach at major event!"
- ✓ "undetermined fires caused by extreme heat"
- ✓ "Replace/upgrade equipment on a schedule vs. on failure to keep costs down and ultimately invest more/reach higher a quality. Emergency repairs are costly, and often poorly implemented. Funding levels remain the same, and effective/efficient usage of such may have more of an impact than initially thought."
- ✓ "The vast majority of people do not have more than 1 week's supply of food and water. If any event where to limit the availability of food and water, we will face a crisis not unlike what the residents of New Orleans experienced after hurricane Katrina. So it's NOT the event that I fear (either natural or man-made), it's the panic-stricken population who suddenly finds themselves without food and water."
- ✓ "Sounds like another red/blue sticker program that will not go anywhere."
- ✓ "HAZmat's gonna be paying dearly when the water runs out."
- ✓ "Let's try to eliminate programs that are outdated and not needed."
- ✓ "Provide broadcast shelter areas for each precinct within a county in case of disaster with protection in these areas allowing for power, water etc. backup for emergency use."
- ✓ "People need to know in advance of an emergency what they should do and just handing out brochures will not get it done. Instead of town-hall meetings focused on politics, what about some meetings on how to protect your families or what to do if an emergency occurs such as a fire, tornado, flood, etc., what to do if the family members are separated like what happened in New Orleans, what various federal and state agencies do, what to do or not do if your electricity is out for several days in summer or winter, who to contact for assistance. What in the heck is the role of the various government agencies? Once an emergency

hits it is bedlam and people need to already have answers, it is already too late. Just an opinion."

- ✓ "Make sure no home or buildings have CSST. See www.csstdanger.com for info. City of Lubbock has banned this product"
- ✓ "County emergency management needs to learn how to work together to formulate emergency plans which are workable. Most County products are basically jokes. The new County Emergency Manager has already shown his ignorance about emergency preparedness and mitigation. When I was involved in City management, the County was a joke. Unfortunately, there is no evident changes."
- ✓ "monthly or biweekly columns in all local newspapers with emergency preparedness ideas, protocols, contacts, training programs, etc. thanks for asking my opinion!"
- ✓ "Programs focused on educating the public how to better prepare for emergencies."
- ✓ "Traffic flow management in the event of a hazard event."
- ✓ "Great start..."
- ✓ "Mitigation grants for roads/bridges/ overpass, emergency response to Ray Lake Hubbard/ working with businesses to improve emergency planning."
- ✓ "More Funding."
- ✓ "I already volunteer with various groups that work directly with the City of Dallas and several other government entities. One of my major concerns is that not every OEM is aware of the capabilities of all resources that are available. Although it would be a huge undertaking I think it would be wise to have a day allocated for a simulated disaster that uses all resources from volunteers to professionals. As an example have all typical first responders, but then create a scenario that grows in magnitude and requires more people from CERT, DPD volunteers, Red Cross, church organizations, special disability shelters, ham radio/skywarn, local news media, reverse 911, mutual aid, automatic aid, etc. Having everyone on the same page as to what exact roles and duties are would be invaluable in the case of a major disaster."
- ✓ "There is a notable increase in the number of high rise structures in Dallas - has there been a corresponding increase in preparedness planning for all types of potential responding agencies?"
- ✓ "I stumbled across this survey by accident. it seems this should be promoted more"
- ✓ "Sending mass text messages during an emergency."
- ✓ "Provide campaign to inform the public of where they can receive information after an impact."
- ✓ "Why is wildfire not listed"
- ✓ "Wireless emergency notification system would be very helpful in the event of a major disaster. Citizens should have the ability to communicate even when power is lost.."
- ✓ "Apartments buildings need to pay their fair share of water treatment and usage not giving them a commercial rate for water usage. A family of 4 uses as much

water in a home 6 months of the year and dumps as much waste all year long. Them paying their fair share will provide funds to build for tomorrows Metroplex."

- ✓ "terrorist activities"
- ✓ "No comment"
- ✓ "Enhance television warning system before the tornado is at your door, as in the March 2012 tornado in DeSoto and Lancaster."
- ✓ "Monitor and track the dangerous materials and chemicals that come through here on trucks and trains. It is a miracle nothing has happened already."
- ✓ "Additional FEMA grants to homeowners build tornado safe rooms."
- ✓ "Chemical storage, safety and security"
- ✓ "Better flash flood alerting systems for individual crossings and the smallest low areas."
- ✓ "Please expand the Metro Safe Room Rebate Program."
- ✓ "Bridges - improve recording system for bridge safety and integrity Parks - needs to be a way to notify people at parks of imminent danger. Library - have available/improve availability of preparation education on the most likely events (such as tornado, hail)"
- ✓ "Desoto residents should have been able to apply for FEMA grants for storm shelters regardless if our homes are in flood zones or not. Much of the city is in a flood zone. I feel we were unfairly left out and not given any alternatives as if our lives did not matter!! I'm really angry about that!"

Appendix B: Meeting and Presentation Materials

Michael Gaciri

Subject:	Web Conference - Update of the 2008 Dallas County Hazard Mitigation Action Plan
Location:	Web Conference
Start:	Mon 3/11/2013 10:00 AM
End:	Mon 3/11/2013 11:15 AM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Michael Gaciri
Required Attendees:	Michael Gaciri; '(osem.osem@dallascounty.org)'; 'Alyson Brooks (abrooks@mesquitefire.org)'; 'Ben Williamson (bwilliam@garlandtx.gov)'; 'Billy Owens (bowens@cityofirving.org)'; 'Brad Simpkins (bsimpkins@ci.coppell.tx.us)'; 'Carrie Little (clittle@grapevinetexas.gov)'; 'Chief Trent Mackey (trentmackey@spcglobal.net)'; 'Chris Vinson (cvinson@hpdps.org)'; 'Crystal Birdwell (cbirdwell@cityofwilmer.com)'; 'David Giordano (dgiordano@ci.duncanville.tx.us)'; 'David Haas (dhaas@cityofbalchsprings.com)'; 'David McCurdy (dmccurdy@dfwairport.com)'; 'Don Poovey (dpoovey@rowlett.com)'; 'Doug Bass (doug.bass@dallascounty.org)'; 'Doug Kendrick (dkendrick@cityofsachse.com)'; 'Elliott Reep (elliott.reep@cityofcarrollton.com)'; 'Eric Greaser (egreaser@ci.coppell.tx.us)'; 'Francisco San Miguel'; 'Frank McElligott (chief@hutchinspd.org)'; 'Gary Brown (gbrown@cityofbalchsprings.com)'; 'George Harris (gharris@rowlett.com)'; 'Greg Porter (greg.porter@cedarhilltx.com)'; 'Gregg Loyd (gloyd@ci.coppell.tx.us)'; 'Gregg Salmi (gregg.salmi@cityofcarrollton.com)'; 'Jason Carriere (jcarriere@cityofirving.org)'; 'Jerry Smith (jsmith@desototexas.gov)'; 'Jessica Woydziak (jwoydziak@dfwairport.com)'; 'John Ballard-chief (john.ballard@cedarhilltx.com)'; 'John Murphy (john.murphy@cityofcarrollton.com)'; 'John O'Neal (joneal@addisontx.gov)'; 'Kevin Richardson (krichardson@ci.coppell.tx.us)'; 'Lt. Fire Chad Moore (cmoore@glennheights.com)'; 'Lt. Hurley (hurley379@balchspringspd.com)'; 'Mark Haseloff (mark.haseloff@citycarrolton.com)'; 'Matt Garrett (matthew.garrett@cor.gov)'; 'Matt Miller (mmiller@dfwairport.com)'; 'Michael Laws (mlaws@desototexas.gov)'; 'Mike Burns (firechief@cockrell-hill.tx.us)'; 'Mike Nolen (mnolen@uptexas.org)'; 'Mistie Gardner (mistie.gardner@cor.gov)'; 'Mollie Rivas (mrivas@garlandtx.gov)'; 'Nick Robison (nrobison@cityofirving.org)'; 'OEM Staff (oemdepartment@dallascityhall.com)'; 'Pat Adamcik (padamcik@lancaster-tx.com)'; 'Patrick McMacken (pmcmacken@cityofirving.org)'; 'Phillip Prasifka (chiefofpolice@glennheights.com)'; 'Randy Howell (rhowell@uptexas.org)'; 'Raymond Rivas (rrivas@mesquitefire.org)'; 'Rick Nessner (ricnessner@aol.com)'; 'Rick Pyle (rpyle@hpdps.org)'; Ricky Pendley (ricky.pendley@cedarhilltx.com); Rocky Vaz (rocky.vaz@dallascityhall.com); Ryan Woolever (woolever@hutchinsfirerescue.org); Sam Rohde (srohde@ci.duncanville.tx.us); Skyla Pellum (spellum@ci.duncanville.tx.us); Stacey Hickson (shickson@hutchinsfirerescue.org); Steve Parker (steve.parker@farmersbranch.info); Steve Perry (ltperry@hutchinspd.org); Summer Wilhelm (swilhelm@cityoflewisville.com); Thomas Griffith (tgriffith@lancaster-tx.com); Tim Dedear (tim.dedear@farmersbranch.info); Tim Oates (toates@ci.coppell.tx.us); Tim Tittle (tittle@cityoflewisville.com); Todd Gilcrease (toddgilcrease@yahoo.com); Tommy Lemond (tlemond@seagoville.us); Tony Martinez (tmartinez@rowlett.com); Tonya Hunter (thunter@gptx.org); Scott Greeson; AStrickler@nctcog.org
Optional Attendees:	'Gregg Loyd'; Ellis, Joseph; Guthrie, Gregory; Tony Martinez; Don Poovey; Rodrick Jones

1

Good Afternoon,
As some of you may already know, Dallas County Office of Homeland Security and Emergency Management (HSEM) is facilitating and coordinating an update of the **2008 Dallas County Hazard Mitigation Action Plan (HazMAP)**. The purpose of updating the HazMAP is to meet the FEMA requirements to provide updated hazard mitigations plans every 5 years.

In light of this, Dallas County HSEM will be hosting a web conference for all interested jurisdictions in Dallas County. The purpose of the meeting is to provide an overview to mitigation plan requirements as well as provide attending jurisdictions the opportunity to get a better understanding of the planning process and benefits of having a Hazard Mitigation Plan. For those jurisdictions in Dallas County that do not have a mitigation plan, this web conference can be an opportunity to know how you can get involved and have your questions answered. Having your jurisdiction present and on board at the web conference will be critical for the success of the project.

The details to the web conference are as follows:
Who: Dallas County Jurisdiction EMC and/or Representatives
Date: March 11, 2013
Time: 10:00 am
Link: See details provided below

If you have any questions or comments please contact me at the contact information provided below.

Regards,

Michael Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
509 Main Street, Suite 305
Dallas, TX 75202
Main: 214-653-6962
Email: michael.gaciri@dallascounty.org

****

TO CONNECT WITH YOUR *TELEPHONE ONLY* (no computer):
==========
1. Choose one of the following numbers to dial:
If you are calling from an office location with on-site number(s) (listed below), try this number first. If you do not have on-site access, or you are not a member of the host's company/organization, use one of the other numbers shown.
* Toll-Free Number (in USA): (877)226-9790.
* Caller-Paid number: (636)651-3172
* Blackberry (Toll-Free Number): (877)226-9790x1794833#
2. When prompted, enter the Meeting Access Code: 1794833#

Although this conference will begin with telephones only, if the conference leader instructs you to also connect your computer to the conference, you may do so by clicking here:
https://connect9.uc.att.com/service32/meet/?ExEventID=81794833&CT=M
Powered by AT&T Connect.

Dallas County
Department of Homeland Security and Emergency Management (HSEM)
Hazard Mitigation Planning

What is Mitigation?

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters.



Hazard Mitigation Plan Update

- Welcome & Introduction
- Web Conference Features and Etiquette
- History of the Dallas County HazMAP
- Presentation – Update Process
- Answer Questions/Comments

Mitigation Guidance

Hazard Mitigation Action Plan
" ...provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand and improve these existing tools."

44 CFR 201.6 (c) (3)

Dallas County
Department of Homeland Security and Emergency Management (HSEM)
Hazard Mitigation Planning

Dallas County Hazard Mitigation Action Plan

Dallas County has a FEMA approved Hazard Mitigation Plan

- Plan was written by the NCTCOG
- Approved on November 25, 2008
- 11 jurisdictions participated; all adopted

1

What's in a Mitigation Action Plan?

- Description of your jurisdiction
- Description the planning process and how the plan will be maintained
- Profile of hazards in your jurisdiction
- Identification of action items (projects) to reduce vulnerability to hazards identified

Review Crosswalk

Comparing the Local Mitigation Plan Review Crosswalk with the Local Mitigation Plan Review Tool Regulation Checklist

1. REGULATION CHECKLIST Regulation (44 CFR 201.6 Local Mitigation Plans)	CROSSWALK REFERENCE #
ELEMENT A. PLANNING PROCESS	
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	2A, 3A, 4A, 4B
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	4D
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	4C
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	4E
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	2Dii
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	1Bii, 1Biii, 1Civ
ELEMENT A - CHANGES FROM THE CROSSWALK • A2 clarifies the interpretation of the CFR to involve neighboring communities, agencies involved in hazard mitigation and those with authority to regulate development. • A5 and A6 tweaks the Plan Maintenance requirements into the Planning Process element.	

Action Items

- Implement the Texas Individual Tornado Safe Room Rebate Program
- Improve on flood plain management
- Property acquisition in the flood plain areas
- Improve on building code enforcement
- Purchase of outdoor sirens

FEMA Mitigation Crosswalk

- Document used to review mitigation action plans
- Standards in the document are used by TDEM and FEMA
- Any changes needed will be noted by the reviewer in the crosswalk



Resources for Mitigation Planning

- Local Mitigation Plan Review Crosswalk
  http://www.fema.gov/library/viewRecord.do?id=4878
- Hazard Mitigation Planning Resources
  http://www.fema.gov/hazard-mitigation-planning-resources
- Local Mitigation Plan Review Guide
  http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=4876

FEMA Mitigation Crosswalk

- In 2012 FEMA provided an updated or enhanced Crosswalk.
- The Local Mitigation Plan Review Crosswalk Comparison Tool
  http://www.fema.gov/library/viewRecord.do?id=4989

The Basic Elements of the Hazard Mitigation Action Plan (HazMAP)

- **The Planning Process:** Describes the individual mitigation planning processes for each participating jurisdiction satisfying requirements §201.6(c)(1), §201.6(b)(1), §201.6(b)(2), §201.6(b)(3), §201.6(c)(4)(i), and §201.6(c)(4)(iii).
- **Hazard Identification and Risk Assessment:** Describes the hazards identified, known national extent scales, location of hazards, previous events, and jurisdictional profiles satisfying requirements §201.6(c)(2)(i) and §201.6(c)(2)(ii).
- **Mitigation Strategy:** Describes the county-wide goals established by the Local Mitigation Strategy and the Mitigation Action Items for each jurisdiction satisfying requirements §201.6(c)(3), §201.6(c)(3)(i), §201.6(c)(3)(ii), §201.6(c)(3)(iii), and §201.6(c)(3)(iv), and §201.6(c)(4)(ii).
- **Plan Review, Evaluation and Implementation (applicable for plan updates only):** Describes the monitoring, evaluating, updating, plan incorporation, and future public updates for each participating jurisdiction satisfying requirements §201.6(d)(3).
- **Plan Adoption:** Describes and provide support documentation of the plans formal adoption for each participating jurisdiction, satisfying requirements §201.6(c)(5).
- **Attachment A:** Public Meeting Announcement
- **Attachment B:** Verification of Planning Meetings
- **Attachment C:** Adoption Resolutions

Planning Process

- Plan ready for submission
  - Dallas County will submit the final draft plan to State
  - State reviews and then forwards to FEMA for final approval

FEMA

Planning Process

- Three Meeting Groups:
  1. Dallas County HazMAP Working Group Meetings
  2. Hazard Mitigation Planning Team (HMPT) Meetings
  3. Public Meetings



Why should our jurisdiction participate?

- Money for projects e.g. Tornado Safe Room Rebate Program
  - Hazard Mitigation Grant Program (HMGP)
  - Pre-Disaster Mitigation Grant (PDM)
  - Flood Mitigation Assistance (FMA)
  - Repetitive Flood Claims(RFC)
  - Severe Repetitive Loss (SRL)
    - Over $750,000,000 in HMGP funding alone in Texas since 2001
- Hazard analysis for your jurisdiction
- Identify action items (mitigation projects)

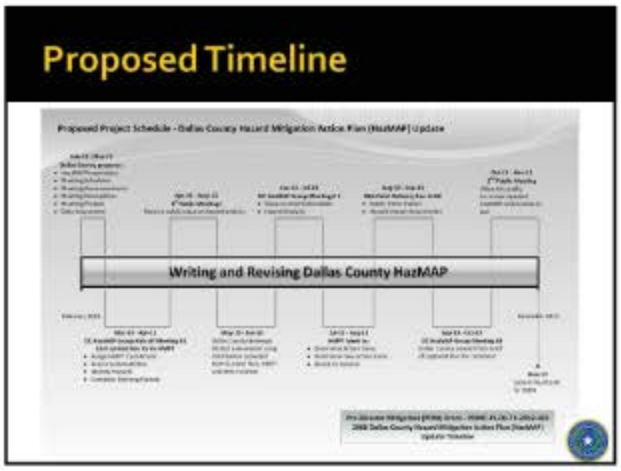
Planning Process



Next Steps

- Initial Meeting Packet
  - Overview of planning process
  - Form HMPT for each jurisdiction
  - Vulnerability assessment
  - Identify specific hazards
  - Identify overall mitigation goals
  - Document HMPT & public meetings

3


Proposed Timeline
Writing and Revising Dallas County HazMAP


Questions?
Michael Gaciri
Hazard Mitigation Specialist
michael.gaciri@dallascounty.org
Tel: 214-653-6962

Michael Gaciri

From:	Michael Gaciri
Sent:	Thursday, April 04, 2013 12:04 PM
To:	'David Haas (dhaas@cityofbalchsprings.com)'; 'Gary Brown (gbrown@cityofbalchsprings.com)'; john.ballard@cedarhilltx.com; 'Mike Burns (firechief@cockrell-hill.tx.us)'; 'Rick Nessner (ricnessner@aol.com)'; jsmith@desototexas.gov; 'David Giordano (dgiordano@ci.duncanville.tx.us)'; 'Phillip Prasifka (chiefofpolice@glennheights.com)'; Stacey Hickson (shickson@hutchinsfirerescue.org); 'Frank McElligott (chief@hutchinspd.org)'; tgriffith@lancaster-tx.com; Tommy Lemond (tlemond@seagoville.us); 'Chief Trent Mackey (trentmackey@spcglobal.net)'; 'mhamilton@cityofwilmer.com'; 'Pat Adamcik (padamcik@lancaster-tx.com)'; 'John O'Neal'; 'John Murphy (john.murphy@cityofcarrollton.com)'; bsimpkins@ci.coppell.tx.us; Guthrie, Gregory (gregory.guthrie@dallascityhall.com); Steve Parker (steve.parker@farmersbranch.info); 'Chris Vinson (cvinson@hpdps.org)'; pmcmacken@cityofirving.org; 'Billy Owens'; mistie.gardner@cor.gov; 'Matthew Garrett'; gharris@rowlett.com; dkendrick@cityofsachse.com; 'Randy Howell (rhowell@uptexas.org)'; rocky.vaz@dallascityhall.com; Francisco San Miguel
Cc:	Scott Greeson; Doug Bass; Larry Thompson; Rodrick Jones; (osem.osem@dallascounty.org) (osem.osem@dallascounty.org)
Subject:	Dallas County HazMAP Kickoff Meetings

Good Afternoon Everyone,

Dallas County Office of Homeland Security and Emergency Management (HSEM) would like to invite all jurisdictions participating in the Dallas County Hazard Mitigation Action Plan Project HazMAP) to a kickoff meeting. The kickoff meeting will provide some resources that participating jurisdictions may use in the gathering of data needed for the Hazard Mitigation Plan. We will also be discussing planning requirements that participating jurisdictions must complete in order to successfully complete this project. Having your jurisdictions represented and on board will be critical for the success of the project. We encourage you to invite members that could serve on your jurisdiction's planning team such as public works, PD, Fire, etc...

HSEM will conduct two identical kickoff meetings. To this end, we have divided participating jurisdictions into two geographic groups - the northern and the southern jurisdictions. The details of the respective meetings are as follows:

- **Southern Jurisdictions** include Balch Springs, Cedar Hill, Cockrell Hill, Combine, Desoto, Duncanville, Glenn Heights, Hutchins, Lancaster, Seagoville, Sunnyvale and Wilmer. These jurisdictions will meet in Cedar Hill, TX
  - **Date:** Wednesday, April 30, 2013
  - **Location:** Training Room – Fire Station 211
    1212 W. Belt Line Rd.
    Cedar Hill, TX 75104
  - **Time:** 1:30pm – 3:00pm

- **Northern Jurisdictions** include Addison, Carrollton, Coppell, Dallas, Farmers Branch, Highland Park, Irving, Richardson, Rowlett, Sachse and University Park. These jurisdictions will meet in Addison, TX
  - **Date:** Thursday, May 1, 2013
  - **Location:** 4798 Airport Parkway, (the corner of Addison Road and Airport Parkway)
    Addison 75001
  - **Time:** 2:00 pm – 3:30 pm

1

Please contact me if you have any questions or concerns. I look forward to seeing you at your jurisdiction's respective kickoff meetings. Thank you

Regards,

Mike Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
Tel: 214-653-6962
Fax: 214-653-7988
Email: michael.gaciri@dallascounty.org

RODRICK JONES rljones@dallascounty.org

Matthew Garrett Matthew.garrett@cor.gov

M G mgaciri@gmail.com

Raymond Rivas rrivas@mesquitefire.org

rocky vaz rocky.vaz@dallascityhall.com

John ONeal joneal@addisontx.gov

Billy Owens bowens@cityofirving.org

Scott Greeson scott.greeson@dallascounty.org

Elliott Reep elliott.reep@cityofcarrollton.com

Angie Strickler astrickler@nctcog.org

Greg Guthrie gregory.guthrie@dallascityhall.com

Rick Pyle rpyle@hpdps.org

Dallas County

Office of Homeland Security and Emergency Management (HSEM)

June 17, 2013

Hazard Mitigation Planning Team Meeting

Current Hazard Mitigation Action Plan (HazMAP)

- Developed on behalf of Dallas County by NCTCOG
- Adopted in 2009
- 11 jurisdictions
- Current Update23 of the 26 jurisdictions



Hazard Mitigation Strategy - Planning Process

- Jurisdictions are required to develop a Hazard Mitigation Plan as a condition of receiving Hazard Mitigation Assistance (HMA) funding
- Requirements and procedures for local mitigation plans are found in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201.6 (44 CFR Part 201.6.)

Planning Process

- The planning process is as important as the plan itself



What's in a HazMAP Plan?

- Planning and maintenance process
- Planning Area - Description of your jurisdiction
- Risk Assessment - Profile of hazards in your jurisdiction
- Mitigation Strategy - Action items (projects)
- Adoption and Supporting documentation

Planning Process Overview

1. Form and organize teams
   - ✓ Hazard Mitigation Planning Team
2. Review existing plan, studies, and laws
3. Involve public and other stakeholders
4. Document the process

1

Form and Organize Teams

- Form Hazard Mitigation Planning Team (HMPT)
  - Each jurisdiction will form a HMPT
  - Assign Hazard Mitigation Planning Coordinator (HMPC)
  - Identify experts to assist in process
  - Identify community resources

Hazard Mitigation Planning Team (HMPT)

- HMPT can comprise of representatives from various departments and planning stakeholders within a jurisdiction. These could include:
  - Public Works
  - Public Health
  - Public Safety
  - City/Economic Planning
  - Elected Officials
  - College & School Officials
  - Other stakeholders & interest groups

Role of HMPT

- Assess and identify geographically specific hazards
- Set goals and mitigation action items
- Conduct Capabilities Assessment
  - Planning and Regulatory – Plans, studies and laws
  - Administrative and Technical – personnel
  - Financial – Funding sources
  - Educational and Outreach – public education
- Review and provide input to the drafts developed in HazMAP

Assessment Resources

- Current HazMAP plan
- Storm water studies
- Engineering reports
- Floodplain ordinances
- State Hazard Mitigation Plan
- Comprehensive Plan
- Land Use Plans
- Building Codes
- Capital Improvement Plans

Plan Update Requirements

- Must describe the process used to review and analyze each section of the plan
- Whether or not a section is changed, the process the team took to make that decision must be documented
- Continued public involvement may be discussed in this section

Hazard Identification Risk Assessment (HIRA) Tool

- Hazards Identified in the Current Dallas Mitigation Action Plan
- Include Additional hazards, if any
  - Frequency
  - Probability
  - Severity
  - Impact of People, Property and Environment

2

Deliverable Packets

- Mid-Point Deliverable Packet
  - Hazard Impact Analysis
  - Identify Action or Mitigation Items

Documenting Local Match



3

Michael Gaciri

From:	Michael Gaciri
Sent:	Friday, July 12, 2013 12:13 PM
To:	'John O'Neal (joneal@addisontx.gov)'; 'David Haas (dhaas@cityofbalchsprings.com)'; 'Gary Brown (gbrown@cityofbalchsprings.com)'; 'John Murphy (john.murphy@cityofcarrollton.com)'; 'Elliott Reep (elliott.reep@cityofcarrollton.com)'; john.ballard@cedarhilltx.com; Skyla Pellum (spellum@ci.duncanville.tx.us); firechief@cockrell-hill.tx.us; 'Rick Nessner (ricnessner@aol.com)'; bradsimpkins@yahoo.com; 'Alisha.Gimbel@cor.gov'; Ellis, Joseph (joseph.ellis@dallascityhall.com); jduffield@desototexas.gov; 'Michael Laws (mlaws@desototexas.gov)'; Sam Rohde (srohde@ci.duncanville.tx.us); Steve Parker (steve.parker@farmersbranch.info); Don Ross (don.ross@farmersbranch.info); Tim Dedear (tim.dedear@farmersbranch.info); 'rpyle@hpdps.org'; 'jcarriere@cityofirving.org'; tgriffith@lancaster-tx.com; mistie.gardner@cor.gov; Lee Shaw (lshaw@ci.rowlett.tx.us); 'dpoovey@rowlett.com'; 'rcoleman@cityofsachse.com'; Tommy Lemond (tlemond@seagoville.us); trentmackey@sbcglobal.net; Richard Adkins (richard.j.adkins@gmail.com); 'rhowell@uptexas.org'; mhamilton@cityofwilmer.com
Cc:	Scott Greeson; Doug Bass; Rodrick Jones; Larry Thompson
Subject:	2nd Dallas County Hazard Mitigation Planning Working Group Meeting

Good Afternoon,
Dallas County Office of Homeland Security and Emergency Management (HSEM) would like to invite you to the 2nd Dallas County Hazard Mitigation Planning Working Group meeting. The details of the meeting are as follows:

Date: Wednesday, July 24, 2013
Location: Richardson Civic Center 411 West Arapaho Road, Richardson, TX 75080
Time: 10:30 am

The purpose of this meeting is to discuss the initial deliverables for the Dallas County HazMAP Update process as outlined in the proposed work plan schedule distributed at the kick off meetings. The discussions at the meeting will include:

1. Hazard Identification and Risk Analysis (HIRA) Form
2. Capability Assessment – This is a product of reviewing your jurisdictions current capabilities in handling the hazards identified above or reviewing and changing capabilities identified in the original plans your jurisdictions may have in place
3. Mitigation Goals – These could be a by-product of the capabilities assessment. It is possible that some of the gaps identified in the in the capabilities assessment could serve as mitigation goals

If your jurisdictions has already taken the above steps and have completed them, your participation at the meeting will be very much appreciated as you can provide ideas to other jurisdictions on what you did to complete these tasks.

We look forward to seeing you at the meeting.

Please contact me if you have any questions or concerns about the meeting or the HazMAP Update process.

Sincerely,

Mike Gaciri
Hazard Mitigation Specialist

1

DALLAS COUNTY HAZMAP WORKING GROUP MEETING SIGN-IN SHEET

Jurisdiction:	DALLAS COUNTY	**Meeting Date:**	Wednesday, July24, 2013
Facilitator:	MICHAEL GACIRI, DALLAS COUNTY HSEM	**Place/Room:**	Richardson Civic Center 411 West Arapaho, Richardson, TX 75080

ATTENDEE SIGN IN

Name	Title	Jurisdiction/Company	Phone	E-Mail
RICK COLEMAN	FIRE CHIEF	SACHSE FIRE	469-429-9810	RCOLEMAN@CITYOFSACHSE.COM
DAVID HAAS	EMC	BACH SPRINGS	214-850-6581	DHAAS@CITYOFBACHSPRINGS.COM
Tommy Lemond	Fire Chief	Seagoville	214-537-8076	TLEMOND@seagoville.us
RICHARD ADKINS	FF/EMT	SUNNYVALE	214.244.8192	RICHARD.J.ADKINS@GMAIL.COM
Alisha Ginibel	Prep. + Mit. Coord.	Richardson	214-544-5879	alisha.ginibel@gmail.com
Mike Nolen	F. Marshal	UP	2149875382	mnolen@uptexas.org
JAMES ROOTE	INTERIM ASST. CHIEF	DUNCANVILLE FIRE	972-780-4920	JROOTE@CI.DUNCANVILLE.TX.US
John ONeal	Fire Chief	Addison Fire	972 450 7203	joneal@addisontx.gov
Don Ross	PREP & MIT COORD	FARMERS BRANCH	214-557-2765	DONALD.PROSS@VERIZON.NET
Shyla Pellum	EMERGENCY MGT ADMIN	DESOTO CEDAR HILL DUNCANVILLE	972 780-5851	spellum@ci.duncanville.tx.us

DALLAS COUNTY HAZMAP WORKING GROUP MEETING SIGN-IN SHEET

Jurisdiction:	DALLAS COUNTY	**Meeting Date:**	Wednesday, July24, 2013
Facilitator:	MICHAEL GACIRI, DALLAS COUNTY HSEM	**Place/Room:**	Richardson Civic Center 411 West Arapaho, Richardson, TX 75080

ATTENDEE SIGN IN

Name	Title	Jurisdiction/Company	Phone	E-Mail
Doug Kendrick	FC/EMC	Rowlett	972-412-6230	dkendrick@rowlett.com

DALLAS COUNTY HAZMAP WORKING GROUP MEETING SIGN-IN SHEET

Jurisdiction:	DALLAS COUNTY	**Meeting Date:**	Wednesday, July24, 2013
Facilitator:	MICHAEL GACIRI, DALLAS COUNTY HSEM	**Place/Room:**	Richardson Civic Center 411 West Arapaho, Richardson, TX 75080

ATTENDEE SIGN IN

Name	Title	Jurisdiction/Company	Phone	E-Mail
Jason Carriere	EMC	Irving	972-721-2182	jcarriere@cityofirving.org
Greg Goedecker	EMP	Irving	469-744-5904	ggoedecker@cityofirving.org
Rick Pyle	Assistant Chief	Highland Park	214 559 9450	rpyle@hpdps.org
Lindsey Dusek	Intern - Fire	Carrollton	713-882-5474	
Mark Haseloff	Asst Chief	Carrollton	972 466 3210	MARK.HASELOFF@CITYOFCARROLLTON.COM
Elliott Reep	EMC	Carrollton	972 466 4789	elliott.reep@cityofcarrollton.com
SCOTT GREEN	PLANNING	DCHSEM		
KEVIN ODEN	OEM	DALLAS	214-670-4276	KEVIN.ODEN@DALLASCITYHALL.COM
Joe Ellis	OEM	Dallas	214-670-4341	joseph.ellis@dallascityhall.com

Dallas County

Office of Homeland Security and Emergency Management (HSEM)
June 17, 2013

Hazard Mitigation Planning Team Meeting

Current Hazard Mitigation Action Plan (HazMAP)

- Developed on behalf of Dallas County by NCTCOG
- Adopted in 2009
- 11 jurisdictions
- Current Update23 of the 26 jurisdictions



Hazard Mitigation Strategy - Planning Process

- Jurisdictions are required to develop a Hazard Mitigation Plan as a condition of receiving Hazard Mitigation Assistance (HMA) funding
- Requirements and procedures for local mitigation plans are found in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201.6 (44 CFR Part 201.6.)

Planning Process

- The planning process is as important as the plan itself



What's in a HazMAP Plan?

- Planning and maintenance process
- Planning Area - Description of your jurisdiction
- Risk Assessment - Profile of hazards in your jurisdiction
- Mitigation Strategy - Action items (projects)
- Adoption and Supporting documentation

Planning Process Overview

1. Form and organize teams
   - ✓ Hazard Mitigation Planning Team
2. Review existing plan, studies, and laws
3. Involve public and other stakeholders
4. Document the process

1

Form and Organize Teams

- Form Hazard Mitigation Planning Team (HMPT)
  - Each jurisdiction will form a HMPT
  - Assign Hazard Mitigation Planning Coordinator (HMPC)
  - Identify experts to assist in process
  - Identify community resources

Hazard Mitigation Planning Team (HMPT)

- HMPT can comprise of representatives from various departments and planning stakeholders within a jurisdiction. These could include:
  - Public Works
  - Public Health
  - Public Safety
  - City/Economic Planning
  - Elected Officials
  - College & School Officials
  - Other stakeholders & interest groups

Role of HMPT

- Assess and identify geographically specific hazards
- Set goals and mitigation action items
- Conduct Capabilities Assessment
  - Planning and Regulatory – Plans, studies and laws
  - Administrative and Technical – personnel
  - Financial – Funding sources
  - Educational and Outreach – public education
- Review and provide input to the drafts developed in HazMAP

Assessment Resources

- Current HazMAP plan
- Storm water studies
- Engineering reports
- Floodplain ordinances
- State Hazard Mitigation Plan
- Comprehensive Plan
- Land Use Plans
- Building Codes
- Capital Improvement Plans

Plan Update Requirements

- Must describe the process used to review and analyze each section of the plan
- Whether or not a section is changed, the process the team took to make that decision must be documented
- Continued public involvement may be discussed in this section

Hazard Identification Risk Assessment (HIRA) Tool

- Hazards Identified in the Current Dallas Mitigation Action Plan
- Include or remove hazards, if any
  - Frequency
  - Probability
  - Severity
  - Impact of People, Property and Environment

2

2/18/2014

Dallas County

Department of Homeland Security and Emergency Management (HSEM)

Dallas County HazMAP Working Group Meeting

Update Timeline



Dallas County HIRA



Capabilities Assessment Review

- Planning and Regulatory – Plans and Laws for growth and development
- Administrative and Technical – Personnel & Tools
- Financial – How to fund mitigation actions
- Educational and Outreach – Education & Outreach programs

Capabilities Assessment Review

- For those updating the Plan - Review what is already in the current plan
- For those developing Plan for first time – Use FEMA Mitigation Planning Handbook Worksheet
  - http://www.fema.gov/library/viewRecord.do?id=7209
  - Appendix A: Worksheet 4

Mitigation Goals

- Updating Jurisdictions - Review Goals in current plan
- Gaps identified could help you identify potential goals
- Public Responses

1

2/18/2014

Next Steps

- Mitigation Action Items
- Impact Assessment
  - Mapping Information
  - Prioritizing of Actions
- Prepare Narratives for planning process with jurisdiction

Questions/Comments

Contact Information

Michael Gaciri
Hazard Mitigation Specialist
Tel: 214-653-6962
Email: michael.gaciri@dallascounty.org

2

Michael Gaciri

From:	Michael Gaciri
Sent:	Thursday, January 30, 2014 9:48 AM
To:	John O'Neal (joneal@addisontx.gov); 'David Haas (dhaas@cityofbalchsprings.com)'; 'Elliott Reep (elliott.reep@cityofcarrollton.com)'; john.ballard@cedarhilltx.com; bhaney@cockrell-hill.tx.us; bsimpkins@coppelltx.gov; Ellis, Joseph (joseph.ellis@dallascityhall.com); Skyla Pellum (spellum@ci.duncanville.tx.us); jduffield@desototexas.gov; Sam Rohde (srohde@ci.duncanville.tx.us); steve.parker@farmersbranchtx.gov; tim.dedear@farmersbranchtx.gov; Terri Miller; 'chiefofpolice@glennheights.com'; Rick Pyle (rpyle@hpdps.org); 'Greg Goedecker'; 'jcarriere@cityofirving.org'; tgriffith@lancaster-tx.com; Alisha.Gimbel@cor.gov; Lee Shaw (lshaw@ci.rowlett.tx.us); Tommy Lemond (tlemond@seagoville.us); 'Jim Berman'; richard.adkins@townofsunnyvale.org; firechief@cockrell-hill.tx.us; Fire Chief - Sunnyvale; 'Mike Nolen'; mhamilton@cityofwilmer.com
Cc:	Doug Bass; Larry Thompson; Rodrick Jones; Dariela Rodriguez
Subject:	Dallas County HazMAP Update - Action Items
Attachments:	Copy of Dallas County Hazards and Action Items (2).xlsx; Mitigation Action Items for Consideration.docx
Importance:	High

Good Morning,
This email is to update you on the status of the Dallas County HazMAP Draft Plan. NCTCOG recently completed a review of the Dallas County HazMAP Update draft and have made some recommendations, most of which I can address at my end. However, a more critical item that needs to be addressed is the number of action items per hazard. **TDEM have indicated that their interpretation of the FEMA guidance requires that each jurisdiction must have at least two action items per hazard**. In going through the list of action items not all jurisdictions have met this requirement. I have attached an MS excel spreadsheet analysis showing the status of each jurisdictions action items for you review.

In order to resolve this matter and to submit the plan ASAP, I would like to propose the following steps:

1. Review attached documents. The excel document serves as summary of where your jurisdiction stands, while the MS word document is to serve as a quick reference guide to potential action items that you can add to what you already have. Please make the necessary additions so that the TDEM requirement is met.
2. I will be setting up a conference call meeting for **Monday, February 3, 2014** to discuss the documents and answer any questions you may have. Details will follow shortly. Please plan to attend this meeting as your participation will be crucial to completing the plan in the next couple of weeks.
3. The deadline for submitting the additional action items to me will be **Friday, February 7, 2014**. Please make every effort to forward your action items by then as we would like to submit the final draft on **Friday, February 14, 2014**.

Your cooperation in these matters will be highly appreciated.

If you have any questions please contact me.

Thank you.

Regards,

1

Mike Gaciri
Hazard Mitigation Specialist
Dallas County Homeland Security & Emergency Management
Tel: 214-653-6962
Email: michael.gaciri@dallascounty.org

Dallas County

Department of Homeland Security and Emergency Management (HSEM)

Hazard Mitigation Plan Update Deliverables

HIRA

- Each jurisdiction should submit a Hazard identification and Risk Analysis.
- Doesn't have to be duplicate the Dallas County HIRA
- Should identify the hazards and risks that affect your jurisdiction

Specific Hazard Analysis

- Identify all properties vulnerable to the Flooding, Wildfire and Dam/Levee Failure. See worksheet provided
- Provide Hazard and Vulnerability analysis for all specific/unique hazards identified - definition & type, location & extent, occurrence, vulnerability and probability of recurrence
- In addition we would like to look at the Critical / Essential infrastructure vulnerability analysis worksheet can assist identifying what these are

Capabilities Assessment

- Capabilities Assessment worksheet taken from the FEMA Local Mitigation Handbook - Worksheet 4
- Each jurisdiction is to submit a completed form. This will go into your jurisdictions annex.
- Straight forward document to complete and should not take a long time to complete

Mitigation Goals

- Mitigation goals and objectives remain the same as what is in the Current Plan.
- These were approved at the last meeting

Action Items

- Updating jurisdictions should provide a status report on the current action items identified in the plan – complete and submit
- Capabilities Assessment Worksheet can be helpful at this stage as it can help identify the gaps that exist – this gaps can be new action items
- Action Items ideas – see FEMA Mitigation ideas publication

1

Participating Departments

- Jurisdictions Organizational Chart
- Provide a list of your Hazard Mitigation Planning Team members – Name, Title and Departments or Agencies

Supporting Documentation

- Submit all documents used in your jurisdictions Planning meetings and decision arrived at in these meetings
- Sign in sheets, minutes, agendas, public outreach materials and any other materials that you may have used to support the mitigation work

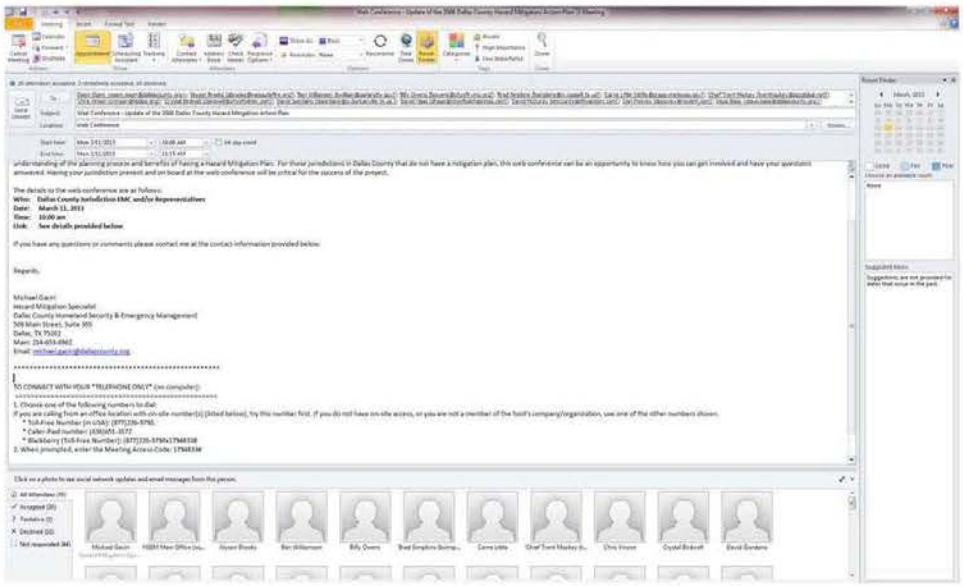
In Kind Reports

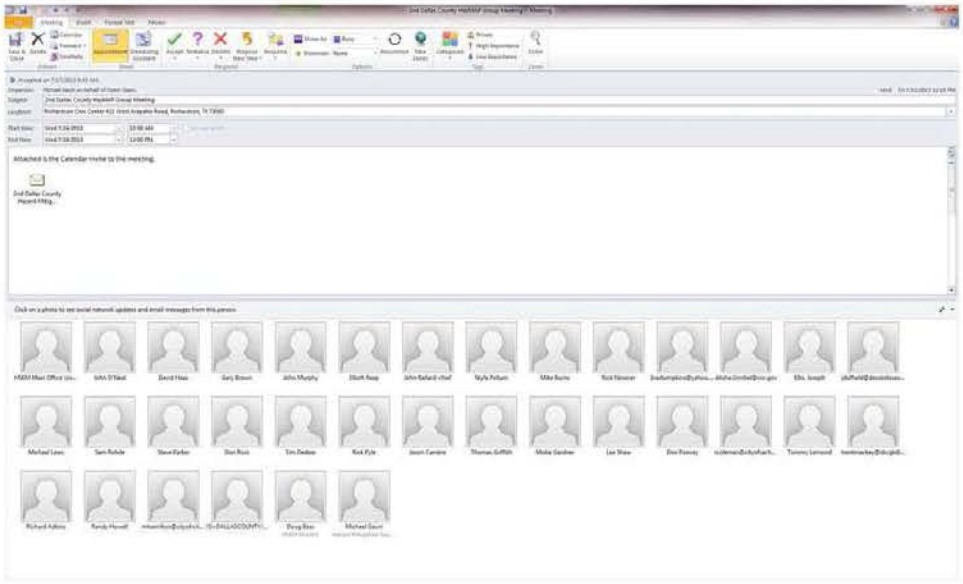
- NCTCOG is asking that we provide more information in the forms
- For any work done – track it and be specific
- Don't forget to sign the second page
- For mileage portion include maps to support

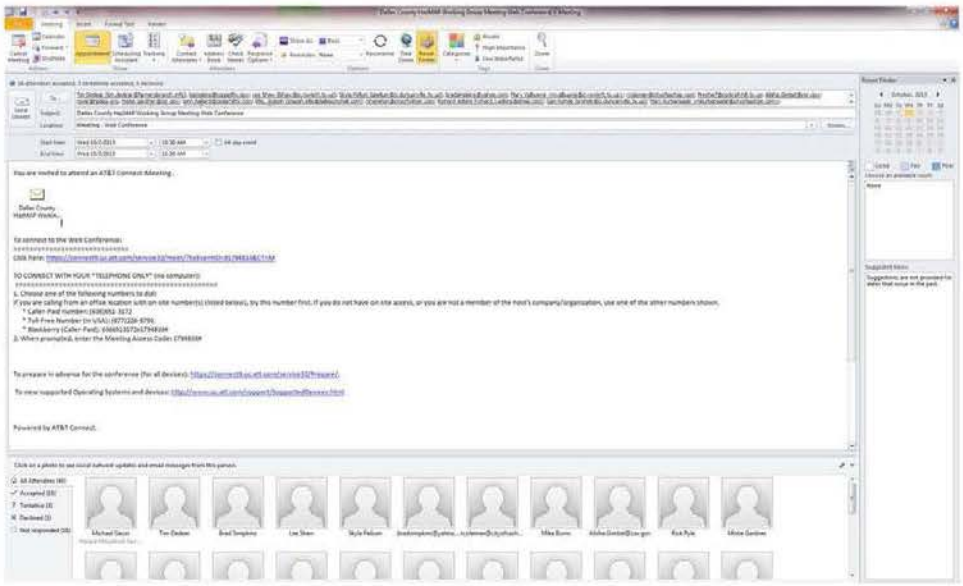
Questions?

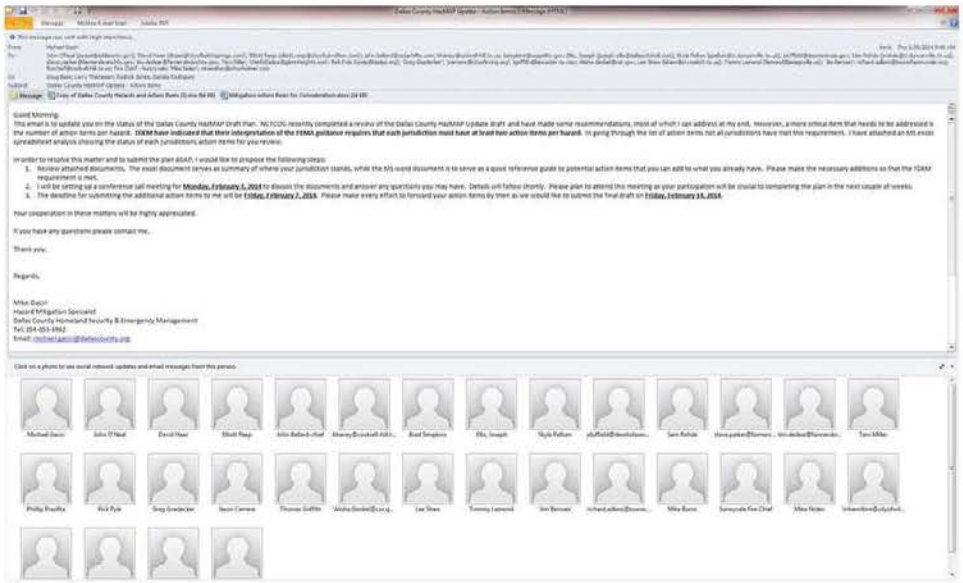
Michael Gaciri
Hazard Mitigation Specialist
michael.gaciri@dallascounty.org
Tel: 214-653-6962

2









Dallas County
Department of Homeland Security and Emergency Management (HSEM)
Hazard Mitigation Action Plan:
Action Item Requirements
February 3, 2014

Agenda

- Web Conference etiquette
- Roll Call
- Presentation
  - NCTCOG Review
  - In-Kind Report
- Questions

Plan Review

- NCTCOG provided the following feedback:
  - Action Items were deficient
  - Need to match natural hazards
  - Minor issues and formatting issues
- Other concern:
  - In-Kind Match

Action Items

- **201.6(c)(3)(iv) of the 2008 Local Guidance states:**

(ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard …

(iv) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Action Items

- Review your mitigation action items for your jurisdiction
- The goal is to have at least two (2) action items per hazard identified in the plan
- Use the resources provided and/or recommended

Action Items

- Forward the additional items to me by the end of the week – February 7, 2014
- Goal is to submit plan within 2 weeks – February 14, 2014

1

Meeting & Outreach Documentation

- Sign in sheets
- Agendas
- Meeting minutes
- Outreach programs materials
  - Flyers
  - Pictures of notices

In Kind Match

- Please take the time to consolidate all work by all persons who did any sort of work on this project.
  - Typing
  - Reviewing
  - Meetings
  - Travel time
  - Travel mileage
  - Etc.

Questions



2

AGENDA ITEM # 23

KEY FOCUS AREA: E-Gov

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): N/A

DEPARTMENT: Office of Financial Services

CMO: Jeanne Chipperfield, 670-7804

MAPSCO: N/A

SUBJECT

Authorize Supplemental Agreement No. 5 to the professional services contract with Diversified Utility Consultants, Inc., increasing the contract for expert consulting services and testimony in matters related to Atmos Energy Mid-Tex Division's "Dallas Annual Rate Review" filing - Not to exceed $80,000, from $350,000 to $430,000 - Financing: Current Funds (to be fully reimbursed by Atmos Energy)

BACKGROUND

Atmos Energy Mid-Tex Division (Atmos) is to make its fifth filing under the "Dallas Annual Rate Review" (DARR) tariff on or about January 15, 2016. It is necessary that filing be fully investigated to determine if the requested rates are justified and if the DARR is performing its intended purpose. Diversified Utility Consultants, Inc. (DUCI) has expertise in gas regulatory matters and is currently assisting the City with gas related issues before the Railroad Commission of Texas and in state district court. DUCI provided expert testimony on behalf of the City in Atmos' last full rate case (GUD 9869) and is familiar with the findings in that case. The DARR uses the methodologies and depreciation rates approved in the most recent full rate case. The City of Dallas contracted with DUCI (Resolution 120130) to assist the City in its review and settlement of the first DARR filing in 2012 which resulted in a reduction in rates to Dallas citizens. The DARR is intended to recognize changes in net investment and expenses without the expense of a full rate case. Subsequent to the 2012 DARR filing, Atmos filed a depreciation only rate case with the Railroad Commission of Texas (RCT). The City of Dallas intervened in that proceeding since the depreciation rates set by the RCT would impact future DARR filings by Atmos. The City contracted with DUCI to assist in the review of the depreciation rates and provide expert testimony before the RCT (supplemental agreement number one to the contract with DUCI). DUCI's participation in that proceeding was outside the scope of the original contract and was authorized by AA Number 122949. As a direct result of DUCI's testimony in that case, the RCT on December 4, 2012 issued a final order which reduced Atmos requested depreciation rates. The result is an annual savings to City of Dallas rate payers of between $220,000 and $260,000.

BACKGROUND (Continued)

The City again expanded the scope of the original contract by executing supplemental agreement number two to the contract with DUCI. Supplemental agreement number two increased the contract from $110,000 to $190,000 and necessary for DUCI to review Atmos' 2013 DARR filing. Based on DUCI's review the City was able to negotiate a reduction to Atmos' 2013 rate request of $1.3 million annually reducing the proposed increase from $3.1 million to $1.8 million. The City also expanded the scope of the original contract by executing supplemental agreement number three to the contract with DUCI. Supplemental agreement number three increased the contract from $190,000 to $270,000 and was necessary for DUCI to review Atmos' 2014 DARR filing. As a direct result of DUCI's review, the City was able to negotiate a settlement of Atmos' 2014 DARR request resulting in a reduction of the requested rates saving Dallas rate payers $2.1 million annually. The City expanded the scope of the original contract further by executing supplemental agreement number four to the Contract with DUCI. Supplemental agreement number four increased the contract from $270,000 to $350,000 and was necessary for DUCI to review Atmos' 2015 DARR filing. As a direct result of DUCI's review, the City was able to negotiate a settlement of Atmos' 2015 DARR request resulting in a reduction of the requested rates saving Dallas rate payers $2.4 million annually.

DUCI has intimate knowledge of the prior full rate case, the 2012 DARR settlement, the 2012 Atmos depreciation rate case, the 2013 DARR settlement, the 2014 DARR settlement, 2015 DARR settlement and is currently assisting the City with other appeals, both at the RCT and in State District Court. The City requires DUCI's expertise in order to adequately review Atmos' 2016 DARR filing. DUCI's review of this new filing is outside the scope of work in the current contract and supplemental agreements numbers 1, 2, 3 and 4.

Pursuant to the DARR, the City must make a determination as to appropriate rates within 135 days of the filing (May 28, 2016). By contracting with DUCI prior to the filing being received by the City, it will maximize the time that DUCI has to review the filing and make appropriate recommendations to the City.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

On January 11, 2012, Resolution No. 12-0130 authorized a professional services contract with DUCI.

On January 9, 2013, Resolution No. 13-0110 authorized supplemental agreement no. 2 to the professional service contract with DUCI.

PRIOR ACTION/REVIEW (Council, Boards, Commissions) (Continued)

On December 11, 2013, Resolution No. 13-2062 authorized supplemental agreement no. 3 to the professional service contract with DUCI.

On December 10, 2014, Resolution No. 14-2104 authorized supplemental agreement no. 4 to the professional service contract with DUCI.

Information about this item will be provided to the Budget, Finance & Audit Committee on January 4, 2016.

FISCAL INFORMATION

$80,000 - Current Funds (to be fully reimbursed by Atmos Energy)

M/WBE INFORMATION

Diversified Utility Consultants, Inc., is performing services under this contract with its own employees. There are no subcontracting opportunities.

ETHNIC COMPOSITION

Diversified Utility Consultants, Inc.

White Male	2	White Female	1
African-American Male	0	African-American Female	0
Hispanic Male	0	Hispanic Female	0
Other Male	0	Other Female	0

OWNER

Diversified Utility Consultants, Inc.

Jack Pous, President

WHEREAS, on June 22, 2011, Ordinance No. 28281, authorized tariff "DARR - Dallas Annual Rate Review" (DARR); and

WHEREAS, on January 11, 2012, Resolution No. 12-0130 authorized a professional services contract with Diversified Utility Consultants, Inc. for expert consulting services and testimony necessary in matters related to the 2012 DARR filing; and

WHEREAS, on December 12, 2012, Administrative Action No. 12-2949 authorized supplemental agreement no. 1 to the professional services contract with Diversified Utility Consultants, Inc. to expand the scope of the contract to provide for expert consulting services and testimony necessary in matters related to Atmos 2012 depreciation rate case filed with the Railroad Commission of Texas; and

WHEREAS, on January 9, 2013, Resolution No. 13-0110 authorized supplemental agreement no. 2 to the professional services contract with Diversified Utility Consultants, Inc. to expand the scope of the contract to provide for expert consulting services and testimony necessary in matters related to the 2013 DARR filing; and

WHEREAS, on December 11, 2013, Resolution No. 13-2062 authorized supplemental agreement no. 3 to the professional services contract with Diversified Utility Consultant, Inc. to expand the scope of the contract to provide for expert consulting services and testimony necessary in matters related to the 2014 DARR filing; and

WHEREAS, on December 10, 2014, Resolution No. 14-2104 authorized supplemental agreement no. 4 to the professional services contract with Diversified Utility Consultant, Inc. to expand the scope of the contract to provide for expert consulting services and testimony necessary in matters related to the 2015 DARR filing; and

WHEREAS, Atmos Energy Mid-Tex Division (Atmos) is required to make its annual filing under the tariff DARR on or about January 15, 2016; and

WHEREAS, the City requires outside assistance in reviewing the filing to determine fair and reasonable rates to be charged by Atmos; and

WHEREAS, Diversified Utility Consultants, Inc. has expertise in this area and has assisted the city in its most recent gas rate reviews; and

WHEREAS, the expert consulting services and testimony of Diversified Utility Consultants, Inc. are necessary in this matter.

Now, Therefore,

January 13, 2016

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That following approval as to form by the City Attorney, the City Manager is hereby authorized to enter into supplemental agreement no. 5 to a professional services contract with Diversified Utility Consultants, Inc., for expert consulting services and testimony necessary in Matters Related to the 2015 DARR filing, in an amount not to exceed $80,000, increasing the contract from $350,000 to $430,000.

SECTION 2. That the Chief Financial Officer is authorized to disburse, in periodic payments to Diversified Utility Consultants, Inc., an amount not to exceed $80,000 from Fund 0001, Dept BMS, Unit 1246, Obj. 3070, Encumbrance No. BMS1246D1601, Vendor No. 249678.

SECTION 3. That the Chief Financial Officer is authorized to deposit reimbursement revenue received from Atmos Energy Corp. to Fund 0001, Dept BMS, Unit 1246, Revenue Code 8428.

SECTION 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 24

KEY FOCUS AREA: Culture, Arts and Recreation and Educational Enhancements

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 9

DEPARTMENT: Park & Recreation

CMO: Willis Winters, 670-4071

MAPSCO: 37-C G H

SUBJECT

Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail located between the Mockingbird Pedestrian Bridge to Bath House at White Rock Lake - Not to exceed $148,820, from $1,171,690 to $1,320,510 - Financing: 2006 Bond Funds ($147,818) and 2003 Bond Funds ($1,002)

BACKGROUND

The original contract was awarded to A S Con, Inc. by City Council on June 25, 2014, by Resolution No. 14-1005 for hike and bike trail improvements at White Rock Lake East Lawther Trail located between Mockingbird Pedestrian Bridge to Bath House, in an amount not to exceed $1,171,690.00.

This action is to authorize Change No. 1 to the contract with A S Con, Inc., in an amount not to exceed $148,819.86, increasing the original contract amount from $1,171,690.00 to $1,320,509.86 for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail.

ESTIMATED SCHEDULE OF PROJECT

Began Construction	September 2014
Complete Construction	April 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

The Park and Recreation Board authorized proceeding with advertisement for construction procurement on January 23, 2014.

The Park and Recreation Board authorized award of the contract on June 5, 2014.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS) (Continued)

City Council authorized award of the contract on June 25, 2014, by Resolution No. 14-1005.

The Park and Recreation Board authorized Change Order No. 1 on November 19, 2015.

Information about this item will be provided to the Quality of Life & Environment Committee on January 11, 2016.

FISCAL INFORMATION

$147,817.86 - 2006 Bond Funds
$ 1,002.00 - 2003 Bond Funds

Construction Contract	$1,171,690.00
Change Order No. 1 (this action)	$148,819.86
Total amount not to exceed	$1,320,509.86

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

A S Con, Inc.

White Male	0	White Female	0
Black Male	0	Black Female	0
Hispanic Male	0	Hispanic Female	0
Other Male	1	Other Female	1

OWNER

A S Con, Inc.

Ali Safdarinia, President

MAP

Attached

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail located between the Mockingbird Pedestrian Bridge to Bath House at White Rock Lake - Not to exceed $148,820, from $1,171,690 to $1,320,510 - Financing: 2006 Bond Funds ($147,818) and 2003 Bond Funds ($1,002)

A S Con, Inc. is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractor.

PROJECT CATEGORY: Construction

LOCAL/NON-LOCAL CONTRACT SUMMARY - THIS ACTION ONLY

	Amount	Percent
Local contracts	$146,225.86	98.26%
Non-local contracts	$2,594.00	1.74%
TOTAL THIS ACTION	$148,819.86	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION THIS ACTION

Local Contractors / Sub-Contractors

Local	Certification	Amount	Percent
Berumen Construction	HMMB61381N0416	$104,408.00	71.40%
Total Minority - Local		$104,408.00	71.40%

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE PARTICIPATION

	This Action		Participation to Date	
	Amount	Percent	Amount	Percent
African American	$0.00	0.00%	$0.00	0.00%
Hispanic American	$104,408.00	70.16%	$649,818.00	49.21%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$104,408.00	70.16%	$649,818.00	49.21%



November 19, 2015

White Rock Lake Park, East Lather Trail
(between Mockingbird Pedestrian Bridge to Bath House)

Mapsco
37 C G H

District
9

January 13, 2016

WHEREAS, on June 25, 2014, by Resolution No. 14-1005, A S Con, Inc. was awarded a contract for hike and bike trail improvements at White Rock Lake East Lawther Trail located between Mockingbird Pedestrian Bridge to Bath House, in an amount not to exceed $1,171,690.00; and

WHEREAS, this action will authorize Change No. 1 to the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail, in an amount not to exceed $148,819.86, increasing the original contract amount from $1,171,690.00 to $1,320,509.86.

Now, Therefore,

BE IT RESOLVED BY THE PARK AND RECREATION BOARD AND THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the City Manager is hereby authorized to execute Change Order No. 1 to the contract with A S Con, Inc. for additional scope of work to include: surveying, clearing, culverts, rock excavation and other miscellaneous items at White Rock Lake East Lawther Trail, in an amount not to exceed $148,819.86, increasing the original contract amount from $1,171,690.00 to $1,320,509.86.

SECTION 2. That the Chief Financial Officer is hereby authorized to disburse an amount not to exceed $148,819.86 to A S Con, Inc., as follows:

(2003) Neighborhood Park and Recreation Facilities Fund Fund 5R05, Department PKR, Unit T331, Object 4599 Activity RFSI, Program PK06T331, CT-PKR14019456 Commodity 91200, Vendor 261853	$1,002.00
(2006) Park and Recreation Facilities Improvement Fund Fund 2T00, Department PKR, Unit T331, Object 4599 Activity RFSI, Program PK06T331, CT-PKR14019456 Commodity 91200, Vendor 261853	$125,898.00
(2006) Neighborhood Park and Recreation Facilities Fund Fund 7T00, Department PKR, Unit T331, Object 4599 Activity RFSI, Program PK06T331, CT-PKR14019456 Commodity 91200, Vendor 261853	$601.77
(2006) Neighborhood Park and Recreation Facilities Fund Fund 8T00, Department PKR, Unit T331, Object 4599 Activity RFSI, Program PK06T331, CT-PKR14019456 Commodity 91200, Vendor 261853	$2,412.40

SECTION 2. (Continued)

(2006) Neighborhood Park and Recreation Facilities Fund Fund BT00, Department PKR, Unit T331, Object 4599 Activity RFSI, Program PK06T331, CT-PKR14019456 Commodity 91200, Vendor 261853	$18,905.69
Total amount not to exceed	$148,819.86

SECTION 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 25

KEY FOCUS AREA: Culture, Arts and Recreation and Educational Enhancements

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 1

DEPARTMENT: Park & Recreation

CMO: Willis Winters, 670-4071

MAPSCO: 43-Z 44-W

SUBJECT

Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail located from Stevens Park tennis courts to Hampton Road - Not to exceed $84,954, from $1,131,842 to $1,216,796 - Financing: 2006 Bond Funds

BACKGROUND

The original contract was awarded to A S Con, Inc. by City Council on February 25, 2015, by Resolution No. 15-0377 for a construction contract for a new trail at Stevens Park Golf Course and the tennis courts along Kessler Parkway and other miscellaneous items for the Coombs Creek Trail, Phase III located from Stevens Park tennis courts to Hampton Road, in an amount not to exceed $1,131,842.00.

This action will authorize Change Order No. 1 to the contract with A S Con, Inc., in an amount not to exceed $84,953.54, increasing the original contract amount from $1,131,842.00 to $1,216,795.54 for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail.

ESTIMATED SCHEDULE OF PROJECT

Began Construction	May 2015
Complete Construction	March 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

The Park and Recreation Board authorized proceeding with advertisement for construction procurement on November 6, 2014.

The Park and Recreation Board authorized award of the contract on February 5, 2015.

City Council authorized award of the contract on February 25, 2015, by Resolution No. 15-0377.

The Park and Recreation Board authorized Change Order No. 1 on November 19, 2015.

Information about this item will be provided to the Quality of Life & Environment Committee on January 11, 2016.

FISCAL INFORMATION

2006 Bond Funds - $84,953.54

Construction Contract	$1,131,842.00
Change Order No. 1 (this action)	$84,953.54
Total amount not to exceed	$1,216,795.54

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

A S Con, Inc.

White Male	0	White Female	0
Black Male	0	Black Female	0
Hispanic Male	0	Hispanic Female	0
Other Male	1	Other Female	1

OWNER

A S Con, Inc.

Ali Safdarinia, President

MAP

Attached

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize an increase in the contract with A S Con, Inc. for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail located from Stevens Park tennis courts to Hampton Road - Not to exceed $84,954, from $1,131,842 to $1,216,796 - Financing: 2006 Bond Funds

A S Con, Inc. is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractor.

PROJECT CATEGORY: Construction

LOCAL/NON-LOCAL CONTRACT SUMMARY - THIS ACTION ONLY

	Amount	Percent
Local contracts	$73,593.54	86.63%
Non-local contracts	$11,360.00	13.37%
TOTAL THIS ACTION	$84,953.54	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION THIS ACTION

Local Contractors / Sub-Contractors

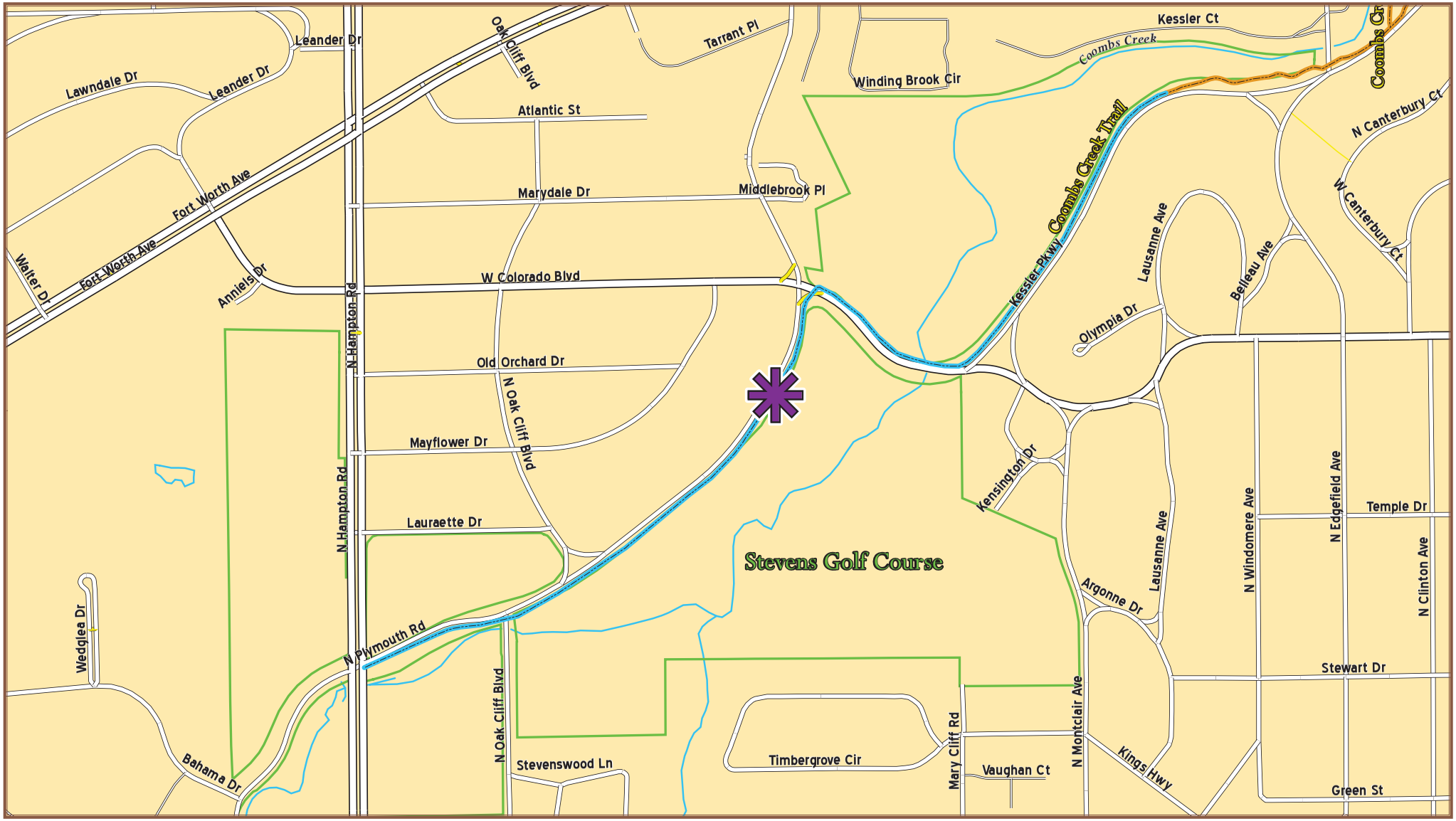
Local	Certification	Amount	Percent
Berumen Construction	HMMB61381N0416	$36,596.10	49.73%
Total Minority - Local		$36,596.10	49.73%

Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE PARTICIPATION

	This Action		Participation to Date	
	Amount	Percent	Amount	Percent
African American	$0.00	0.00%	$707,656.10	58.16%
Hispanic American	$36,596.10	43.08%	$0.00	0.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$36,596.10	43.08%	$707,656.10	58.16%



0 190 380 760 1,140 Feet

N W E S

November 19, 2015

Coombs Creek Trail
(N Hampton Rd to Stevens Golf Course)

Mapsco
43 Z
44 W

District
1

January 13, 2016

WHEREAS, on February 25, 2015, by Resolution No. 15-0377, A S Con, Inc. was awarded a construction contract for a new trail at Stevens Park Golf Course and the tennis courts along Kessler Parkway and other miscellaneous items for the Coombs Creek Trail, Phase III located from Stevens Park tennis courts to Hampton Road, in an amount not to exceed $1,131,842.00; and

WHEREAS, this action will authorize Change Order No. 1 to the contract with A S Con, Inc., in an amount not to exceed $84,953.54, increasing the original contract amount from $1,131,842.00 to $1,216,795.54 for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail.

Now, Therefore,

BE IT RESOLVED BY THE PARK AND RECREATION BOARD AND THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the City Manager is hereby authorized to execute Change Order No. 1 to the contract with A S Con, Inc. for additional scope of work to include: additional flagstone and trail widening; concrete pad; electrical conduit and wiring; modifications to irrigation line controllers; and other miscellaneous work at Coombs Creek Trail, in an amount not to exceed $84,953.54, increasing the original contract amount from $1,131,842.00 to $1,216,795.54.

SECTION 2. That the Chief Financial Officer is hereby authorized to disburse an amount not to exceed $84,953.54 from (2006) Park and Recreation Facilities Improvement Funds, Fund 2T00, Department PKR, Unit 7165, Object 4599, Activity HIBT, Program PB06P849, CT-PKR15019492, Commodity 91200, Vendor 261853.

SECTION 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 26

KEY FOCUS AREA: Culture, Arts and Recreation and Educational Enhancements

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 13

DEPARTMENT: Park & Recreation

CMO: Willis Winters, 670-4071

MAPSCO: 23-Z 24-W

SUBJECT

Authorize a public hearing to be held on February 10, 2016 to receive comments for the proposed use of a portion of the Bachman Creek Greenbelt located at 3900 Shorecrest Drive, totaling approximately 42,323 square feet, for driveway access and parking by QuikTrip Corporation that will benefit the park by providing parking, trail access, driveway, landscaping and other amenities to be constructed and maintained by QuikTrip Corporation for the benefit of the public – Financing: No cost consideration to the City

BACKGROUND

The City of Dallas owns municipal parkland known as Bachman Creek Greenbelt (approximately 41 acres) located at 3900 Shorecrest Drive, just north of Love Field Airport. This passive-use park is used for open space. A trail runs through the park along the north side of Bachman Creek which connects to and is a part of the Bachman Lake Park Trail in adjacent Bachman Lake Park to the west. Currently, there is no direct public accessible access to Bachman Creek Greenbelt for residential neighborhoods to the north. There is a need for direct, publicly accessible access to Bachman Creek Greenbelt for the surrounding neighborhood. QuikTrip proposes to construct and maintain a trailhead which includes parking, landscaping, seating, paving, and a drinking fountain. QuikTrip is proposing to allow itself and its patrons use of the proposed parkland access drive and parking lot. This portion of the park has always been turf and because of its unusual configuration has never been developed. The development of a trailhead at this location is a functional use of the space which will provide much needed access to the Bachman Lake Trail.

In compliance with the law, QuikTrip has determined that there is a need and that no feasible and prudent alternative exists and that all reasonable care has been taken so as to not damage the remainder of the park property and to mitigate any disruption of park services.

BACKGROUND (Continued)

In accordance with the Texas Parks and Wildlife Code, Chapter 26 (Sections 26.001 through 26.004) the City Council must advertise and hold a public hearing on the change of use of parkland.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

On December 3, 2015, the Park and Recreation Board authorized a public hearing to be held on February 10, 2016.

FISCAL INFORMATION

No cost consideration to the City.

OWNER

City of Dallas

MAPS

Attached



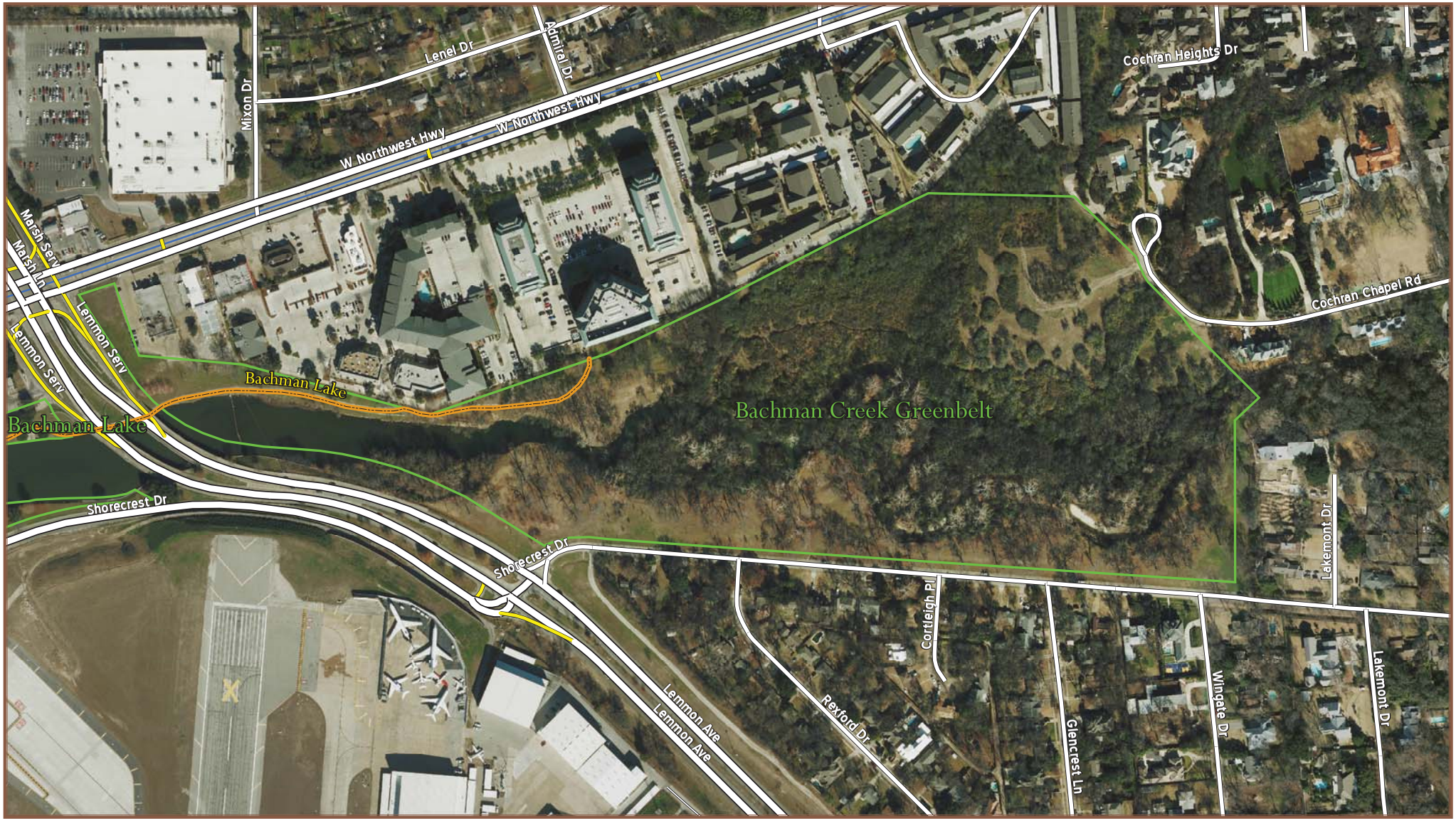
0 155 310 620 930 Feet

December 3, 2015

Bachman Creek Greenbelt
(3900 Shorecrest Dr.)

Mapsco
23 Z
24 W

District
13



0 120 240 480 720 Feet

N
W E
S

December 9, 2015

Bachman Creek Greenbelt

January 13, 2016

WHEREAS, the City of Dallas owns land in Dallas know as Bachman Creek Greenbelt located at 3900 Shorecrest Drive, north of Love Field Airport, which has been maintained by the City as parkland since 1930; and

WHEREAS, QuikTrip Corporation proposes to design, construct, and maintain a trailhead on approximately 42,323 square feet of parkland in Bachman Creek Greenbelt which will provide accessible public access to the existing hike and bike trail; and

WHEREAS, QuikTrip Corporation has requested a non-exclusive use of the trailhead, access driveway, and parking for itself and its patrons, and the Park and Recreation Board is agreeable to providing the property for this non-exclusive license; and

WHEREAS, the Texas Parks and Wildlife Code, Chapter 26 (Section 26.001 through 26.004), requires that before a municipality may approve any program or project that requires the use or taking of any public land designated and used as parkland, the governing body of such public municipality must determine that there is no feasible and prudent alternative to the use or taking of such land, and that the program or project includes all reasonable planning to minimize harm to the remainder of the park; and

WHEREAS, prior to making this determination, notice must be given and a public hearing be held relative to the proposed change of park use; and

WHEREAS, the City Council desires to give notice and hold such hearing in accordance with the law with respect to the utilization of Bachman Creek Greenbelt.

Now, Therefore,

BE IT RESOLVED BY THE PARK AND RECREATION BOARD AND THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the Park and Recreation Department is hereby authorized and directed to advise in writing of such proposed use of the park property by delivering a notice for publishing to the official newspaper to be advertised once each week for three consecutive weeks, the last publication to be not less than one week nor more than two weeks before the date of the hearing, which shall be held in the City Council Chambers on February 10, 2016.

SECTION 2. That the approval of the aforementioned project by the City Council, at the close of said hearing, shall be construed as making the proper findings as to the use, taking and conveyance of parkland, consistent with the Texas Parks and Wildlife Code and the Texas Local Government Code.

SECTION 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

LICENSE AGREEMENT
LEMMON AVE. & N.W. HIGHWAY
CITY BLOCK 4424

BEING a 42,323 square foot (0.972 acre) tract of land located in the City of Dallas, Dallas County, Texas, part of City Block no. 4424, part of the William C. Trimble Survey, Abstract No. 1484, and being part of that called 22.1324 acre tract of land described in deed to the City of Dallas as recorded in Volume 280, Page 40, Deed Records, Dallas County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at a 3" brass disk in concrete monument found for the northwest corner of Lot 5, Block A/5089, Northway Addition, an addition to the City of Dallas according to the plat thereof recorded in Volume 88231, Page 2676, Deed Records, Dallas County, Texas, said point being North 71 degrees 30 minutes 00 seconds East, a distance of 100.72 feet from the intersection of the southerly right-of-way line of Northwest Highway (100' R.O.W.) and the easterly right-of-way line of Lemmon Avenue (240' R.O.W.);

THENCE, along the westerly line of said Lot 5, South 18 degrees 30 minutes 00 seconds East, a distance of 209.00 feet to an "X" in concrete found for the southwest corner of said Lot 5;

THENCE, along the southerly line of said Lot 5, South 84 degrees 42 minutes 48 seconds East, a distance of 173.76 feet to a "Mag-Nail" set for the southeast corner of said Lot 5, being the southwest corner of a 0.676 acre tract of land described in deed to Admiral Flag Inc. as recorded in Volume 91056, Page 4426, Deed Records, Dallas County, Texas;

THENCE, over and across said 22.1324 acre City of Dallas tract of land as follows:
South 18 degrees 32 minutes 32 seconds East, a distance of 108.87 feet to a 5/8" iron rod set with red plastic cap stamped "R.P.L.S. 5199";

South 76 degrees 36 minutes 29 seconds West, a distance of 143.16 feet to an "X" in concrete set, being in the curving easterly right-of-way line of Lemmon Avenue (240' R.O.W.), said point being the beginning of a non-tangent curve to the right;

THENCE, along the easterly right-of-way line of Lemmon Avenue as follows:
Along said curve to the right through a central angle of 22 degrees 47 minutes 10 seconds, a radius of 453.69 feet, an arc length of 180.43 fee, a chord bearing of North 42 degrees 06 minutes 35 seconds West and a chord distance of 179.24 feet to a 5/8" iron rod set with red plastic cap stamped "R.P.L.S. 5199" ;

North 30 degrees 43 minutes 00 seconds West a distance of 215.00 feet to a 5/8" iron rod set with red plastic cap stamped "R.P.L.S. 5199", being in the southerly right-of-way line of Northwest Highway (100' R.O.W.);

THENCE, along the southerly right-of-way line of Northwest Highway, North 71 degrees 30 minutes 00 seconds East, a distance of 100.72 feet to the **POINT OF BEGINNING** and containing 42,323 square feet or 0.972 acres of land more or less.

BASIS OF BEARINGS: North line of Lot 5, Block A/5089, Northway Addition, Volume 86231, Page 2676, Deed Records, Dallas County, Texas held as North 31 degrees 30 minutes 00 seconds East.

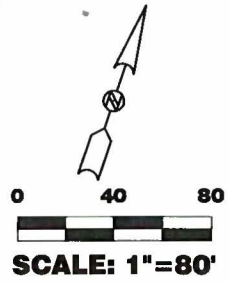


10/23/13

William J. Johnson
Registered Professional Land Surveyor No. 5426

Survey Consultants, Inc.
903 N. Bowser Road
Suite 240
Richardson, Texas 75081
(972) 424-7002 Voice
(972) 633-1702 Fax
WWW.SurveyConsultantsInc.Com

LICENSE AGREEMENT
LEMMON AVE. & N.W. HIGHWAY
CITY BLOCK 4424



BASIS OF BEARINGS
NORTH LINE OF LOT 5, BLOCK 5089
NORTHWAY ADDITION
(N71°30'00"E)
VOL. 88231, PG. 2676, D.R.D.C.T.

LEGEND

5/8" I.R.S.	5/8" IRON ROD SET WITH PLASTIC CAP STAMPED "R.P.L.S. 5199"
(C.M.)	CONTROLLING MONUMENT
D.R.D.C.T.	DEED RECORDS, DALLAS COUNTY, TEXAS
I.R.F.	IRON ROD FOUND
PG.	PAGE
P.O.B.	POINT OF BEGINNING
R.O.W.	RIGHT-OF-WAY
VOL.	VOLUME

0.5048 ACRES
LEAL PROPERTIES, INC.
VOL. 2002006, PG. 7150
D.R.D.C.T.

LOT 1, BLOCK 1/5087
NEC N.W. HWY. & MARSH ADDITION
VOL. 94188, PG. 4588
D.R.D.C.T.

NORTHWEST HIGHWAY
(100' R.O.W.)

P.O.B.
BRASS MON.
FND. (CM)

5/8" I.R.S.

N 71°30'00" E
100.72'

N 71°31'37" E 158.79'
LINE OF DIRECTIONAL CONTROL

"X" SET

LEMMON AVENUE
(240' R.O.W.)

N 30°43'00" W 215.00'

S 18°30'00" E 209.00'

0.676 ACRES
ADMIRAL FLAG, INC.
VOL. 91056, PG. 4426
D.R.D.C.T.

LOT 1, BLOCK A/5089
SHERWOOD WEST NO. 3
VOL. 79162, PG. 1284
D.R.D.C.T.

LOT 5, BLOCK A/5089
NORTHWAY ADDITION
VOL. 88231, PG. 2676
D.R.D.C.T.

"X" FND.
(C.M.)

5/8" I.R.S.

S 84°42'48" E 173.76'

LOT 3, BLOCK A/5089
CROW-FARRELL PLAZA
ON BACHMAN CREEK
VOL. 85231, PG. 2664
D.R.D.C.T.

42,323 SQUARE FEET
0.9716 ACRES

PART OF
CITY OF DALLAS TRACT
VOL. 280, PG. 40
D.R.D.C.T.

"MAG-NAIL"
SET

Delta=22°47'10"
Radius=453.69'
Length=180.43'
CB=N 42°06'35" W
CL=179.24'

BLOCK 4424

S 18°32'32" E
108.87'

"X"
SET

S 76°56'29" W 143.16'

5/8"
I.R.S.

(BACHMAN LAKE)
BLOCK 4424

EDGE OF WATER

REMAINDER OF
CITY OF DALLAS TRACT
VOL. 280, PG. 40
D.R.D.C.T.

STATE OF TEXAS
REGISTERED
WILLIAM J. JOHNSON
5426
PROFESSIONAL
LAND SURVEYOR

10/23/13

William J. Johnson
Registered Professional Land Surveyor No. 5426

Survey Consultants, Inc.
903 N. Bowser Road
Suite 240
Richardson, Texas 75081
(972) 424-7002 Voice
(972) 633-1702 Fax
WWW.SurveyConsultantsInc.Com

AGENDA ITEM # 27

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 5, 7

DEPARTMENT: Public Works Department
Water Utilities

CMO: Jill A. Jordan, P.E., 670-5299
Mark McDaniel, 670-3256

MAPSCO: 47W 57B 58J

SUBJECT

Authorize a professional services contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project for Lonsdale Avenue from Sarah Lee Drive to Lake June Road and two bridge repair projects along Second Avenue over White Rock Creek (list attached) - Not to exceed $186,047 - Financing: 2012 Bond Funds ($153,217) and Water Utilities Capital Improvement Funds ($32,830)

BACKGROUND

The consulting firm, TranSystems Corporation d/b/a TranSystems Corporation Consultants, was selected following a qualifications-based selection process in accordance with the City of Dallas procurement guidelines. This action will authorize a professional services contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project for Lonsdale Avenue from Sarah Lee Drive to Lake June Road and two bridge repair projects along Second Avenue over White Rock Creek.

The street petition project will include 33-feet wide reinforced concrete pavement, storm drainage, drive approaches, sidewalks, water and wastewater main improvements. The bridge repair projects will include the repair of defective bridge railings and pier foundation supports. The bridge projects will also repair spalls on the bridge substructure and bridge deck, as well as spot painting of steel bridge members to prevent corrosion.

BACKGROUND (Continued)

Street Petition Improvement	Council District	Amount
Lonsdale Avenue from Sarah Lee Drive to Lake June Road	5	$140,810.00
Bridge Repair		
Second Avenue over White Rock Creek (Bridge No. 8)	5, 7	$ 17,772.00
Second Avenue over White Rock Creek (Bridge No. 10)	5, 7	$ 27,465.00

ESTIMATED SCHEDULE OF PROJECTS

Street Petition Improvement	Begin Design	Complete Design
Lonsdale Avenue from Sarah Lee Drive to Lake June Road	March 2016	August 2016
Bridge Repair		
Second Avenue over White Rock Creek (Bridge No. 8)	March 2016	July 2016
Second Avenue over White Rock Creek (Bridge No. 10)	March 2016	July 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Transportation and Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

2012 Bond Funds - $153,217
Water Utilities Capital Improvement Funds - $32,830

Council District	Amount
5	$163,428.50
7	$ 22,618.50
Total	$186,047.00

Street Petition Improvement

Lonsdale Avenue from Sarah Lee Drive to Lake June Road

Design - PBW (this action)	$ 107,980.00
Design - DWU (this action)	$ 32,830.00
Construction	$1,392,683.60 (est.)
Total	$1,533,493.60 (est.)

Bridge Repair

Second Avenue over White Rock Creek (Bridge No. 8)

Design - PBW (this action)	$ 17,772.00
Construction	$192,948.80 (est.)
Total	$210,720.80 (est.)

Second Avenue over White Rock Creek (Bridge No. 10)

Design - PBW (this action)	$ 27,465.00
Construction	$278,955.60 (est.)
Total	$306,420.60 (est.)

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

TranSystems Corporation d/b/a TranSystems Corporation Consultants

Hispanic Female	0	Hispanic Male	5
African-American Female	3	African-American Male	1
Other Female	2	Other Male	5
White Female	6	White Male	24

OWNER

TranSystems Corporation d/b/a TranSystems Corporation Consultants

Garry Kraus, P.E., Vice President

MAPS

Attached.

Professional Services Contract

Project	Council District	Amount
Street Petition Improvement		
Lonsdale Avenue from Sarah Lee Drive to Lake June Road	5	$140,810.00
Bridge Repair		
Second Avenue over White Rock Creek (Bridge No. 8)	5, 7	$ 17,772.00
Second Avenue over White Rock Creek (Bridge No. 10)	5, 7	$ 27,465.00

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a professional services contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project for Lonsdale Avenue from Sarah Lee Drive to Lake June Road and two bridge repair projects along Second Avenue over White Rock Creek (list attached) - Not to exceed $186,047 - Financing: 2012 Bond Funds ($153,217) and Water Utilities Capital Improvement Funds ($32,830)

TranSystems d/b/a TranSystems Corporation Consultants is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractors.

PROJECT CATEGORY: Architecture & Engineering

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$186,047.00	100.00%
Total non-local contracts	$0.00	0.00%
TOTAL CONTRACT	$186,047.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

Local	Certification	Amount	Percent
Alliance Geotechnical Group	BMDB6934Y0116	$4,450.00	2.39%
Lim & Associates, Inc.	PMDB01647Y0416	$58,990.00	31.71%
Total Minority - Local		$63,440.00	34.10%

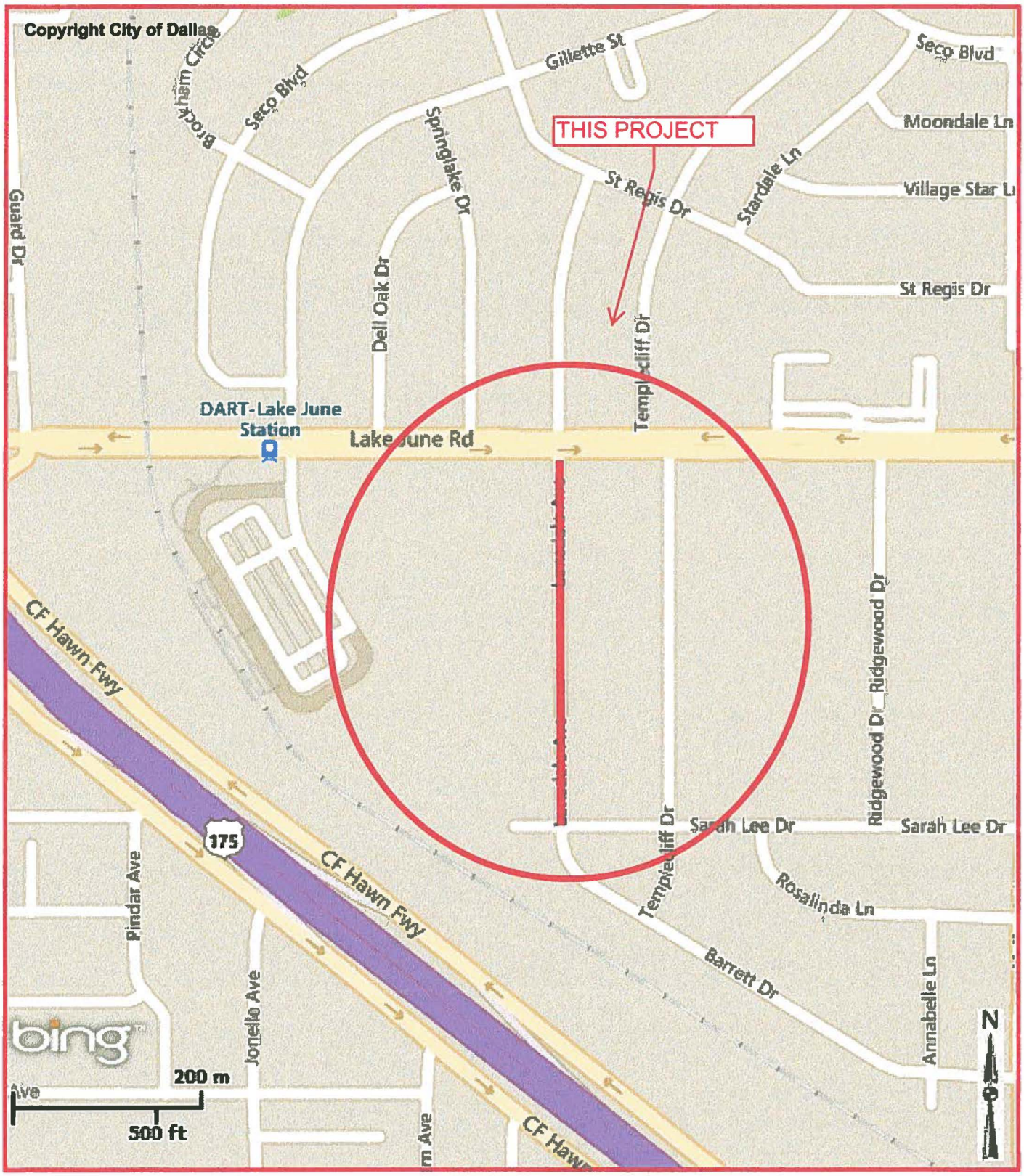
Non-Local Contractors / Sub-Contractors

None

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$4,450.00	2.39%	$4,450.00	2.39%
Hispanic American	$0.00	0.00%	$0.00	0.00%
Asian American	$58,990.00	31.71%	$58,990.00	31.71%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$0.00	0.00%
Total	$63,440.00	34.10%	$63,440.00	34.10%

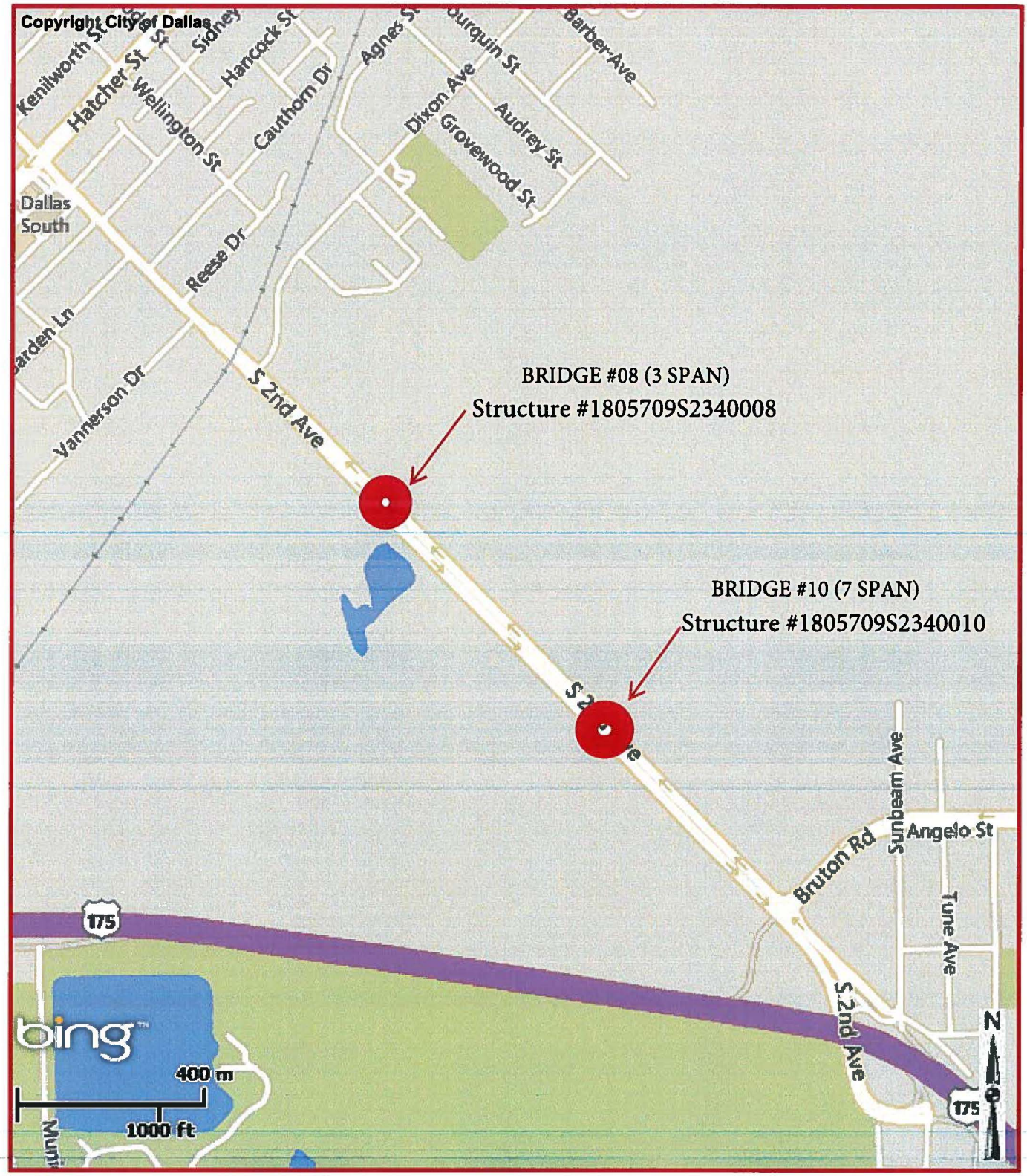
LONSDALE AVENUE
FROM SARAH LEE DRIVE TO LAKE JUNE ROAD



MAPSCO 58J

BRIDGE REPAIR

SECOND AVENUE OVER WHITE ROCK CREEK



MAPSCO 47W, 57B

January 13, 2016

WHEREAS, TranSystems Corporation d/b/a TranSystems Corporation Consultants was selected to provide the engineering design for a street petition project and two bridge repair projects.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to enter into a contract with TranSystems Corporation d/b/a TranSystems Corporation Consultants for engineering services for the indicated projects in an amount not to exceed $186,047.00, after it has been approved as to form by the City Attorney.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in accordance with the terms and conditions of the contract:

TranSystems Corporation d/b/a TranSystems Corporation Consultants for the engineering design of a street petition project on: Lonsdale Avenue from Sarah Lee Drive to Lake June Road; two bridge repair projects along Second Avenue over White Rock Creek:

Street and Transportation Improvements Fund Fund 2U22, Department PBW, Unit W052, Act. STPT Obj. 4111, Program #PB12W052, CT PBW12W052C1 Vendor #350370, in an amount not to exceed	$107,980.00
Street and Transportation Improvements Fund Fund 2U22, Department PBW, Unit P867, Act. BRAM Obj. 4111, Program #PB06P867, CT PBW12W052C1 Vendor #350370, in an amount not to exceed	$ 17,772.00
Street and Transportation Improvements Fund Fund 2U22, Department PBW, Unit P868, Act. BRAM Obj. 4111, Program #PB06P868, CT PBW12W052C1 Vendor #350370, in an amount not to exceed	$ 27,465.00
Water Capital Improvement Fund Fund 2115, Department DWU, Unit PW42 Obj. 4111, Program #716035, CT PBW716035CP Vendor #350370, in an amount not to exceed	$ 15,430.10

Wastewater Capital Improvement Fund	
Fund 2116, Department DWU, Unit PS42	
Obj. 4111, Program #716036, CT PBW716036CP	
Vendor #350370, in an amount not to exceed	$ 17,399.90
Total amount not to exceed	$186,047.00

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 28

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Public Works Department

CMO: Jill A. Jordan, P.E., 670-5299

MAPSCO: Various

SUBJECT

Authorize the rejection of bids for a thirty-six month sidewalk and barrier free ramp installation paving services contract; and, the re-advertisement for new bids - Financing: No cost consideration to the City

BACKGROUND

This action will authorize the rejection of one single bid received for the sidewalk and barrier free ramp installation paving services contract. NPL Construction Co. submitted the lone bid on September 28, 2015, and the bid was approximately 40% higher than the original cost estimate. The sidewalk and barrier free ramp installation paving services contract for the sidewalk replacement program has been re-advertised and staff anticipates bringing the construction contract to Council for approval consideration at the January 27, 2016 Council meeting.

ESTIMATED SCHEDULE OF PROJECT

Begin Construction	March 2016
Complete Construction	March 2018

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item will be provided to the Transportation and Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

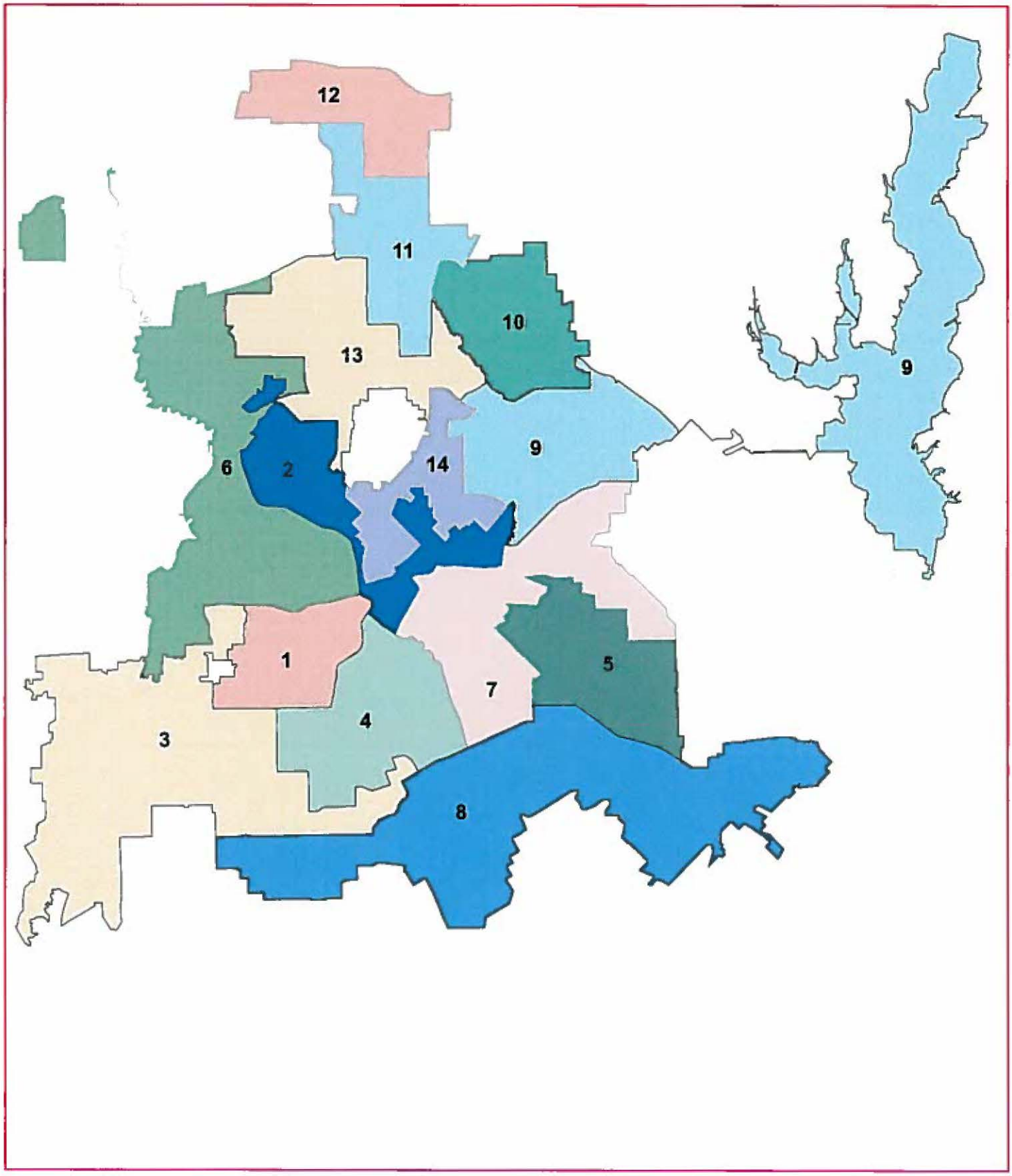
No cost consideration to the City

MAP

Attached.

PAVING SERVICES CONTRACT

Infrastructure at Various Locations



January 13, 2016

WHEREAS, a bid was received on September 28, 2015, for a thirty-six month paving services contract; and,

WHEREAS, it is now necessary to reject the bid received for paving services; and to re-advertise for new bids.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to reject the bids received for a paving services contract, and to re-advertise for new bids.

Section 2. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 29

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 4

DEPARTMENT: Sustainable Development and Construction
Public Works Department

CMO: Ryan S. Evans, 671-9837
Jill A. Jordan, P.E., 670-5299

MAPSCO: 55H

SUBJECT

Authorize acquisition from Gerardo Rodriguez and Consuelo Rodriguez of approximately 5,772 square feet of land improved with a single family residence located near the intersection of McGowan and Childers Streets for the Cadillac Heights future location of city service and maintenance facilities - Not to exceed $46,000 ($42,000, plus closing costs and title expenses not to exceed $4,000) - Financing: 2006 Bond Funds

BACKGROUND

This item authorizes the acquisition of approximately 5,772 square feet of improved land with a single family residence located near the intersection of McGowan and Childers Street. The consideration is based on an independent appraisal.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Council will be briefed by memorandum regarding this item.

FISCAL INFORMATION

2006 Bond Funds - $46,000 ($42,000, plus closing costs and title expenses not to exceed $4,000)

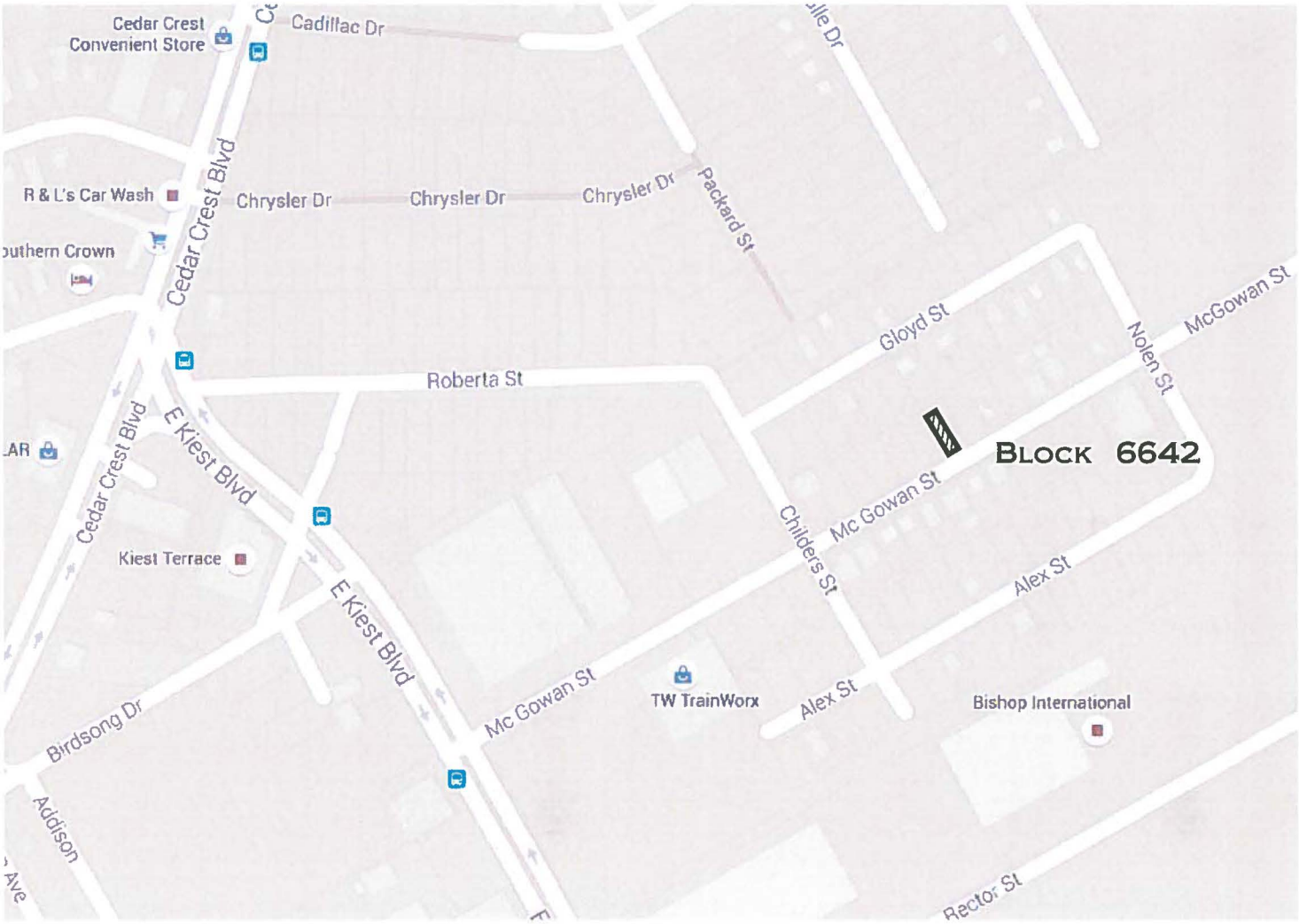
OWNERS

Gerardo Rodriguez

Consuelo Rodriguez

MAP

Attached


N
Cedar Crest Convenient Store
Cadillac Dr
R & L's Car Wash
Chrysler Dr
Chrysler Dr
Chrysler Dr
Packard St
Cedar Crest Blvd
Roberta St
Gloyd St
Nolen St
McGowan St
BLOCK 6642
E Kiest Blvd
Kiest Terrace
Mc Gowan St
Childers St
Alex St
TW TrainWorx
Bishop International
Birdsong Dr
Addison
Rector St

SUBJECT:

January 13, 2016

A RESOLUTION DETERMINING UPON THE NECESSITY OF ACQUIRING REAL PROPERTY AND AUTHORIZING ITS PURCHASE FOR PUBLIC USE.

DEFINITIONS: For the purposes of this resolution, the following definitions of terms shall apply:

"CITY": The City of Dallas

"PROPERTY": Approximately 5,772 square feet of land located in Dallas County, Texas, and being the same property more particularly described in "Exhibit A", attached hereto and made a part hereof for all purposes, and any and all improvements, rights and appurtenances appertaining thereto.

"PROJECT": Cadillac Heights Phase II Project

"USE": Future location of city service and maintenance facilities, provided, however, to the extent fee title to the PROPERTY is acquired, such title and the PROPERTY shall not be limited to or otherwise deemed restricted to the USE here provided.

"PROPERTY INTEREST": Fee Simple Title subject to the exceptions, reservations, covenants, conditions and/or interests, if any, provided in the form instrument more particularly described in Exhibit "B" attached hereto and made a part hereof for all purposes.

"OWNER": Gerardo Rodriguez and Consuelo Rodriguez, provided, however, that the term "OWNER" as used in this resolution means all persons having an ownership interest, regardless of whether those persons are actually named herein.

"PURCHASE AMOUNT": $42,000

"CLOSING COSTS AND TITLE EXPENSES": Not to exceed $4,000

"AUTHORIZED AMOUNT": Not to exceed $46,000

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the USE of the PROPERTY for the PROJECT is a public use.

SECTION 2. That public necessity requires that CITY acquire the PROPERTY INTEREST in the PROPERTY for the PROJECT.

SECTION 3. That the City Manager, and/or the City Manager's designees, is hereby authorized and directed to consummate and accept the purchase, grant, and conveyance to CITY of the PROPERTY INTEREST in and to the PROPERTY pursuant to the conveyancing instrument substantially in the form described in Exhibit "B", attached hereto and made a part hereof for all purposes, and approved as to form by the City Attorney and to execute, deliver and receive such other usual and customary documents necessary, appropriate and convenient to consummating this transaction.

SECTION 4. That to the extent the PROPERTY is being purchased wholly or partly with bond proceeds CITY has obtained an independent appraisal of the PROPERTY'S market value.

SECTION 5. That OWNER has been provided with a copy of the Landowner's Bill of Rights as contemplated by applicable state statute.

SECTION 6. That in the event this acquisition closes, the Chief Financial Officer is authorized and directed to draw a warrant in favor of the OWNER, or the then current owner of record, or the title company closing the transaction described herein in the PURCHASE AMOUNT and CLOSING COSTS AND TITLE EXPENSES payable out of Public Safety Facilities Funds, Fund No. BT11, Department PBW, Unit T825, Activity LAAQ, Program No. PB06T825, Object 4210, Encumbrance No. SUST825VL16. The PURCHASE AMOUNT, CLOSING COSTS and TITLE EXPENSES together shall not exceed the AUTHORIZED AMOUNT.

SECTION 7. That CITY is to have possession and/or use, as applicable, of the PROPERTY at closing; and CITY will pay any title expenses and closing costs. All costs and expenses described in this section shall be paid from the previously described funds.

SECTION 8. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

APPROVED AS TO FORM:
WARREN M. S. ERNST, City Attorney

BY Brian N. S II
Assistant City Attorney

EXHIBIT A

Being Lot 55, in City Block 6642, of MEADOW GARDENS, an Addition to the City of Dallas, Dallas County, Texas, according to the map thereof recorded in Volume 7, page 465, of the Map Records of Dallas County, Texas.

NOTICE OF CONFIDENTIALITY OF RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

EXHIBIT B

GENERAL WARRANTY DEED

THE STATE OF TEXAS §
§ KNOW ALL PERSONS BY THESE PRESENTS:
COUNTY OF DALLAS §

That Gerado Rodriguez and Consuelo Rodriguez, a married couple (hereinafter called "Grantor" whether one or more natural persons or legal entities) of the County of Dallas, State of Texas, for and in consideration of the sum of FORTY TWO THOUSAND AND NO/100 DOLLARS ($42,000.00) to the undersigned in hand paid by the **City of Dallas, 1500 Marilla Street, Dallas, Texas 75201**, a Texas municipal corporation (hereinafter called "City"), the receipt of which is hereby acknowledged and confessed, has GRANTED, SOLD AND CONVEYED and does hereby GRANT, SELL AND CONVEY unto City, its successors and assigns, the following (all said property and interests being collectively referred to herein as the "Property"):

(a) that certain tract or parcel of land (the "Land") in Dallas County, Texas, described more fully on Exhibit "A", attached hereto and incorporated herein for all purposes;

(b) all right, title and interest of Grantor, as owner of the Land, in (i) strips or gores, if any, between the Land and abutting properties and (ii) any land lying in or under the bed of any street, alley, road or right-of-way, opened or proposed, abutting or adjacent to the Land;

(c) all improvements, buildings, structures, fixtures, and open parking areas which may be located on the Land (the "Improvements"), including, without limitation, all mechanical, electrical, heating, ventilation, air conditioning and plumbing fixtures, systems and equipment as well as compressors, engines, elevators and escalators, if any;

(d) all right, title and interest of Grantor, as owner of the Land, in and to any easements, rights-of-way, rights of ingress and egress or other interests in, on, or to any land, highway, street, road or avenue, opened or proposed, in, on, across from, in front of, abutting, adjoining or otherwise appurtenant to the Land; and

(e) all other rights, privileges and appurtenances owned by Grantor and in any way related to the Property.

TO HAVE AND TO HOLD the Property, together with all and singular the rights and appurtenances thereto in anywise belonging unto City, its successors and assigns forever, and Grantor binds Grantor and Grantor's heirs, executors, administrators, or successors to Warrant and Forever Defend all and singular the said premises unto City, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof.

EXECUTED this _____ day of _____, _____.

_____ _____

Gerado Rodriguez Consuelo Rodriguez

EXHIBIT B

ACKNOWLEDGEMENT

Approved As To Form:
WARREN M.S. ERNST,
City Attorney

By: _____
Assistant City Attorney

STATE OF TEXAS
COUNTY OF DALLAS

This instrument was acknowledged before me on _____by Gerado Rodriguez.

_____
Notary Public, State of TEXAS

STATE OF TEXAS
COUNTY OF DALLAS

This instrument was acknowledged before me on _____ by Consuelo Rodriguez.

_____
Notary Public, State of TEXAS

After recording return to:
City of Dallas, Department of Development Services
Real Estate Division
320 East Jefferson Boulevard, Room 203
Dallas, Texas 75203
attn: VLeal

Warranty Deed Log No. 39981

EXHIBIT B

EXHIBIT A

Being Lot 55, in City Block 6642, of MEADOW GARDENS, an Addition to the City of Dallas, Dallas County, Texas, according to the map thereof recorded in Volume 7, page 465, of the Map Records of Dallas County, Texas.

AGENDA ITEM # 30

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 4, 7

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 46R S T X Y Z 55X 56C V

SUBJECT

Authorize the quitclaim of 14 properties acquired by the taxing authorities from the Tax Foreclosure Sheriff's Sale to the highest bidders; and authorize the execution of release of liens for any non-tax liens that may have been filed by the City and were included in the foreclosure judgment (list attached) - Revenue: $19,678

BACKGROUND

This item authorizes the quitclaim of 14 properties that were foreclosed by the Sheriff's Department for unpaid taxes pursuant to judgments or seizure warrants from a District Court and the release of liens for any non-tax liens that may have been filed by the City and were included in the foreclosure judgment. These properties are being sold to the highest bidders and will return to the tax rolls upon conveyance.

Successful bidders are required to sign a certification stating that they are not purchasing these properties on behalf of the foreclosed owners and that they have no debts owed to the City, no pending code violations, and are not chronic code violators.

All properties were reviewed by the Housing Department for infill housing and were not desired for that program.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Council will be briefed by memorandum regarding this item.

FISCAL INFORMATION

Revenue: $19,678.50

OWNERS

County Land & Water LLC Series 2299EFH
Wayne Prokay, Managing Member

Kantering, LLC
Tony Kantering, Managing Member

Wealthgates Investment Company
David Okumbor, Managing Member

Gaythell Smith

Jeffrey Grant

Temesgen Wukaye

Sabrina Sutton

Quentin McClellan

MAP

Attached

TAX FORECLOSED AND SEIZURE WARRANT PROPERTY RESALES
AGENDA LIST

ITEM #	STREET ADDRESS	VAC/ IMP	COUNCIL DISTRICT	ZONING	PARCEL SIZE	STRUCKOFF AMOUNT	# BIDS	MINIMUM BID	HIGHEST BID AMOUNT	DCAD	HIGHEST BIDDER
1	2903 BRITTON	V	4	R -7.5(A)	.1763	$1,785.00	5	$1,500.00	$3,999.50	$8,000.00	KANTERING, LLC
2	2633 CARPENTER	V	7	R-5(A)	.1733	$4,646.00	2	$250.00	$500.00	$6,000.00	GAYTHELL SMITH
3	2641 CARPENTER	V	7	PD-595	.1672	$6,000.00	4	$250.00	$500.00	$6,000.00	GAYTHELL SMITH
4	2611 DATHE	V	7	R-5(A)	.1439	$3,521.00	2	$250.00	$600.00	$3,900.00	JEFFREY GRANT
5	2610 DATHE	V	7	R-5(A)	.1721	$3,900.00	3	$250.00	$600.00	$3,900.00	JEFFREY GRANT
6	4328 FRANK	V	7	R-5(A)	.1423	$18,941.00	2	$250.00	$1,003.00	$5,000.00	TEMESGEN WUKAYE
7	1910 GRAND	V	7	PD-595	.2036	$13,310.00	7	$1,000.00	$3,999.00	$31,060.00	WEALTHGATES INVESTMENT COMPANY
8	2927 SOUTHLAND	V	7	PD-595	.1320	$14,947.00	2	$250.00	$400.00	$6,000.00	JEFFREY GRANT
9	2522 SOUTHLAND	V	7	PD-595	.2041	$16,015.00	2	$1,000.00	$1,650.00	$6,000.00	COUNTY LAND & WATER LLC SERIES 2299EFH
10	2631 SOUTHLAND	V	7	PD-595	.1499	$6,000.00	2	$1,000.00	$1,150.00	$6,000.00	COUNTY LAND & WATER LLC SERIES 2299EFH
11	2646 SOUTHLAND	V	7	PD-595	.1158	$1,805.00	2	$1,000.00	$3,150.00	$6,000.00	COUNTY LAND & WATER LLC SERIES 2299EFH
12	4748 STOKES	V	7	R-5(A)	.1421	$2,000.00	2	$250.00	$277.00	$2,000.00	SABRINA SUTTON
13	2701 WARREN	V	7	R-5(A)	.0757	$3,900.00	3	$250.00	$350.00	$6,000.00	JEFFREY GRANT
14	3730 WENDELKIN	V	7	PD-595	.1721	$37,040.00	2	$1,000.00	$1,500.00	$6,750.00	QUENTIN MCCLELLAN

67
355
S MARKET STREET EXT
CORINTH ST VIADUCT
30
MARTIN LUTHER KING JR BLVD
E ILLINOIS AVE
45
S LAMAR ST
310
175
2ND AVE
BRUTON RD

January 13, 2016

WHEREAS, the City of Dallas ("City"), the State of Texas ("State"), the County of Dallas, ("County"), and/or Dallas Independent School District ("DISD") acquired Sheriff Deeds to properties ("Properties") at a sheriff tax sale ("the First Sale") authorized by a Judicial Foreclosure ("Judgment") in a District Court in Dallas County, Texas. The Sheriff's Deeds were recorded in the real property records of Dallas County, Texas as described on "Exhibit A," attached herein and incorporated by reference; and

WHEREAS, pursuant to the Texas Attorney General Opinion No. JM-1232 and Section 34.05(a) of the Texas Property Tax Code, the City may re-sell the Properties ("the Second Sale") subject to any right of redemption existing at the time of the Second Sale; and

WHEREAS, pursuant to the provisions of Chapter 34, Section 34.05 of the Texas Property Tax Code, a taxing entity is authorized to re-sell the Properties ("the Second Sale"); and

WHEREAS, by accepting its pro rata proceeds from the Second Sale, the State agrees to the transfer of Properties in which it has an interest; and

WHEREAS, the City Manager, acting on behalf of the County pursuant to a County Commissioner's Court Order, and acting on behalf of DISD pursuant to a School Board Resolution have the authority to execute Quitclaim Deeds to the purchasers of Properties at the Second Sale, and transfer any rights, title, or interests acquired or held by each taxing entity that was a party to the Judgment at the First Sale; and

WHEREAS, the Properties were advertised in the Dallas Morning News on the dates indicated on Exhibit A; and

WHEREAS, the City Council has previously approved the re-sale of other Properties where funds were not received, nor disbursed prior to the April 1, 2001 Tax Collection Consolidation with Dallas County; and

WHEREAS, the distribution of the proceeds from the resale of the Properties will be in accordance with Chapter 34, Section 34.06 of the Texas Property Tax Code;

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That upon receipt of the monetary consideration from the purchasers of the Properties listed on Exhibit A, and upon consent by the County and DISD, the City Manager upon approval as to form by the City Attorney and attested by the City Secretary, is hereby authorized to execute Quitclaim Deeds to the Properties, conveying to the purchasers the right, title, and interest acquired or held by each taxing entity that was a party to the Judgment, subject to any right of redemption, post-Judgment taxes and post Judgment non-municipal liens, and in accordance with the written agreement of the terms, conditions, and release of the taxing entities.

SECTION 2. That the consideration received from the Second Sale shall be distributed pursuant to Chapter 34, Section 34.06 of the Texas Property Tax Code, and applied to the payment of the court costs, interest, and cost of sale and applied to the amount of delinquent taxes, penalties, and non-tax municipal liens as set forth in the Judgment and pursuant to the order of the court.

SECTION 3. That all purchasers shall be responsible for the pro rata portion of property taxes for the remaining part of the current calendar year that will be assessed from the date of closing of the Second Sale. Purchasers shall also be responsible for any post-Judgment taxes, penalties and interest, pursuant to the Texas Property Tax Code, and post-Judgment non-municipal liens. The Properties shall be replaced on the tax rolls as of the date of execution of Quitclaim Deeds.

SECTION 4. That to the extent authorized by law, any liens securing taxes referenced in Section 2 above are hereby released. That the City Manager, upon approval as to form by the City Attorney, is authorized to execute a release(s) of lien for any non-tax municipal lien(s) which (i) are included in the Judgments issued in the foreclosure suits filed by the City on the lot(s) shown on Exhibit “A”; or (ii) arise or are filed of record post Judgment and prior to the Second Sale by the City on the lot(s) shown on Exhibit “A”.

SECTION 5. That any and all proceeds from the Second Sale, including funds not received, nor disbursed prior to the April 1, 2001 Tax Collection Consolidation with Dallas County will be deposited to General Fund 0001, Department DEV, Balance Sheet Account 0519.

SECTION 6. That upon receipt of the consideration from the Second Sale, the Chief Financial Officer is authorized to disburse the proceeds in accordance with Chapter 34, Section 34.06 of the Texas Property Tax Code. Calculations for disbursements shall be provided by the Director of Sustainable Development and Construction to the City of Dallas Land Based Receivables, the Dallas County District Clerk, and the Dallas County Tax Office from the account specified in Section 5, above.

SECTION 7. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

EXHIBIT A
TAX FORECLOSED AND SEIZURE WARRANT PROPERTY RESALES

ITEM #	STREET ADDRESS	LEGAL DESCRIPTION	VAC/ IMP	OWNED BY TAXING ENTITIES	DMN DATES ADVERTISEMENT	# BIDS	MINIMUM BID	HIGHEST BID AMOUNT	HIGHEST BIDDER
1	2903 BRITTON	Lot 10, Block J/3897	V	1,2,3	9/13 & 9/14	5	$1,500.00	$3,999.50	KANTERING, LLC
2	2633 CARPENTER	Lot 16, Block 1/1748	V	1,2,3	9/13 & 9/14	2	$250.00	$500.00	GAYTHELL SMITH
3	2641 CARPENTER	Lot 7, Block 2/1748	V	1,2,3	9/13 & 9/14	4	$250.00	$500.00	GAYTHELL SMITH
4	2611 DATHE	Lot 13, Block B/1699	V	1,2,3	9/13 & 9/14	2	$250.00	$600.00	JEFFREY GRANT
5	2610 DATHE	Lot 5, Block A/1700	V	1,2,3	9/13 & 9/14	3	$250.00	$600.00	JEFFREY GRANT
6	4328 FRANK	Lot 4, Block 1/1853	V	1,2,3	9/13 & 9/14	2	$250.00	$1,003.00	TEMESGEN WUKAYE
7	1910 GRAND	Lot 1, Block 1/1123	V	1,2,3	9/13 & 9/14	7	$1,000.00	$3,999.00	WEALTHGATES INVESTMENT COMPANY
8	2927 SOUTHLAND	Lot 2, Block 3/1774	V	1,2,3	9/13 & 9/14	2	$250.00	$400.00	JEFFREY GRANT
9	2522 SOUTHLAND	Lot 5, Block B/1957	V	1,2,3	9/13 & 9/14	2	$1,000.00	$1,650.00	COUNTY LAND & WATER LLC SERIES 2299EFH
10	2631 SOUTHLAND	Lot 6, Block 5/1958	V	1,2,3	9/13 & 9/14	2	$1,000.00	$1,150.00	COUNTY LAND & WATER LLC SERIES 2299EFH
11	2646 SOUTHLAND	Lot 2, Block 7/1958	V	1,2,3	9/13 & 9/14	2	$1,000.00	$3,150.00	COUNTY LAND & WATER LLC SERIES 2299EFH
12	4748 STOKES	Lot 10D, Block 4/7641	V	1,2,3	9/13 & 9/14	2	$250.00	$277.00	SABRINA SUTTON
13	2701 WARREN	Lot 19, Block 39/1312	V	1,2,3	9/13 & 9/14	3	$250.00	$350.00	JEFFREY GRANT
14	3730 WENDELKIN	Lot 3, Block B/1213	V	1,2,3	9/13 & 9/14	2	$1,000.00	$1,500.00	QUENTIN MCCLELLAN

AGENDA ITEM # 31

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 47J

SUBJECT

An ordinance abandoning a portion of Hobbs Avenue to Southern Foods Group, LLC, the abutting owner, containing approximately 25,965 square feet of land, located near the intersection of Haskell and Hobbs Avenues, authorizing the quitclaim and providing for the dedication of approximately 4,469 square feet of land needed for street right-of-way - Revenue: $35,910, plus the $20 ordinance publication fee

BACKGROUND

This item authorizes the abandonment of a portion of Hobbs Street to Southern Foods Group, LLC, the abutting owner. The area will be included with the property of the abutting owner for expansion of the existing dairy facility. The owner will dedicate approximately 4,469 square feet of land needed for street right-of-way. The cost for this abandonment is based on an independent appraisal.

Notices were sent to 29 property owners located within 300 feet of the proposed abandonment area. There were no responses received in opposition to this request.

PRIOR ACTION /REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Council will be briefed by memorandum regarding this item.

FISCAL INFORMATION

Revenue: $35,909.15, plus the $20 ordinance publication fee

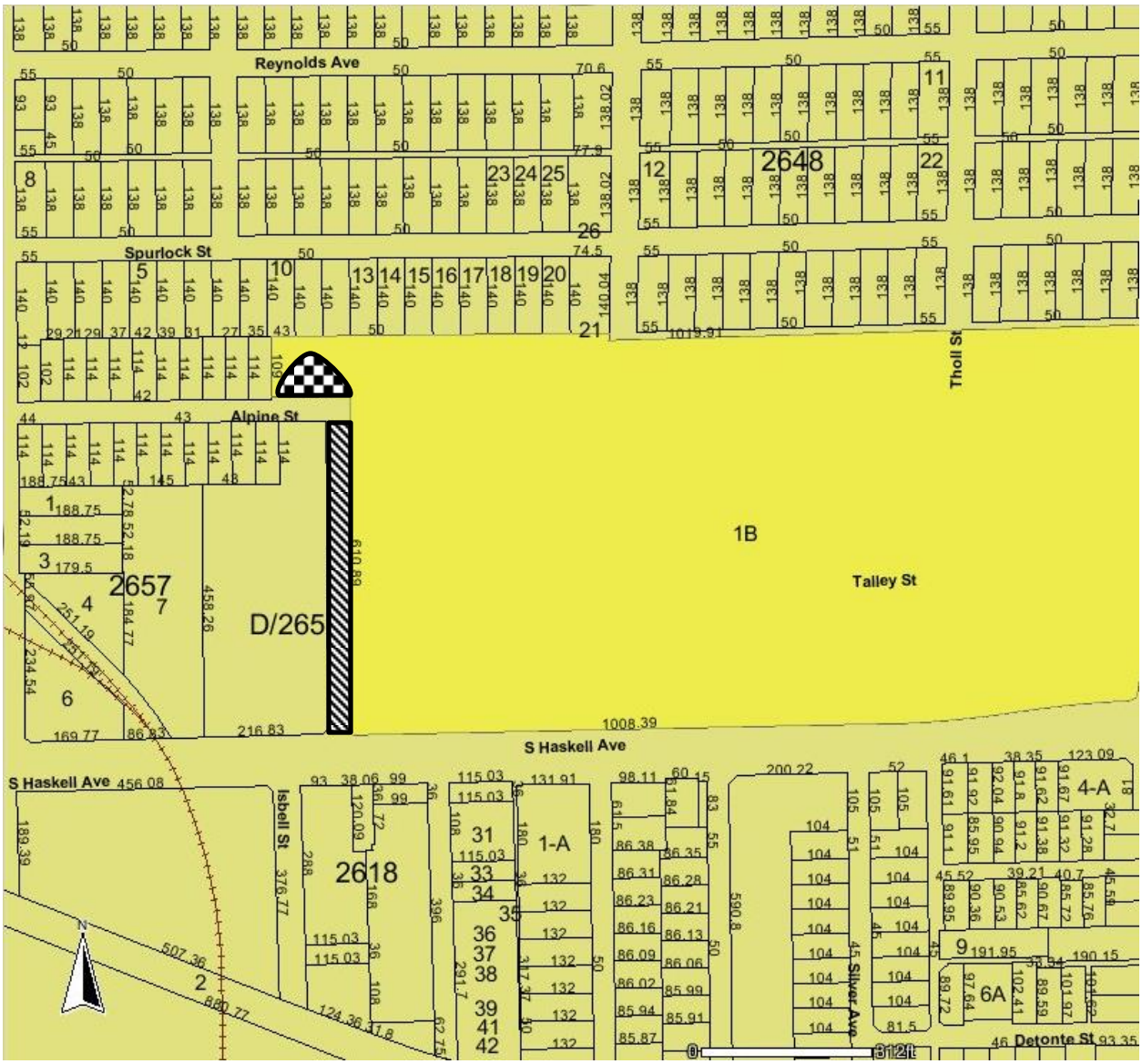
OWNER

Southern Foods Group, LLC

Gregg A. Tanner, Chief Executive Officer

MAP

Attached



Log #: 40373

Mapsco: 47J

Applicant: Southern Foods Group, LLC

= Abandonment Area

= **Dedication Area**

ORDINANCE NO. _____

An ordinance providing for the abandonment of portions of Hobbs Avenue located adjacent to City Blocks D/2659 and 10A/2656 in the City of Dallas and County of Dallas, Texas; providing for the quitclaim thereof to Southern Foods Group, LLC; providing for the terms and conditions of the abandonment and quitclaim made herein; providing for barricading; providing for the conveyance of needed land to the City of Dallas; providing for the indemnification of the City of Dallas against damages arising out of the abandonment herein; providing for the consideration to be paid to the City of Dallas; providing for the payment of the publication fee; providing a future effective date for this abandonment; and providing an effective date for this ordinance.

ooo0ooo

WHEREAS, the City Council of the City of Dallas, acting pursuant to law and upon the request and petition of Southern Foods Group, LLC, a Delaware Limited Liability Company, hereinafter referred to as **GRANTEE**, deems it advisable to abandon and quitclaim the hereinafter described tract of land to **GRANTEE**, and is of the opinion that, subject to the terms and conditions herein provided, said portion of Hobbs Avenue is not needed for public use, and same should be abandoned and quitclaimed to **GRANTEE**, as hereinafter stated; and

WHEREAS, the City Council of the City of Dallas is of the opinion that the best interest and welfare of the public will be served by abandoning and quitclaiming the same to **GRANTEE** for the consideration and subject to the terms and conditions hereinafter more fully set forth; **Now, Therefore**,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the tract of land described in Exhibit A, which is attached hereto and made a part hereof for all purposes, be and the same is abandoned, vacated and closed insofar as the right, title and interest of the public are concerned; subject, however, to the conditions and future effective date hereinafter more fully set out.

SECTION 2. That for and in monetary consideration of the sum of **THIRTY-FIVE THOUSAND NINE HUNDRED NINE AND 15/100 DOLLARS ($35,909.15)** paid by **GRANTEE**, and the further consideration described in Sections 8, 9 and 10, the City of

Dallas does by these presents **FOREVER QUITCLAIM** unto the said **GRANTEE**, subject to the conditions, reservations, future effective date, and exceptions hereinafter made and with the restrictions and upon the covenants below stated, all of its right, title and interest in and to the certain tract of land hereinabove described in Exhibit A. **TO HAVE AND TO HOLD** all of such right, title and interest in and to the property and premises, subject aforesaid, together with all and singular the rights, privileges, hereditaments and appurtenances thereto in any manner belonging unto the said **GRANTEE** forever.

SECTION 3. That upon payment of the monetary consideration set forth in Section 2, **GRANTEE** accepts the terms, provisions, future effective date and conditions of this ordinance.

SECTION 4. That the Chief Financial Officer is authorized to deposit the sum paid by **GRANTEE** pursuant to Section 2 above in the General Fund 0001, Department DEV, Balance Sheet 0519 and Department of Sustainable Development and Construction - Real Estate Division shall be reimbursed for the cost of obtaining the legal description, appraisal and other administrative costs incurred. The reimbursement proceeds shall be deposited in General Fund 0001, Department DEV, Unit 1183, Object 5011 and any remaining proceeds shall be transferred to the General Capital Reserve Fund 0625, Department BMS, Unit 8888, Revenue Source 8416.

SECTION 5. That the abandonment and quitclaim provided for herein are made subject to all present zoning and deed restrictions, if the latter exist, and are subject to all existing easement rights of others, if any, whether apparent or non-apparent, aerial, surface, underground or otherwise, and are further subject to the conditions contained in Exhibit B, which is attached hereto and made a part hereof for all purposes.

SECTION 6. That the terms and conditions contained in this ordinance shall be binding upon **GRANTEE**, its successors and assigns.

SECTION 7. That the abandonment and quitclaim provided for herein shall extend only to the public right, title, easement and interest, and shall be construed to extend only to that interest the Governing Body of the City of Dallas may legally and lawfully abandon and vacate.

SECTION 8. That as a condition of this abandonment and as a part of the consideration for the quitclaim to **GRANTEE** herein, **GRANTEE**, its successors and assigns, agree to indemnify, defend, release and hold harmless the City of Dallas as to any claims for damages, fines, penalties, costs or expenses to persons or property that may arise out of, or be occasioned by or from: (i) the use and occupancy of the area described in Exhibit A by **GRANTEE**, its successors and assigns; (ii) the presence, generation, spillage, discharge, release, treatment or disposition of any Hazardous Substance on or affecting the area set out in Exhibit A; (iii) all corrective actions concerning any discovered Hazardous Substances on or affecting the area described in Exhibit A, which **GRANTEE**, its successors and assigns, agree to undertake and complete in accordance with applicable federal, state and local laws and regulations; and (iv) the abandonment, closing, vacation and quitclaim by the City of Dallas of the area set out in Exhibit A. **GRANTEE**, its successors and assigns, hereby agree to defend any and all suits, claims, or causes of action brought against the City of Dallas on account of same, and discharge any judgment or judgments that may be rendered against the City of Dallas in connection therewith. For purposes hereof, "Hazardous Substance" means the following: (a) any "hazardous substances" under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601 et seq., as amended; (b) any "hazardous substance" under the Texas Hazardous Substances Spill Prevention and Control Act, TEX. WATER CODE, Section 26.261 et seq., as amended; (c) petroleum or petroleum-based products (or any derivative or hazardous constituents thereof or additives thereto), including without limitation, fuel and lubricating oils; (d) any "hazardous chemicals" or "toxic chemicals" under the Occupational Safety and Health Act, 29 U.S.C. Section 651 et seq., as amended; (e) any "hazardous waste" under the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., as amended; and (f) any "chemical substance" under the Toxic Substance Control Act, 15 U.S.C. Section 2601 et seq., as amended. References to particular acts or codifications in this definition include all past and future amendments thereto, as well as applicable rules and regulations as now or hereafter promulgated thereunder.

SECTION 9. That as a condition of this abandonment and as a part of the consideration for the quitclaim made herein, **GRANTEE** shall record a final replat of the adjoining properties within one year of the effective date of this ordinance showing the fee simple dedication of not less than 4,469 square feet of needed right-of-way in City Block 2656. This final replat shall be recorded by **GRANTEE** in the official real property records of the county in which the abandoned area and the dedicated property are located, after its approval by the City Plan Commission of the City of Dallas. This abandonment shall not be effective unless and until this dedication is completed and failure to record a final replat in accordance with the term of this section shall render this ordinance null and void and of no further effect. Further, the final replat shall be recorded in the official real property records of the county in which the abandoned area is located before a certified copy of this ordinance shall be delivered to **GRANTEE**.

SECTION 10. That as a condition of this abandonment and as a part of the consideration for the quitclaim made herein, **GRANTEE** shall, immediately upon the effectiveness of the abandonment, close, barricade and/or place signs in the area described in Exhibit A in accordance with detailed plans approved by the Director of Department of Sustainable Development and Construction. **GRANTEE's** responsibility for keeping the area described in Exhibit A closed, barricaded and/or the signs in place shall continue until the street improvements and intersection returns are removed by **GRANTEE**, its successors and assigns, to the satisfaction of the Director of Department of Sustainable Development and Construction.

SECTION 11. That the City Secretary is hereby authorized and directed to certify a copy of this ordinance for recordation in the official real property records of the county in which the abandonment area is located, which certified copy shall be delivered to the Director of Department of Sustainable Development and Construction, or designee.

Upon receipt of the monetary consideration set forth in Section 2, plus the fee for the publishing of this ordinance, which **GRANTEE** shall likewise pay, and the filing of the final replat set forth in Section 9, the Director of Department of Sustainable Development and Construction, or designee: (i) shall deliver to **GRANTEE** a certified copy of this ordinance, and (ii) is authorized to and shall prepare and deliver a **QUITCLAIM DEED** with regard to the area abandoned herein, to **GRANTEE** hereunder, same to be executed by the City Manager on behalf of the City of Dallas, attested by the City Secretary and approved as to form by the City Attorney. The Director of Department of Sustainable Development and Construction, or designee, shall be the sole source for receiving certified copies of this ordinance for one year after its passage.

SECTION 12. That this ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so ordained.

APPROVED AS TO FORM:
WARREN M. S. ERNST
City Attorney

DAVID COSSUM
Director of Department of Sustainable Development and Construction

BY _____
Assistant City Attorney

BY _____
Assistant Director

Passed _____.

EXHIBIT A

STREET RIGHT-OF-WAY ABANDONMENT
ALL OF HOBBS AVENUE
ADJACENT TO BLOCK'S D/2659 AND 10A/2656
ALPINE ADDITION AND SCHEPPS DAIRY ADDITION
CITY OF DALLAS, DALLAS COUNTY, TEXAS

BEING A 25,965 SQUARE FOOT TRACT OF LAND SITUATED IN THE THOMAS LAGOW SURVEY, ABSTRACT NO. 759, CITY OF DALLAS, DALLAS COUNTY, TEXAS; BEING ALL OF HOBBS AVENUE, 40.00 FEET DEDICATED IN THE ALPINE ADDITION, AN ADDITION TO CITY OF DALLAS, RECORDED IN VOLUME 3, PAGE 322, MAP RECORDS OF DALLAS COUNTY, TEXAS (M.R.D.C.T.), 0.50 FEET DEDICATED IN THE SCHEPPS DAIRY ADDITION SECOND INSTALLMENT, AN ADDITION TO THE CITY OF DALLAS, RECORDED IN VOLUME 97051, PAGE 3038, DEED RECORDS DALLAS COUNTY, TEXAS (D.R.D.C.T.), BEING ALL OF A 4.50 FOOT STREET EASEMENT AS ESTABLISHED IN SCHEPPS DAIRY ADDITION THIRD INSTALLMENT, AN ADDITION TO THE CITY OF DALLAS, RECORDED IN VOLUME 98162, PAGE 10 D.R.D.C.T., AND BEING A PORTION OF TWO STREET EASEMENTS CONVEYED TO THE CITY OF DALLAS IN WARRANTY DEEDS RECORDED IN VOLUME 4928, PAGE 139 AND VOLUME 4730, PAGE 355 D.R.D.C.T., BEING ADJACENT TO CITY BLOCKS D/2659 AND 10A/2656; SAID 25,965 SQUARE FOOT TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 5/8-INCH IRON ROD WITH CAP STAMPED "DC & A" FOUND IN THE SOUTH LINE OF LOT 1B, BLOCK 10A/2656 IN SAID SCHEPPS DAIRY ADDITION, THIRD INSTALLMENT AND THE NORTH RIGHT-OF-WAY LINE OF HASKELL AVENUE (F.K.A. FORNEY AVENUE, A VARIABLE WIDTH PUBLIC RIGHT-OF-WAY), AND BEING FURTHER DESCRIBED IN DEED TO SOUTHERN FOODS GROUP, L.P., RECORDED IN VOLUME 95078, PAGE 3176, D.R.D.C.T., FROM WHICH A CUT "X" FOUND BEARS A CHORD BEARING AND DISTANCE OF NORTH 83°50'31" EAST, 208.19 FEET;

THENCE SOUTH 88°40'50" WEST, ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID SOUTH HASKELL AVENUE, A DISTANCE OF 1,008.39 FEET TO A 5/8-INCH IRON ROD WITH 3-1/4-INCH ALUMINUM CAP STAMPED "SOUTHERN FOOD ADDITION-BURY" (HEREAFTER REFERRED TO AS AMON) SET FOR THE **POINT OF BEGINNING**, BEING THE MOST SOUTHERLY SOUTHWEST CORNER OF SAID LOT 1B, BLOCK 10A/2656, AND BEING THE SOUTH END OF A CORNER CLIP AT THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SAID HOBBS AVENUE WITH THE NORTH RIGHT-OF-WAY LINE OF SAID HASKELL AVENUE;

THENCE SOUTH 88°40'50" WEST, CONTINUING ALONG SAID NORTH RIGHT-OF-WAY LINE, OVER AND ACROSS SAID HOBBS AVENUE, A DISTANCE OF 60.00 FEET TO AN AMON SET FOR THE SOUTH END OF A CORNER CLIP AT THE INTERSECTION OF THE WEST RIGHT-OF-WAY LINE OF SAID HOBBS AVENUE WITH THE NORTH LINE OF SAID HASKELL AVENUE;

THENCE NORTH 44°18'30" EAST, ALONG THE WEST RIGHT-OF-WAY OF SAID HOBBS AVENUE AND SAID CORNER CLIP, A DISTANCE OF 14.28 FEET TO AN AMON SET FOR CORNER;

THENCE NORTH 00°07'27" WEST, ALONG THE WEST RIGHT-OF-WAY LINE OF SAID HOBBS AVENUE AND THE EAST LINE OF SAID BLOCK D/2659, A DISTANCE OF 561.36 FEET TO AN "X" CUT SET AT THE INTERSECTION WITH THE SOUTH RIGHT-OF-WAY LINE OF ALPINE STREET (A VARIABLE WIDTH PUBLIC RIGHT-OF-WAY) AND BEING THE NORTHEAST CORNER OF LOT 13, BLOCK B/2208 OF SAID ALPINE ADDITION;

REVIEWED BY
CEC 11-4-15
SPRG 3049

EXHIBIT A

STREET RIGHT-OF-WAY ABANDONMENT
ALL OF HOBBS AVENUE
ADJACENT TO BLOCK'S D/2659 AND 10A/2656
ALPINE ADDITION AND SCHEPPS DAIRY ADDITION
CITY OF DALLAS, DALLAS COUNTY, TEXAS

THENCE NORTH 89°17'23" EAST, ALONG THE SOUTH RIGHT-OF-WAY LINE OF SAID ALPINE STREET, OVER AND ACROSS SAID HOBBS AVENUE, A DISTANCE OF 40.50 FEET TO A 5/8-INCH IRON ROD WITH AN AMON SET AT THE INTERSECTION WITH THE WEST LINE OF SAID 4.50 FOOT STREET EASEMENT FOR HOBBS AVENUE;

THENCE NORTH 00°07'27" WEST, ALONG THE WEST LINE OF SAID 4.50 FOOT STREET EASEMENT, A DISTANCE OF 45.00 FEET TO AN AMON SET AT THE INTERSECTION WITH THE NORTH RIGHT-OF-WAY LINE OF SAID ALPINE STREET, SAME BEING THE NORTHWEST CORNER OF SAID STREET EASEMENT FOR HOBBS AVENUE;

THENCE NORTH 89°17'23" EAST, ALONG THE NORTH LINE OF SAID STREET EASEMENT, A DISTANCE OF 4.50 FEET TO AN AMON SET AT THE NORTHEAST CORNER OF SAID STREET EASEMENT FOR HOBBS AVENUE;

THENCE SOUTH 00°07'27" EAST, ALONG THE EAST LINE OF SAID 4.50 FOOT STREET EASEMENT FOR HOBBS AVENUE AND THE WEST LINE OF SAID BLOCK 10A/2656, A DISTANCE OF 610.87 FEET TO A 5/8-INCH IRON ROD WITH A YELLOW PLASTIC CAP STAMPED "BURY" SET FOR CORNER AT THE INTERSECTION WITH THE NORTHEASTERLY LINE OF THE AFOREMENTIONED CORNER CLIP AT THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SAID HOBBS AVENUE WITH THE NORTH RIGHT-OF-WAY LINE OF SAID HASKELL AVENUE;

THENCE SOUTH 45°39'23" EAST, ALONG SAID CORNER CLIP, A DISTANCE OF 6.99 FEET TO THE **POINT OF BEGINNING**;

CONTAINING A COMPUTED AREA OF 25,965 SQUARE FEET OR 0.5961 ACRES OF LAND.

NOTES:

BEARINGS SHOWN HEREON ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM, TEXAS NORTH CENTRAL ZONE 4202, NORTH AMERICAN DATUM OF 1983 (2011).

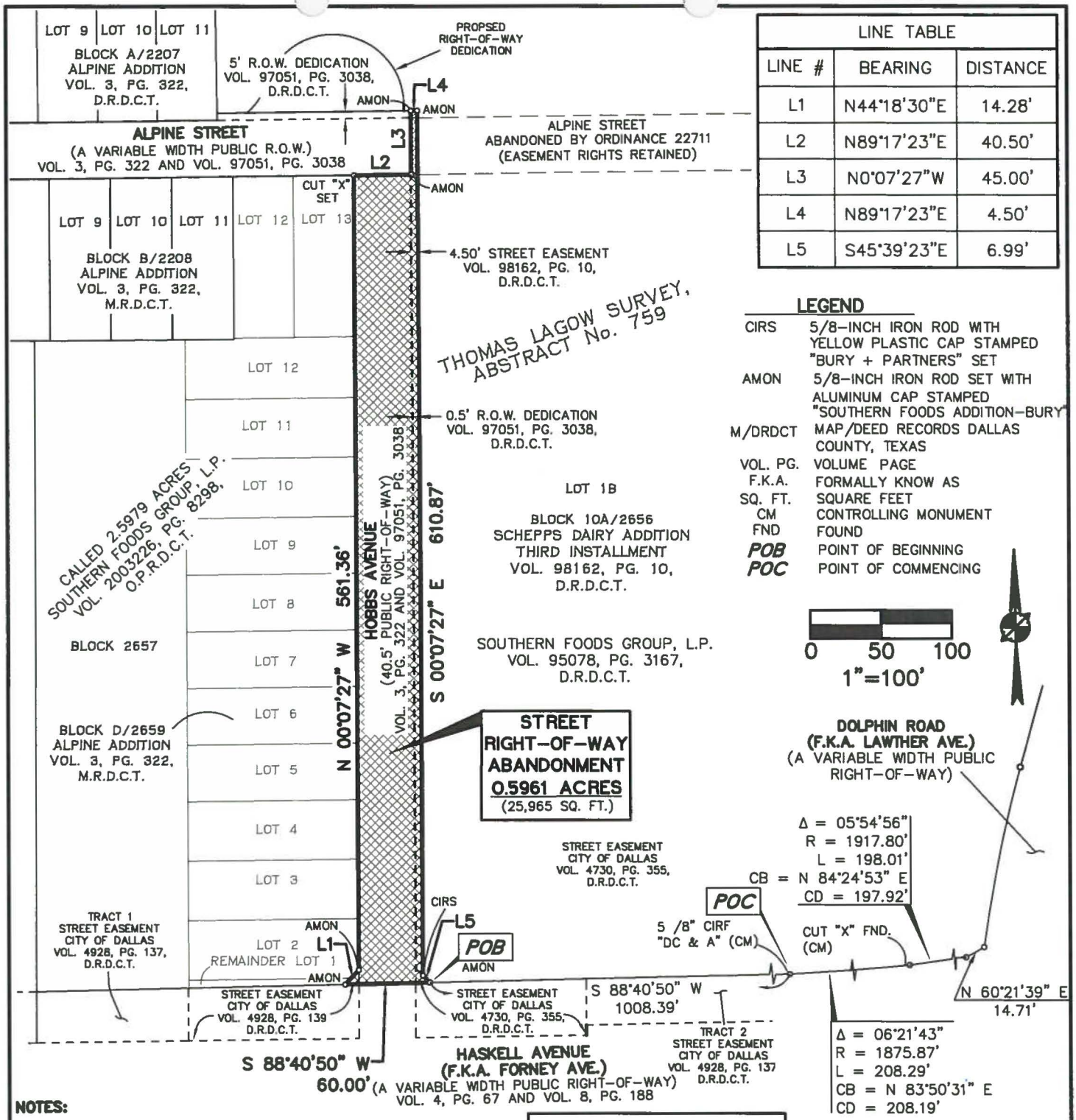
A SKETCH WAS PREPARED ON EVEN DATE TO ACCOMPANY THIS DESCRIPTION.

(For SPRG use only)
Reviewed by: CEC
Date: 11-4-15
SPRG NO: 3049



10/29/15

EXHIBIT A



LINE TABLE		
LINE #	BEARING	DISTANCE
L1	N44°18'30"E	14.28'
L2	N89°17'23"E	40.50'
L3	N0°07'27"W	45.00'
L4	N89°17'23"E	4.50'
L5	S45°39'23"E	6.99'

LEGEND

CIRS	5/8-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "BURY + PARTNERS" SET
AMON	5/8-INCH IRON ROD SET WITH ALUMINUM CAP STAMPED "SOUTHERN FOODS ADDITION-BURY"
M/DRDCT	MAP/DEED RECORDS DALLAS COUNTY, TEXAS
VOL. PG.	VOLUME PAGE
F.K.A.	FORMALLY KNOW AS
SQ. FT.	SQUARE FEET
CM	CONTROLLING MONUMENT
FND	FOUND
POB	POINT OF BEGINNING
POC	POINT OF COMMENCING

NOTES:

A FIELD NOTE DESCRIPTION WAS PREPARED ON EVEN DATE TO ACCOMPANY THIS SKETCH.

BEARINGS SHOWN HEREON ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM, TEXAS NORTH CENTRAL ZONE 4202, NORTH AMERICAN DATUM OF 1983 (2011).

(FOR SPRG USE ONLY)
REVIEWED BY: CEC
DATE: 11-4-15
SPRG NO. 3049

BURY
5310 Harvest Hill Road, Suite 100
Dallas, Texas 75230
Tel. (972) 991-0011 Fax (972) 991-0278
TBPE # F-1048 TBPLS # F-10107502

Copyright © 2015

STREET
RIGHT-OF-WAY ABANDONMENT

ALL OF HOBBS AVENUE,
ADJACENT TO BLOCK'S D/2659 AND 10A/2656,
ALPINE ADDITION, AND SCHEPPS DAIRY ADDITION
CITY OF DALLAS,
DALLAS COUNTY, TEXAS

STATE OF TEXAS
REGISTERED
DAVID J. DeWEIRDT
5066
PROFESSIONAL
LAND SURVEYOR
10/29/15

DAVID J. DeWEIRDT
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 5066
DATE: 10/20/15

S:\SUR\0111420 The Dennis Group\30002 Dennis Group\EXHIBITS\0111420-02-NEW-ROW-ABAND-101915.dwg at Oct 28, 2015 - 4:30pm

EXHIBIT B

ADDITIONAL ABANDONMENT PROVISIONS

That as a condition hereof, this abandonment is subject to any utilities or communication facilities, including without limitation water and wastewater lines, gas lines, and storm sewers, ("Facilities") presently located within the abandoned area described in Exhibit "A", owned and/or operated by the City of Dallas or any utility or communications company, public or private, ("Utility") and to the rights of any Utility for the use of the abandoned area for its Facilities. It is the intent of the foregoing to confirm and maintain and there is hereby reserved and excepted unto the City of Dallas, and not abandoned or conveyed hereunder, an easement (to which this abandonment is made expressly subject) over, upon, under, through, in, and across the abandoned area for each Utility for its respective Facilities located therein at the time of this abandonment, together with the right to make any subsequent alterations, additions, expansions, upgrades or modifications to such Facilities as may, from time to time be deemed necessary or convenient by the Utility owning and/or operating same. No buildings, structures (above or below ground) or trees shall be constructed or placed within the abandoned area without written consent of each affected Utility. Each Utility shall have the full right to remove and keep removed all or part of any buildings, fences, trees, or other improvements or growths which in any way may endanger or interfere with the construction, maintenance or efficiency of its respective Facilities lying within the abandoned area and shall at all times have the full right of ingress and egress to or from and upon the abandoned area for the purposes of reconstructing, removing, relocating, inspecting, patrolling, maintaining, expanding, upgrading, and/or adding to all or part of its Facilities without the necessity at any time of procuring the permission of anyone. The easement reserved hereunder and the conditions and restrictions to which this abandonment is subject shall remain for the benefit of the applicable Utility and/or operators of the Facilities until said Facilities are removed and relocated from the abandoned area. The relocation, removal or adjustment of any or all such Facilities, if made necessary by GRANTEE'S (whether one or more natural persons or legal entities) use of the abandonment area, shall be at the expense of GRANTEE herein, or GRANTEE'S successors and assigns. Should GRANTEE'S relocation or removal of the Facilities require the obtaining of new easements, the acquisition of same shall be at the expense of GRANTEE, GRANTEE'S successors and assigns. If any of the Facilities (or relocations thereof) are allowed to remain on any part of the abandoned area, the easements and buildings restrictions provided herein shall remain thereon. Upon removal or relocation of all of the Facilities, any easements reserved or created herein relating to such removed or relocated Facilities shall terminate, and any building restrictions herein created shall cease.

AGENDA ITEM # 32

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 13

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 14T

SUBJECT

An ordinance abandoning three fire lane easements to Wal-Mart Real Estate Business Trust, the abutting owner, containing a total of approximately 76,544 square feet of land, located near the intersection of Harvest Hill and Midway Roads - Revenue: $5,400, plus the $20 ordinance publication fee

BACKGROUND

This item authorizes the abandonment of three fire lane easements to Wal-Mart Real Estate Business Trust, the abutting owner. The area will be included with the property of the abutting owner for construction of a new retail development. The cost for this abandonment is the minimum processing fee pursuant to the Dallas City Code, therefore, no appraisal is required.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item was provided to the Economic Development Committee on November 16, 2015.

FISCAL INFORMATION

Revenue: $5,400, plus the $20 ordinance publication fee

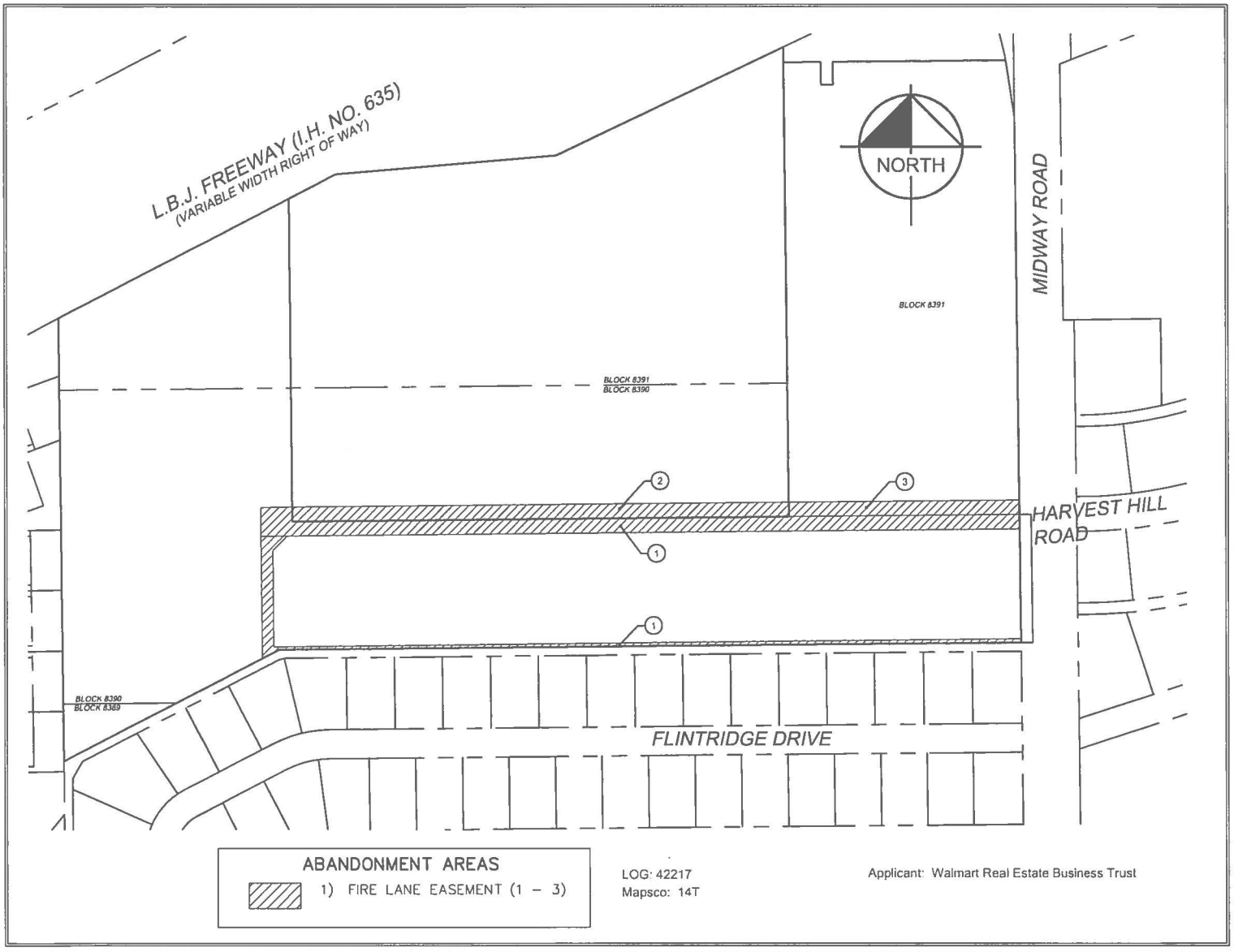
OWNER

Wal-Mart Real Estate Business Trust

J.P. Suarez, Senior Vice President

MAP

Attached



ABANDONMENT AREAS

1) FIRE LANE EASEMENT (1 – 3)

LOG: 42217
Mapsco: 14T

Applicant: Walmart Real Estate Business Trust

ORDINANCE NO. _____

An ordinance providing for the abandonment and relinquishment of three fire lane easements, located in City Blocks 8390, 8391, and A/8391 in the City of Dallas and County of Dallas, Texas; providing for the quitclaim thereof to Wal-Mart Real Estate Business Trust; providing for the terms and conditions of the abandonment, relinquishment and quitclaim made herein; providing for the indemnification of the City of Dallas against damages arising out of the abandonments herein; providing for the consideration to be paid to the City of Dallas; providing for the payment of the publication fee; and providing an effective date for this ordinance.

ooo0ooo

WHEREAS, the City Council of the City of Dallas, acting pursuant to law and upon the request and petition of Wal-Mart Real Estate Business Trust, a Delaware statutory trust; hereinafter referred to as **GRANTEE**, deems it advisable to abandon, relinquish and quitclaim the City of Dallas' right, title and interest in and to the hereinafter described tracts of land to **GRANTEE**, and is of the opinion that, subject to the terms and conditions herein provided, said easements are no longer needed for municipal use, and same should be abandoned, relinquished and quitclaimed to **GRANTEE** as hereinafter provided, for the consideration hereinafter stated; and

WHEREAS, the City Council of the City of Dallas is of the opinion that the best interest and welfare of the City will be served by abandoning, relinquishing and quitclaiming the same to **GRANTEE** for the consideration and subject to the terms and conditions hereinafter more fully set forth; **Now, Therefore,**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the City of Dallas hereby abandons and relinquishes all of its right, title and interest in and to the tracts of land described in Exhibit A, attached hereto and made a part hereof; subject, however, to the conditions hereinafter more fully set out.

SECTION 2. That for and in monetary consideration of the sum of **FIVE THOUSAND FOUR HUNDRED AND NO/100 ($5,400.00) DOLLARS** paid by **GRANTEE**, and the further consideration described in Section 8, the City of Dallas does by these presents **FOREVER QUITCLAIM** unto the said **GRANTEE**, subject to the conditions, reservations, and exceptions hereinafter made and with the restrictions and upon the covenants below stated, all its right, title and interest in and to the certain tracts or parcels of land hereinabove described in Exhibit A. **TO HAVE AND TO HOLD** all of such right, title and interest in and to the property and premises, subject aforesaid, together with all and singular the rights, privileges, hereditaments and appurtenances thereto in any manner belonging unto the said **GRANTEE** forever.

SECTION 3. That upon payment of the monetary consideration set forth in Section 2, **GRANTEE** accepts the terms, provisions, and conditions of this ordinance.

SECTION 4. That the Chief Financial Officer is authorized to deposit the sum paid by **GRANTEE** pursuant to Section 2 above in the General Fund 0001, Department DEV, Balance Sheet 0519 and Department of Sustainable Development and Construction - Real Estate Division shall be reimbursed for the cost of obtaining the legal description, appraisal and other administrative costs incurred. The reimbursement proceeds shall be deposited in General Fund 0001, Department DEV, Unit 1183, Object 5011 and any remaining proceeds shall be transferred to the General Capital Reserve Fund 0625, Department BMS, Unit 8888, Revenue Source 8416.

SECTION 5. That the abandonment, relinquishment and quitclaim provided for herein are made subject to all present zoning and deed restrictions, if the latter exist, and are subject to all existing easement rights of others, if any, whether apparent or non-apparent, aerial, surface, underground or otherwise.

SECTION 6. That the terms and conditions contained in this ordinance shall be binding upon **GRANTEE**, its successors and assigns.

SECTION 7. That the abandonment, relinquishment and quitclaim provided for herein shall extend only to that interest the Governing Body of the City of Dallas may legally and lawfully abandon, relinquish and quitclaim.

SECTION 8. That as a condition of this abandonment and as a part of the consideration for the quitclaim to **GRANTEE** herein, **GRANTEE**, its successors and assigns, agree to indemnify, defend, release and hold harmless the City of Dallas as to any and all claims for damages, fines, penalties, costs or expenses to persons or property that may arise out of, or be occasioned by or from: (i) the use and occupancy of the area described in Exhibit A by **GRANTEE**, its successors and assigns; (ii) the presence, generation, spillage, discharge, release, treatment or disposition of any Hazardous Substance on or affecting the area set out in Exhibit A, (iii) all corrective actions concerning any discovered Hazardous Substances on or affecting the area described in Exhibit A, which **GRANTEE**, its successors and assigns agree to undertake and complete in accordance with applicable federal, state and local laws and regulations; and (iv) the abandonment, closing, vacation and quitclaim by the City of Dallas of the area set out in Exhibit A. **GRANTEE**, its successors and assigns hereby agree to defend any and all suits, claims, or causes of action brought against the City of Dallas on account of same, and discharge any judgment or judgments that may be rendered against the City of Dallas in connection therewith. For purposes hereof, "Hazardous Substance" means the following: (a) any "hazardous substances" under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601 et seq., as amended; (b) any "hazardous substance" under the Texas Hazardous Substances Spill Prevention and Control Act, TEX. WATER CODE, Section 26.261 et seq., as amended; (c) petroleum or petroleum-based products (or any derivative or hazardous constituents thereof or additives thereto), including without limitation, fuel and lubricating oils; (d) any "hazardous chemicals" or "toxic chemicals" under the Occupational Safety and Health Act, 29 U.S.C. Section 651 et seq., as amended; (e) any "hazardous waste" under the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., as amended; and (f) any "chemical substance" under the Toxic Substance Control Act, 15 U.S.C. Section 2601 et seq., as amended. References to particular acts or codifications in this definition include all past and future amendments thereto, as well as applicable rules and regulations as now or hereafter promulgated thereunder.

SECTION 9. That as a condition of this abandonment and as part of the consideration for the quitclaim to **GRANTEE** herein; **GRANTEE** shall, at no time during or after the project cause any delay to emergency traffic or cause interruption to water supply in the area.

SECTION 10. That the City Secretary is hereby authorized and directed to certify a copy of this ordinance for recordation in the Deed Records of Dallas County, Texas, which certified copy shall be delivered to the Director of Department of Sustainable Development and Construction, or designee. Upon receipt of the monetary consideration set forth in Section 2, plus the fee for the publishing of this ordinance, which **GRANTEE** shall likewise pay, the Director of Department of Sustainable Development and Construction, or designee shall deliver to **GRANTEE** a certified copy of this ordinance. The Director of Department of Sustainable Development and Construction, or designee, shall be the sole source for receiving certified copies of this ordinance for one year after its passage.

SECTION 11. That this ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so ordained.

APPROVED AS TO FORM:
WARREN M. S. ERNST
City Attorney

BY _____
Assistant City Attorney

DAVID COSSUM
Director of Department of Sustainable Development and Construction

BY _____
Assistant Director

Passed _____.

EXHIBIT A

TRACT 1

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

BEING a 1.035 acre tract of land situated in the V. Wampler Survey, Abstract No. 1570, City of Dallas, Dallas County, Texas, and being situated in the Official City of Dallas Block 8390, same also being situated in a called 13.504 acre tract, conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201300279878 of the Official Public Records of Dallas County, Texas, also being a portion of a variable width Fire Lane Easement conveyed to the City of Dallas, as evidenced in a document recorded in Volume 68190, Page 755 of the Deed Records of Dallas County, Texas, and being more particularly described by metes and bounds as follows:

COMMENCING at an "X" cut found (controlling monument) for the southeast corner of said 13.504 acre tract, same being the northeast corner of Tamarack Addition, an Addition to the City of Dallas, Texas, according to the Map or Plat, thereof recorded in Volume 67122, Page 27 of the Deed Records of Dallas County, Texas, same also being the southeast corner of a 20' wide Street Easement to the City of Dallas, Texas, as recorded in Volume 68127, Page 595 of the Deed Records of Dallas County, Texas, said corner also being in Midway Road (a called 100' wide right of way);

THENCE South 89°28'36" West, along the south line of said 13.504 acre tract and the north line of said Tamarack Addition, a distance of 20.00 feet to a 5/8-inch iron rod found (controlling monument) on the current west right of way line of said Midway Road for the most southerly, southeast corner of said variable width Fire Lane Easement, same being the **POINT OF BEGINNING** of the herein described abandonment tract;

THENCE South 89°28'36" West, continuing along the south line of said 13.504 acre tract, the north line of said Tamarack Addition and along the most southerly, south line of said variable width Fire Lane Easement, a distance of 1283.54 feet to a PK nail found (controlling monument) for a corner;

THENCE South 62°34'36" West, continuing along the south line of said 13.504 acre tract, the north line of said Tamarack Addition and the most southerly, south line of said variable width Fire Lane Easement , a distance of 32.93 feet to the southwest corner of said variable width Fire Lane Easement;

THENCE North 0°32'30" West, departing the south line of said 13.504 acre tract, the north line of said Tamarack Addition and along the west line of said variable width Fire Lane Easement, a distance of 260.64 feet to the northwest corner of said variable width Fire Lane Easement;

THENCE North 89°27'11 East, along the most northerly, north line of said variable width Fire Lane Easement, a distance of 54.70 feet to a corner on the west line of Tract I as conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201400016333 of the Official Public Records of Dallas County, Texas;

THENCE South 0°30'51" East, departing the most northerly line of said variable width Fire Lane Easement, along the west line of said Tract I, a distance of 25.00 feet to a PK nail found (controlling monument) for the southwest corner of said Tract I, same being on the north line of aforesaid 13.504 acre tract;

(For SPRG use only)
Reviewed By: DBF
Date: 10.22.2015
SPRG NO: 3423

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
NONE	MBM	KHA	10/21/2015	063362231	1 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:52 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

EXHIBIT A

TRACT 1

THENCE North 89°27'11" East, along the north line of said 13.504 acre tract, the south line of said Tract I and the south line of Block A/8391 of Midway Park Shopping Center, an Addition to the City of Dallas, Texas, according to the Final Plat thereof recorded in Volume 74248, Page 546 of the Deed Records of Dallas County, Texas, a distance of 1258.04 feet to an "X" cut found (controlling monument) for a corner on the most northerly, east line of said variable width Fire Lane Easement, same being the southeast corner of said Block A/8391, same also being on the current west right of way line of aforesaid Midway Road;

THENCE South 0°35'26" East, departing the north line of said 13.504 acre tract, along the northerly, east line of said variable width Fire Lane Easement and along the current west right of way line of said Midway Road, a distance of 25.00 feet to the most northerly, southeast corner of said variable width Fire Lane Easement;

THENCE South 89°27'11" West, departing the west right of way line of said Midway Road and along the most northerly, south line of said variable width Fire Lane Easement, a distance of 1267.76 feet to a corner;

THENCE South 44°27'11" West, continuing along the most northerly, south line of said variable width Fire Lane Easement, a distance of 35.36 feet to a corner;

THENCE South 0°32'30" East, along the most westerly, east line of said variable width Fire Lane Easement, a distance of 165.75 feet to a corner;

THENCE North 89°28'36" East, along the most southerly, north line of said variable width Fire Lane Easement, a distance of 1292.92 feet to the most southerly, northeast corner of said variable width Fire Lane Easement, same being on the current west right of way line of aforesaid Midway Road;

THENCE South 0°35'26" East, along the most southerly, east line of said variable width Fire Lane Easement and along the west right of way line of said Midway Road, a distance of 5.00 feet to the **POINT OF BEGINNING** and containing 1.035 acres (45,093 square feet) of land.

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.



(For SPRG use only)
Reviewed By: DBP
Date: 10-29-2015
SPRG NO: 3423

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

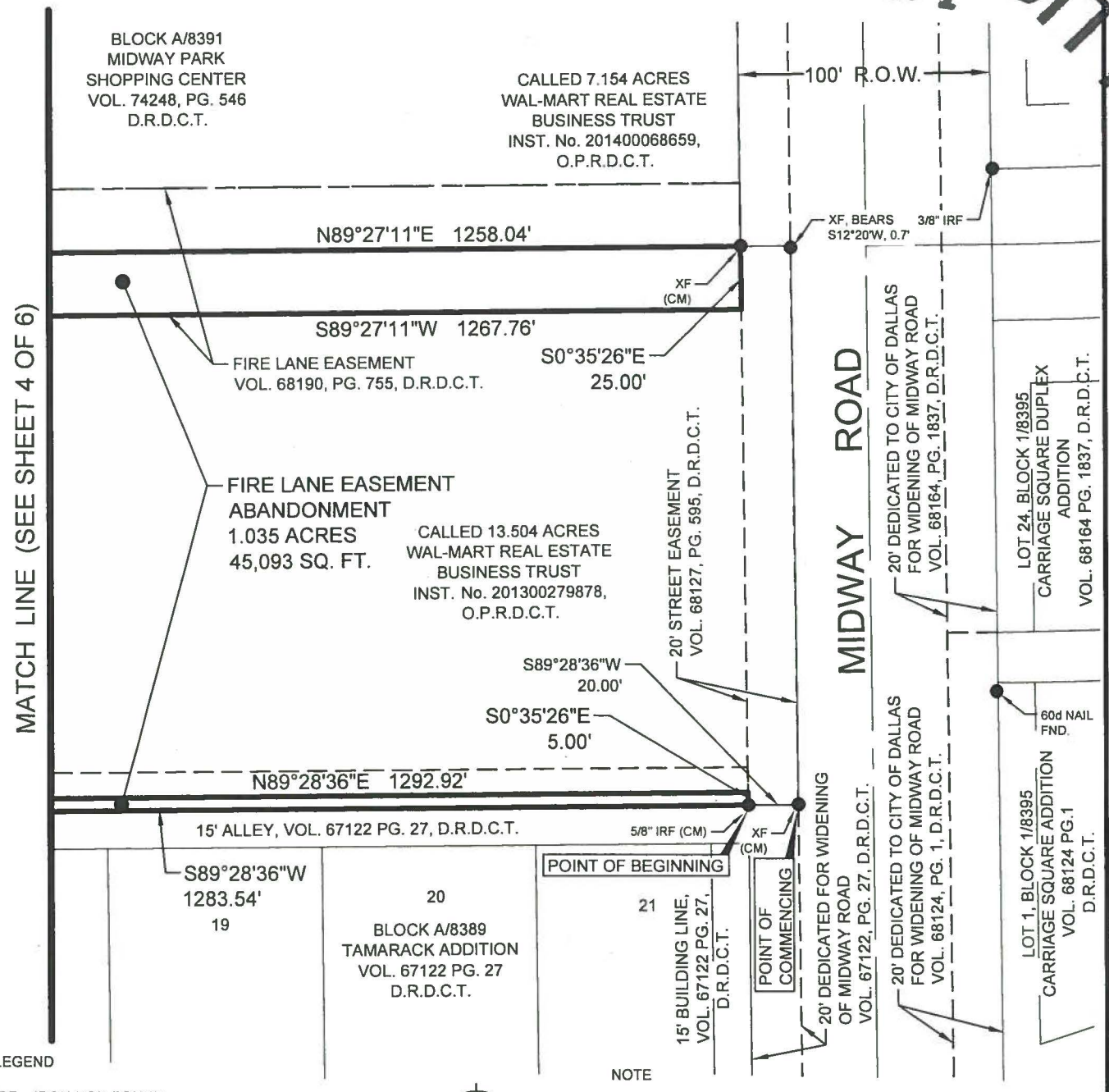
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
NONE	MBM	KHA	10/21/2015	063362231	2 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:52 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

EXHIBIT A

TRACT 1



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NORTH

0 30 60

GRAPHIC SCALE IN FEET

(For SPRG use only)

Reviewed By: DBF

Date: 10.29.2015

SPRG NO: 3423

Kimley»Horn

5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

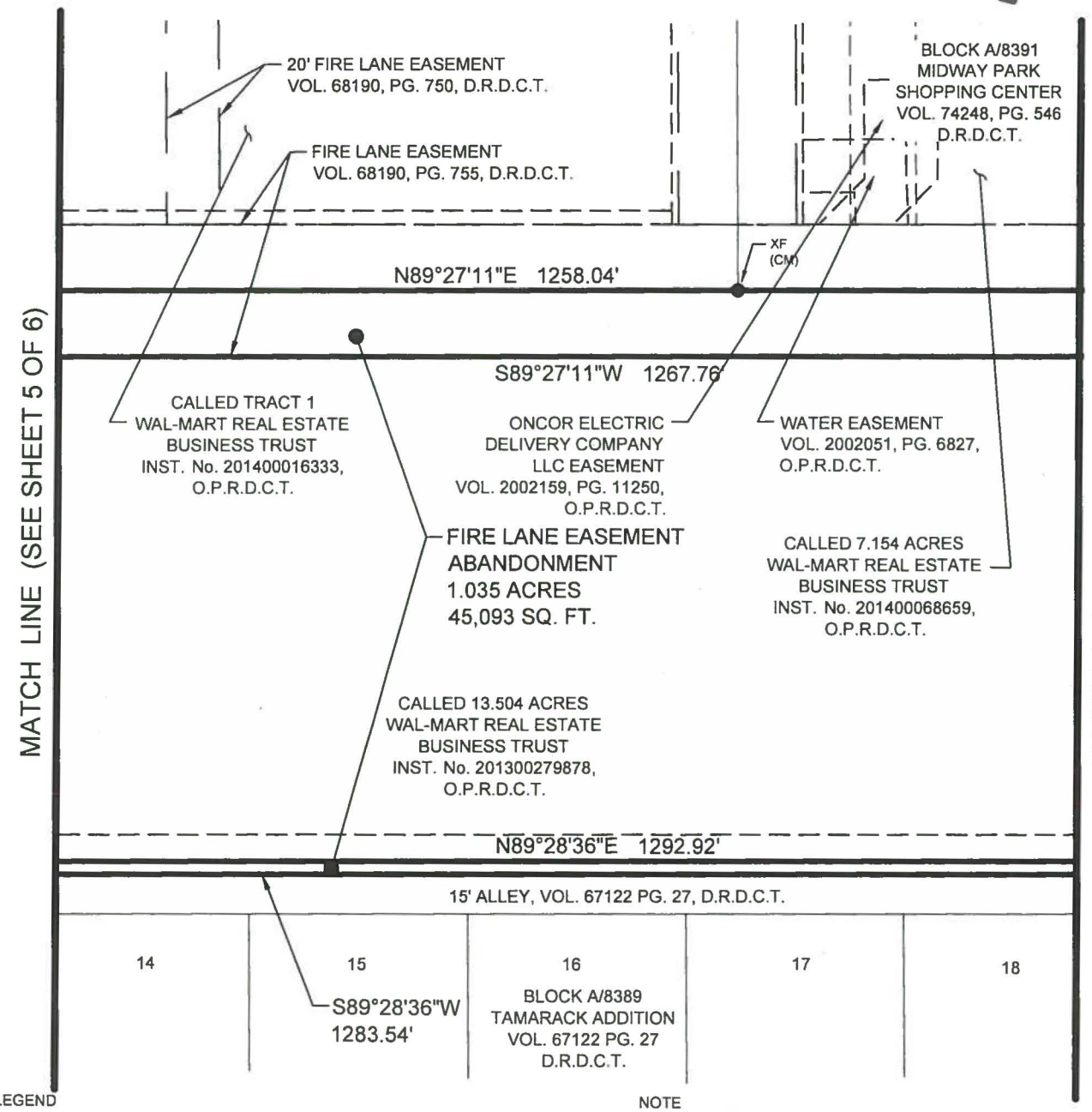
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	3 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:53 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 1



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NORTH

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3423

0 30 60
GRAPHIC SCALE IN FEET

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

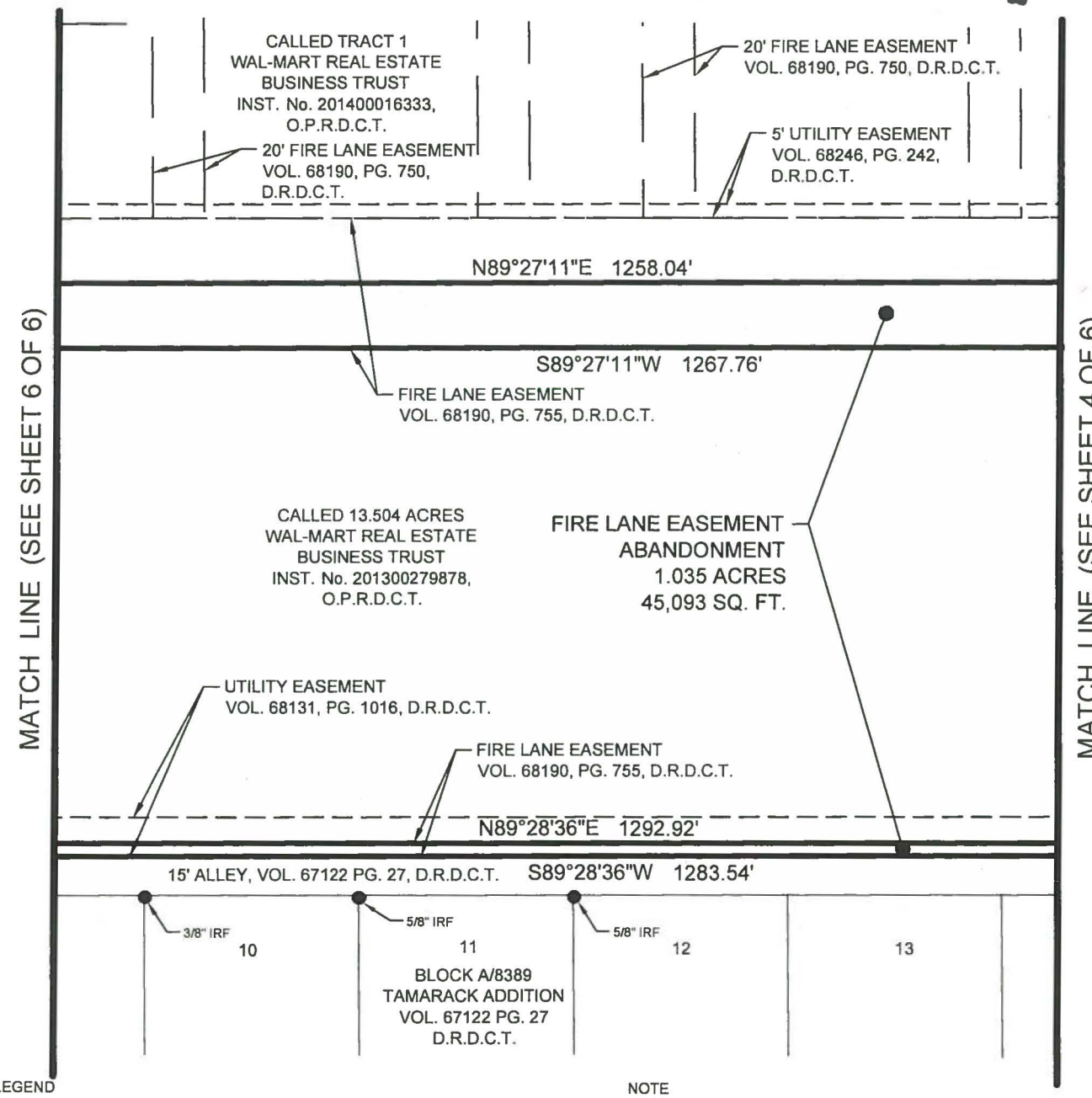
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	4 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:53 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

TRACT 1

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NORTH

0 30 60

GRAPHIC SCALE IN FEET

(For SPRG use only)
Reviewed By: OBF
Date: 10-29-2015
SPRG NO: 3423

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

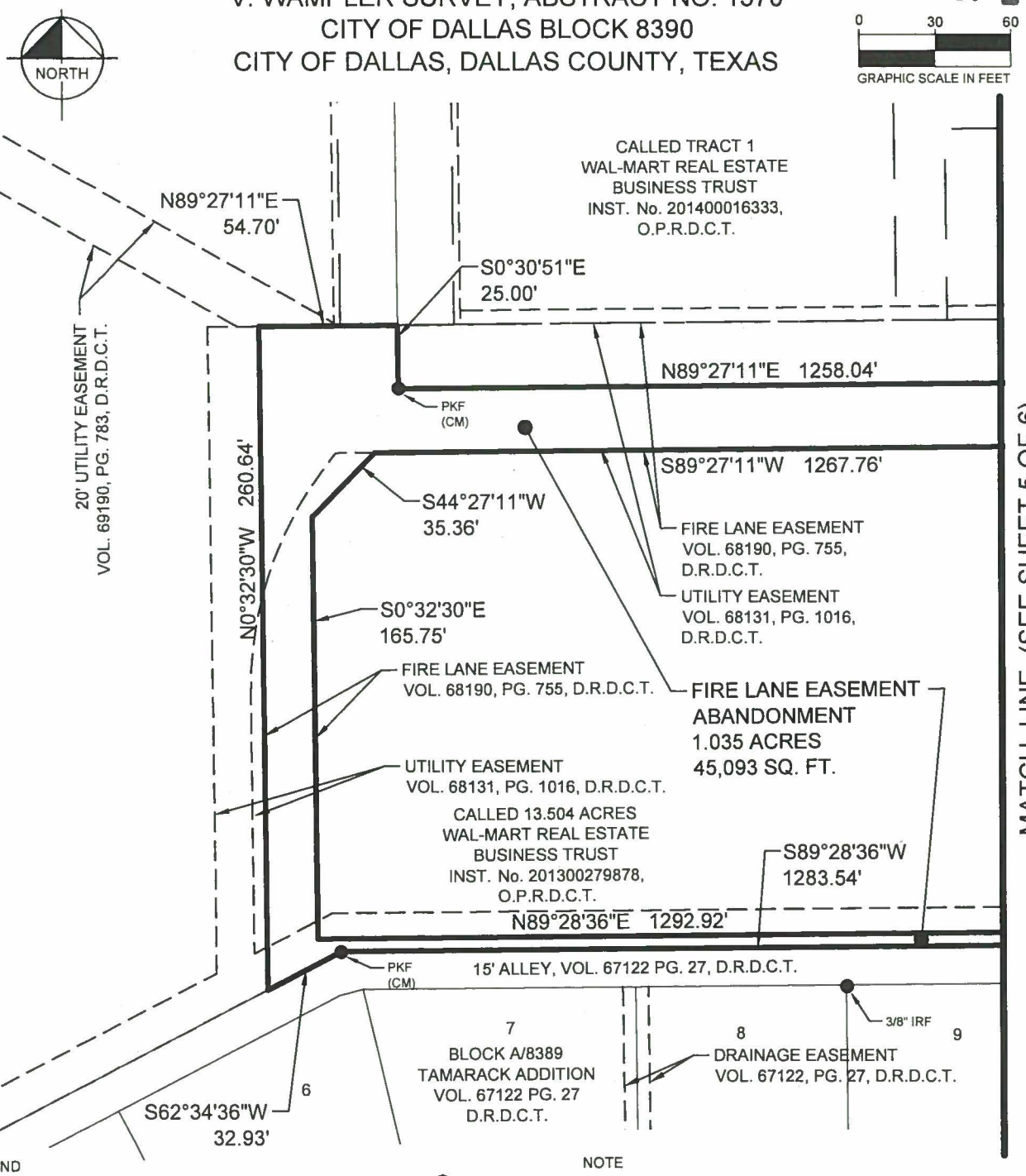
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	5 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:53 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 1



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

STATE OF TEXAS
REGISTERED
MICHAEL B. MARX
5181
PROFESSIONAL
LAND SURVEYOR

10/23/15

(For SPRG use only)
Reviewed By: DBF
Date: 10.29.2015
SPRG NO: 3423

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	6 OF 6

PLOTTED BY MARX, MICHAEL 10/23/2015 6:53 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 2

BEING a 21,458 square feet (0.493 acre) tract of land situated in the V. Wampler Survey, Abstract No. 1570, City of Dallas, Dallas County, Texas, and being situated in the Official City of Dallas Block 8390, same also being situated in a called Tract I (12.970 acres), conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201400016333 of the Official Public Records of Dallas County, Texas, also being a portion of a variable width Fire Lane Easement conveyed to the City of Dallas, as evidenced in a document recorded in Volume 68190, Page 755 of the Deed Records of Dallas County, Texas, and being more particularly described by metes and bounds as follows:

COMMENCING at an "X" cut found (controlling monument) for the southeast corner of Block A/8391 of Midway Park Shopping Center, an Addition to the City of Dallas, Texas, according to the Final Plat thereof recorded in Volume 74248, Page 546 of the Deed Records of Dallas County, Texas on the most northerly, east line of said variable width Fire Lane Easement, same being the most easterly northeast corner of a called 13.504 acre tract, conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201300279878 of the Official Public Records of Dallas County, Texas, same also being on the west line of a 20' wide Street Easement to the City of Dallas, Texas, as recorded in Volume 68127, Page 595 of the Deed Records of Dallas County, Texas, said corner also being in Midway Road (a called 100' wide right of way);

THENCE South 89°27'11" West, departing the current west right of way line of said Midway Road, along the south line of said Block A/8391 and the northerly line of said 13.504 acre tract, a distance of 399.71 feet to an "X" cut found (controlling monument) for the southwest corner of said Block A/8391 and the southeast corner of aforesaid Tract I, same being the **POINT OF BEGINNING** of the herein described abandonment tract;

THENCE South 89°27'11" West, continuing along the northerly line of said 13.504 acre tract and the south line of said Tract I, a distance of 858.32 feet to a PK nail found (controlling monument) for the southwest corner of said Tract I, same being an angle point in the northerly line of said 13.504 acre tract;

THENCE North 0°30'51" West, along the northerly line of said 13.504 acre tract and the west line of said Tract I, a distance of 25.00 feet to a corner on the north line of aforesaid variable width Fire Lane Easement;

THENCE North 89°27'11" East, departing the west line of said Tract I, the northerly line of said 13.504 acre tract and along the north line of said variable width Fire Lane Easement, a distance of 858.31 feet to a corner on the east line of said Tract I, same being on the west line of aforesaid Block A/8391, Midway Park Shopping Center;

THENCE South 0°32'20" East, departing the north line of said variable width Fire Lane Easement, along the east line of said Tract I and the west line of said Block A/8391, a distance of 25.00 feet to the **POINT OF BEGINNING** and containing 0.493 of an acre (21,458 square feet) of land.

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: OBF
Date: 10-29-2015
SPRG NO: 3424

STATE OF TEXAS
REGISTERED
MICHAEL B. MARX
5181
PROFESSIONAL
LAND SURVEYOR
10/23/15

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

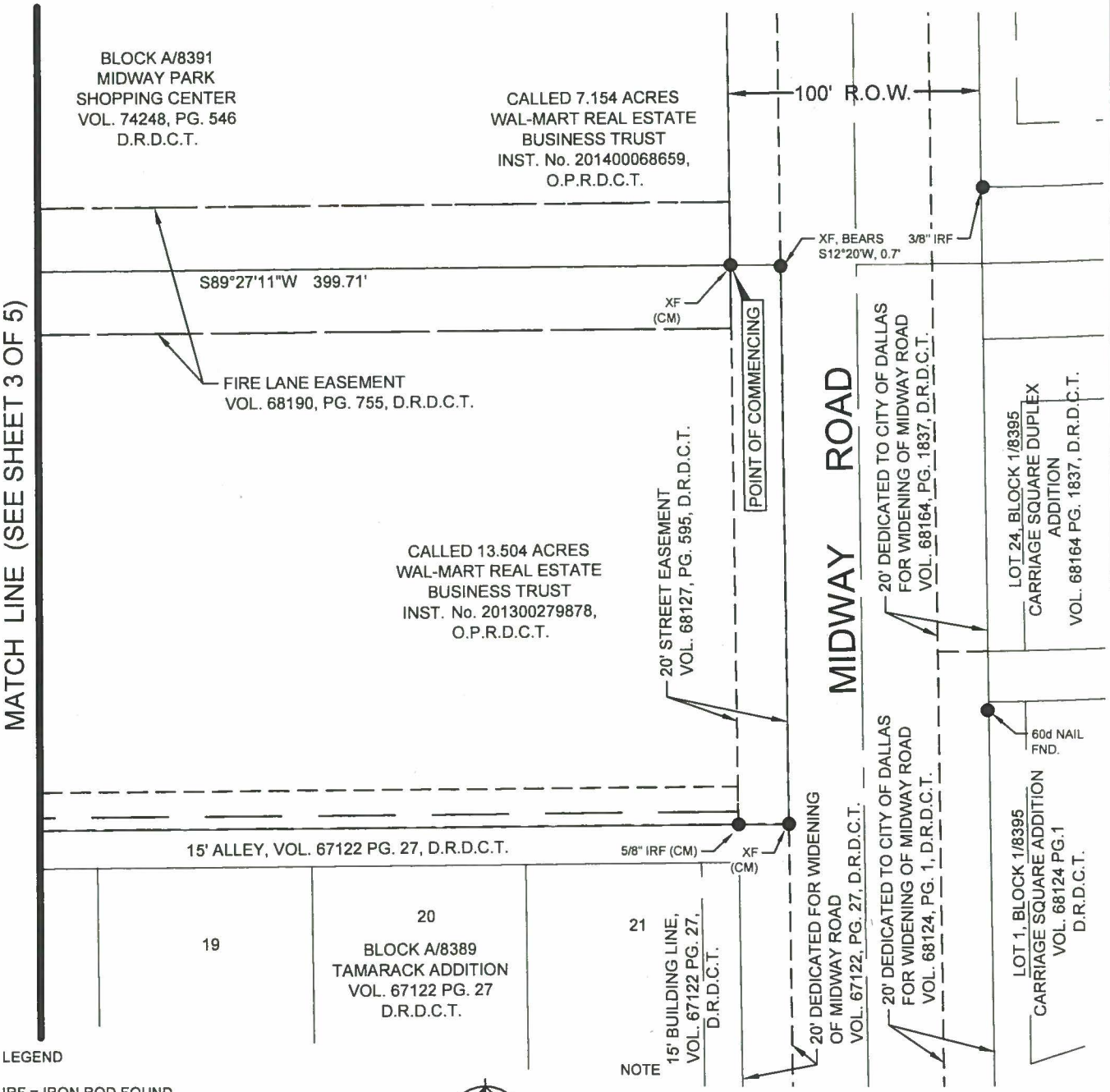
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
NONE	MBM	KHA	10/21/2015	063362231	1 OF 5

PLOTTED BY MARX, MICHAEL 10/23/2015 6:54 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 2



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NORTH

0 30 60

GRAPHIC SCALE IN FEET

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3424

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

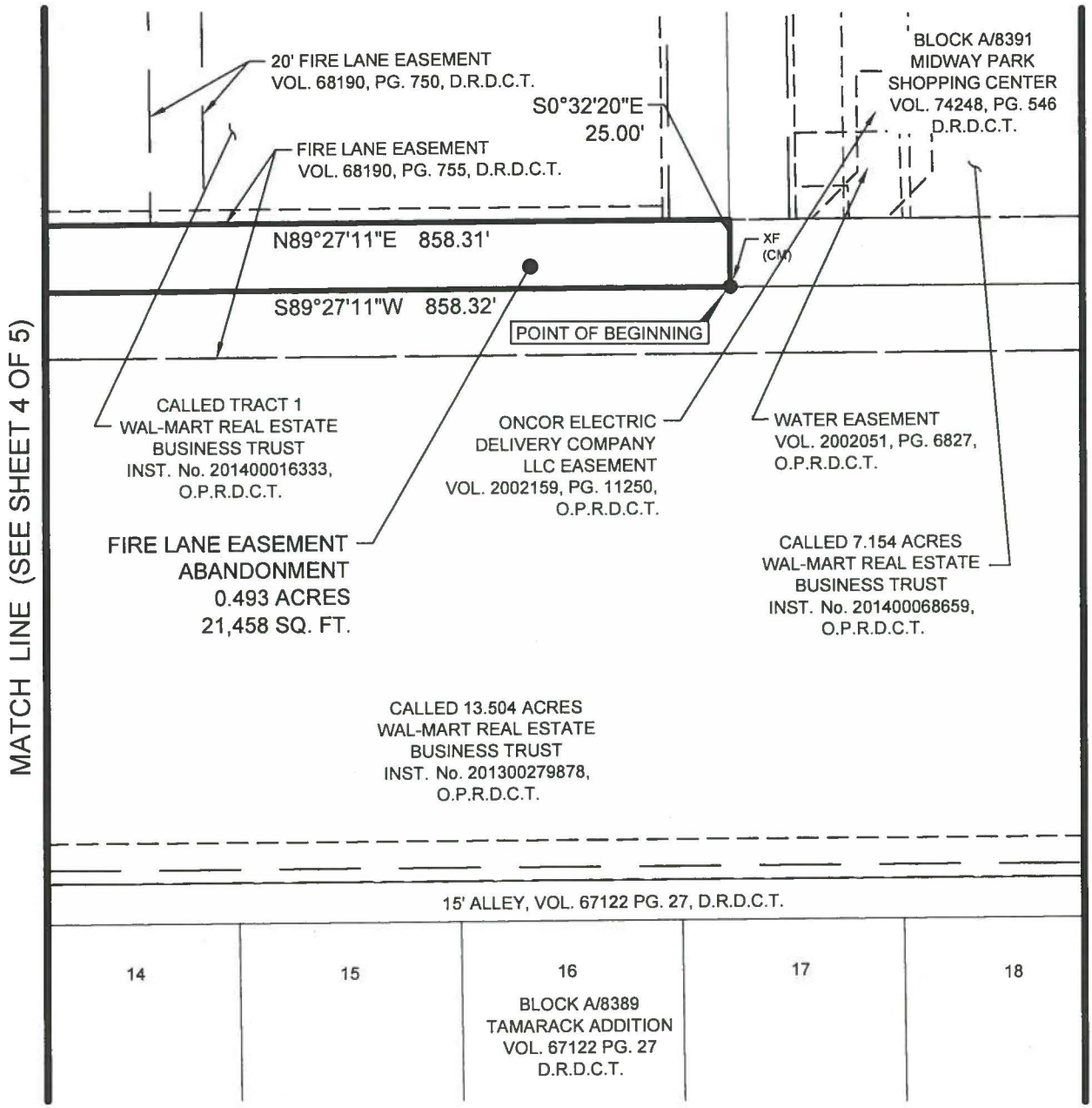
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	2 OF 5

PLOTTED BY MARX, MICHAEL 10/23/2015 6:54 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 2



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NORTH

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: DGF
Date: 10-29-2015
SPRG NO: 3424

0 30 60
GRAPHIC SCALE IN FEET

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

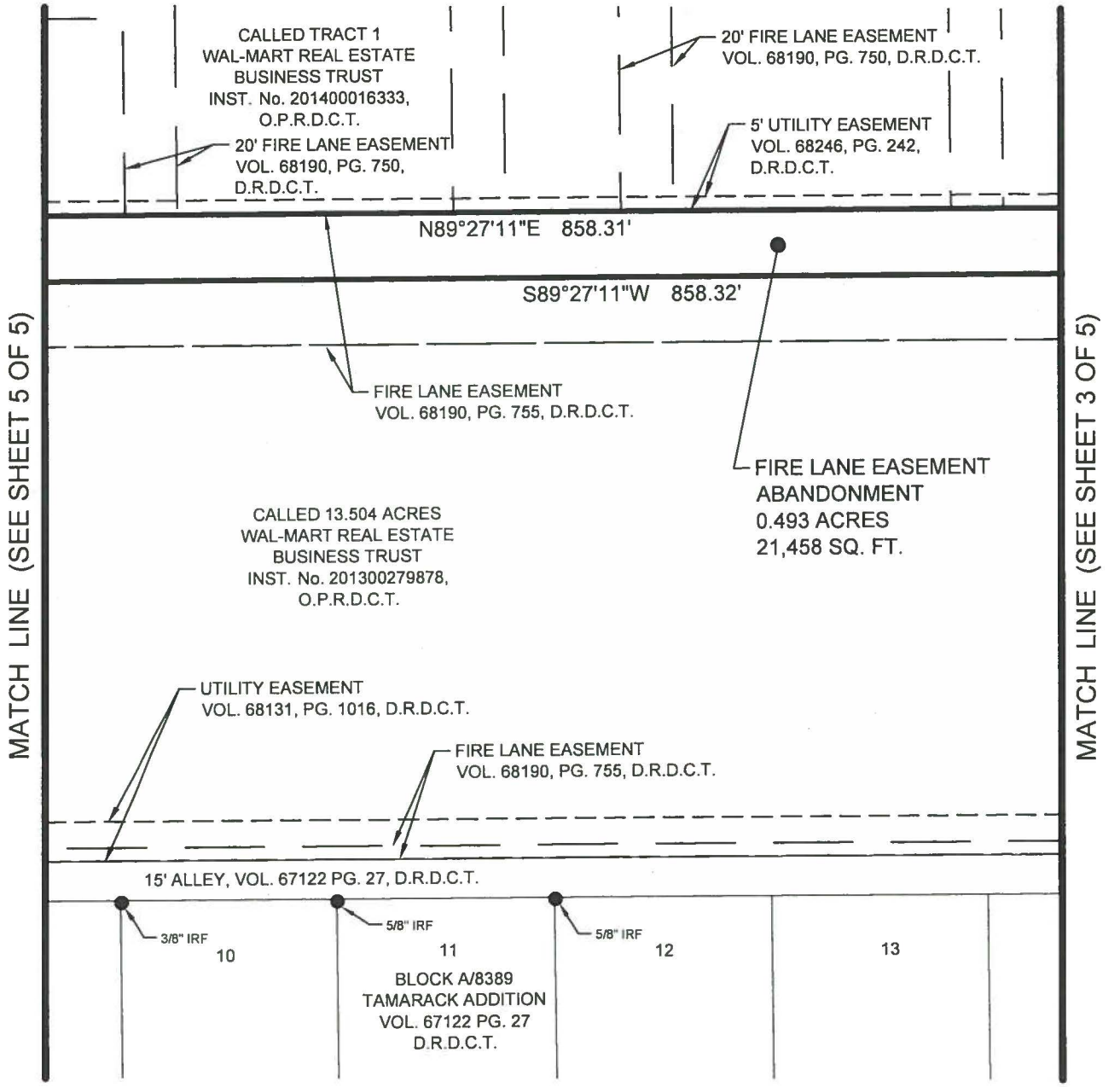
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	3 OF 5

PLOTTED BY MARX, MICHAEL 10/23/2015 6:54 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 2



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NORTH

0 30 60
GRAPHIC SCALE IN FEET

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: OBF
Date: 10.29.2015
SPRG NO: 3424

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

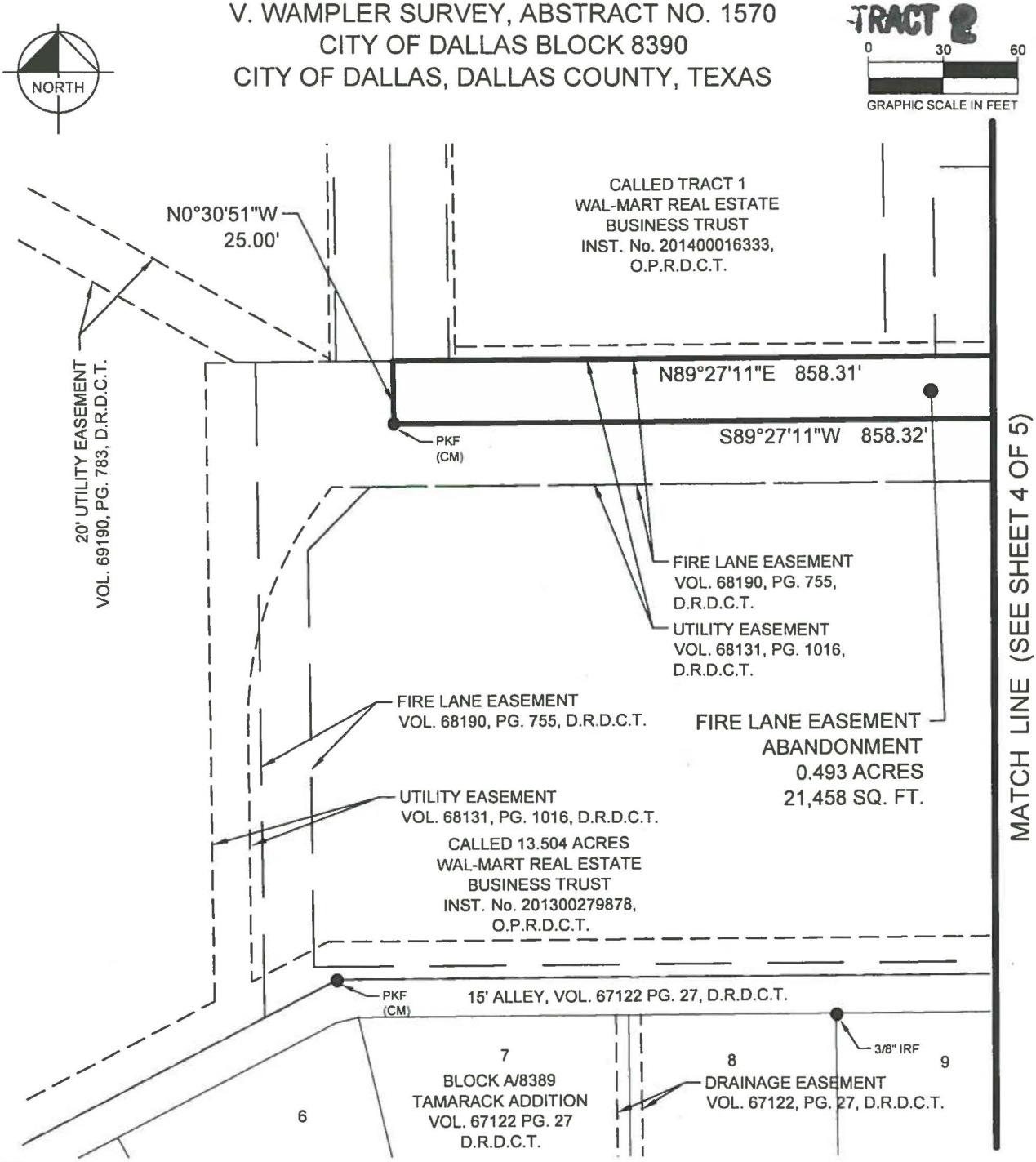
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	4 OF 5

PLOTTED BY MARX, MICHAEL 10/23/2015 6:55 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LB\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 2



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3424

STATE OF TEXAS
REGISTERED
MICHAEL B. MARX
5181
PROFESSIONAL
LAND SURVEYOR
10/23/15

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	5 OF 5

PLOTTED BY MARX, MICHAEL 10/23/2015 6:55 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570 TRACT 3
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

BEING a 9,993 square feet (0.229 acre) tract of land situated in the V. Wampler Survey, Abstract No. 1570, City of Dallas, Dallas County, Texas, and being situated in Block A/8391 of Midway Park Shopping Center, an Addition to the City of Dallas, Texas, according to the Final Plat thereof recorded in Volume 74248, Page 546 of the Deed Records of Dallas County, Texas, same also being situated in a called 7.154 acre tract of land, conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201400068659 of the Official Public Records of Dallas County, Texas, also being a portion of a variable width Fire Lane Easement conveyed to the City of Dallas, as evidenced in a document recorded in Volume 68190, Page 0755 of the Deed Records of Dallas County, Texas, and being more particularly described by metes and bounds as follows:

BEGINNING at an "X" cut found (controlling monument) for the southeast corner of said Block A/8391 of Midway Park Shopping Center, and the most northerly, east line of said variable width Fire Lane Easement, same on the north line of a called 13.504 acre tract, conveyed to Wal-Mart Real Estate Business Trust, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201300279878 of the Official Public Records of Dallas County, Texas, same also being on the west line of a 20' wide Street Easement to the City of Dallas, Texas, as recorded in Volume 68127, Page 0595 of the Deed Records of Dallas County, Texas, said corner also being in Midway Road (a called 100' wide right of way) ;

THENCE South 89°27'11" West, departing the current west right of way line of said Midway Road, along the south line of said Block A/8391 and the north line of said Tract 1 (6.8878 acres), a distance of 399.71 feet to an "X" cut found (controlling monument) for the southwest corner of said Block A/8391 and the southeast corner of a called Tract I, conveyed to Wal-Mart Real Estate Business Tract, as evidenced in a Special Warranty Deed, recorded in Instrument No. 201400016333 of the Official Public Records of Dallas County, Texas;

THENCE North 0°32'20" West, departing the north line of said 13.504 acre tract, along the east line of said Tract I and the west line of said Block A/8391, a distance of 25.00 feet to a corner on the north line of aforesaid variable width Fire Lane Easement;

THENCE North 89°27'11" East, departing the east line of said Tract I, the west line of said Block A/8391 and along the north line of said variable width Fire Lane Easement, a distance of 399.69 feet to the most northerly, northeast corner of said variable width Fire Lane Easement, same being on the current west right of way line of aforesaid Midway Road;

THENCE South 0°35'26" East, along the most northerly, east line of said variable width Fire Lane Easement, along the east line of said Block A/8391 and the current west right of way line of said Midway Road, a distance of 25.00 feet to the **POINT OF BEGINNING** and containing 0.229 of an acre (9,993 square feet) of land.

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

STATE OF TEXAS
REGISTERED
MICHAEL B. MARX
5181
PROFESSIONAL
LAND SURVEYOR
10/23/15

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3425

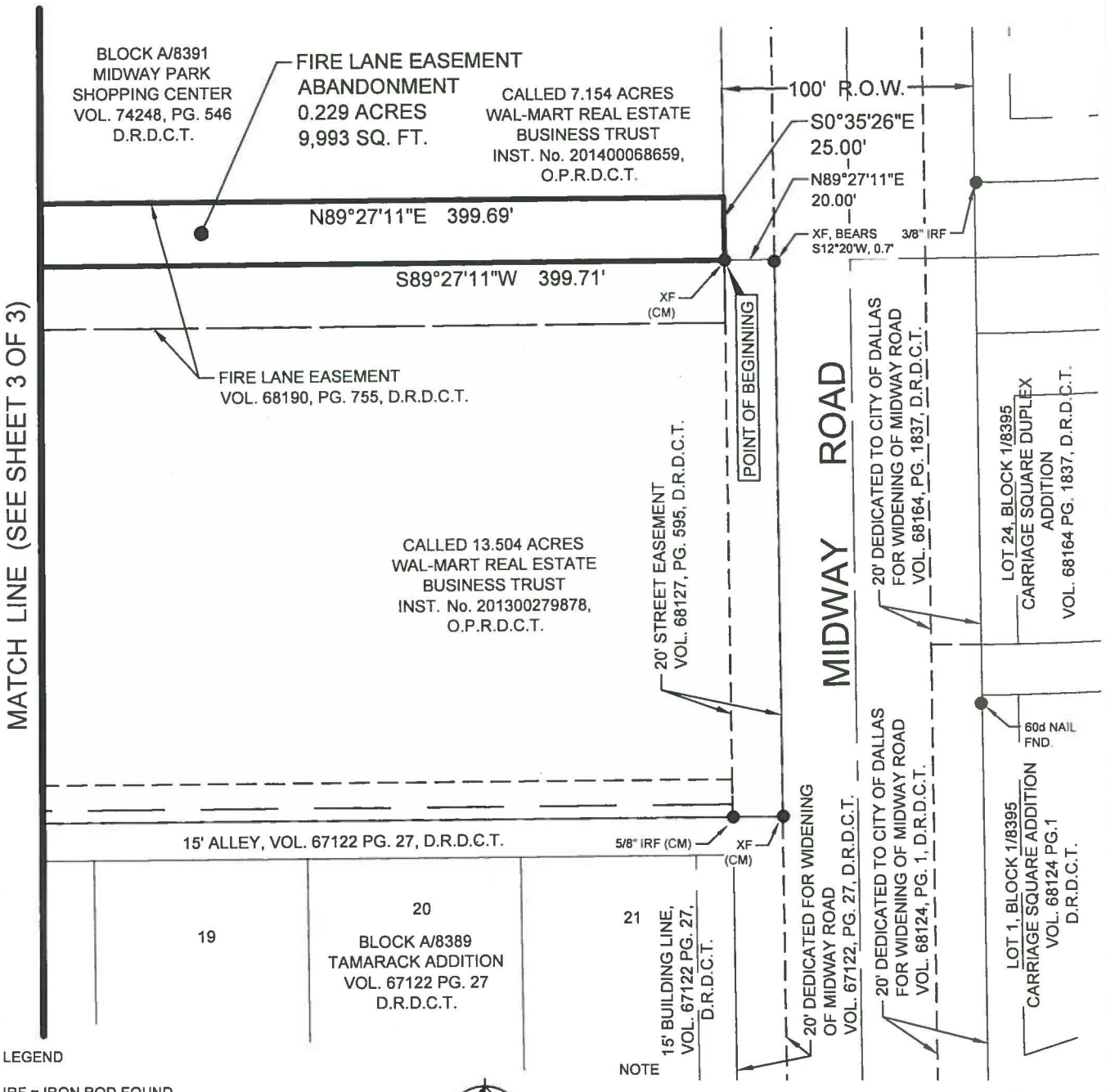
Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
NONE	MBM	KHA	10/21/2015	063362231	1 OF 3

EXHIBIT A

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

TRACT 3



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NORTH

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3425

0 30 60
GRAPHIC SCALE IN FEET

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	2 OF 3

PLOTTED BY MARX, MICHAEL 10/23/2015 6:56 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

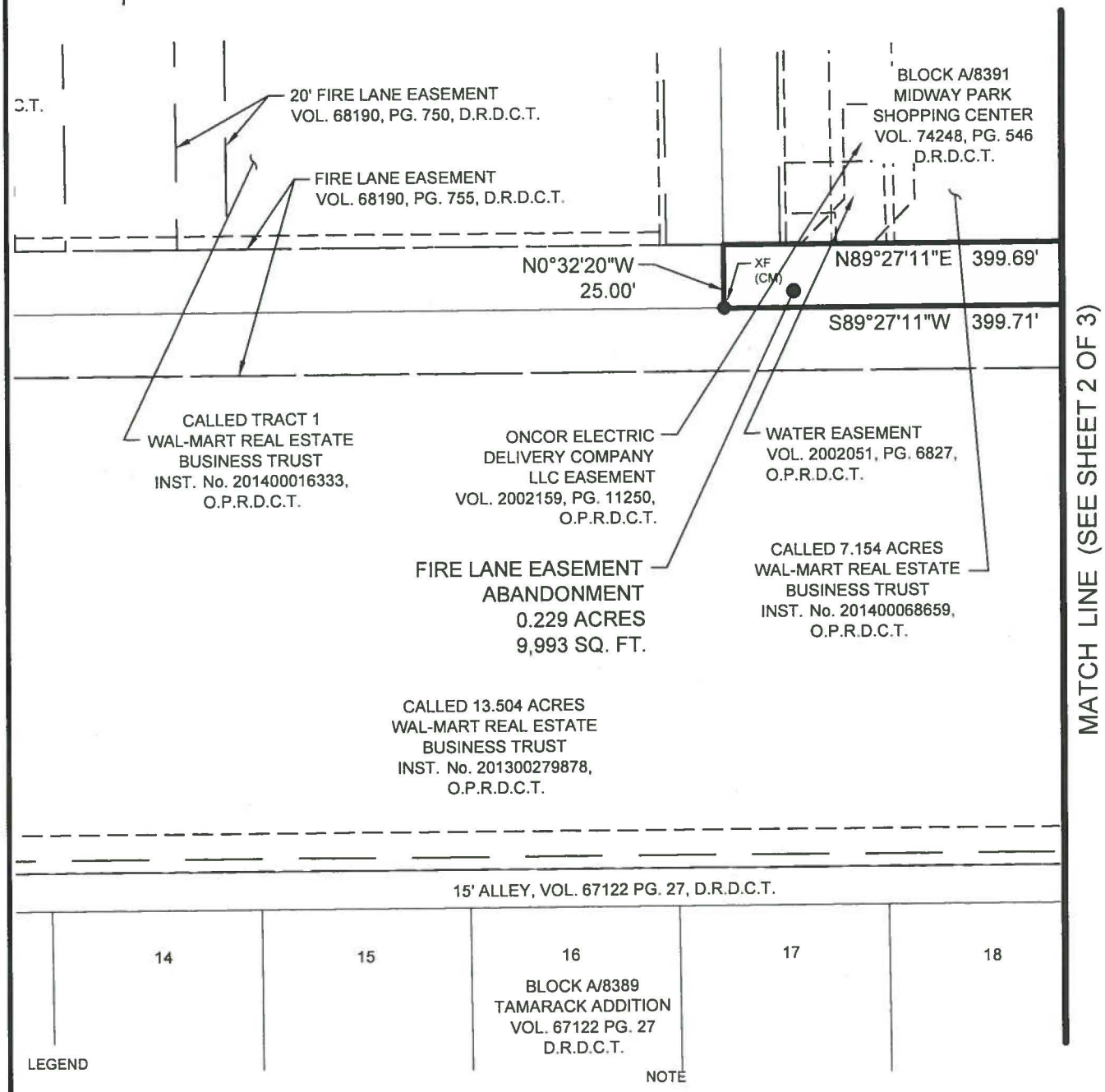
EXHIBIT A

TRACT 3

FIRE LANE EASEMENT ABANDONMENT
V. WAMPLER SURVEY, ABSTRACT NO. 1570
CITY OF DALLAS BLOCK 8390
CITY OF DALLAS, DALLAS COUNTY, TEXAS

NORTH

0 30 60
GRAPHIC SCALE IN FEET



LEGEND

IRF = IRON ROD FOUND
C.M. = CONTROLLING MONUMENT
D.R.D.C.T. = DEED RECORDS OF DALLAS COUNTY, TEXAS
O.P.R.D.C.T. = OFFICIAL PUBLIC RECORDS, DALLAS COUNTY, TEXAS

NOTE

Bearings are based upon the Texas Coordinate System of 1983, Zone 4202, NAD 83 datum, as determined by GPS observations resulting in a bearing of South 89°27'11" West along the southerly line of Block A/8391, Midway Park Shopping Center (Vol. 74248, Pg. 546, D.R.D.C.T.). The bearings listed are Grid values and the distances listed are surface values.

(For SPRG use only)
Reviewed By: DBF
Date: 10-29-2015
SPRG NO: 3425

STATE OF TEXAS
REGISTERED
MICHAEL B. MARX
5181
PROFESSIONAL
LAND SURVEYOR
10/23/15

Kimley»Horn
5750 Genesis Court, Suite 200
Frisco, Texas 75034
TBPLS FIRM NO. 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	MBM	KHA	10/21/2015	063362231	3 OF 3

PLOTTED BY MARX, MICHAEL 10/23/2015 6:56 AM DWG NAME K:\FRI_SURVEY\063362231-MIDWAY AND LBJ\DWG\ABANDONMENTS\WM MIDWAY SOUTH FLE ABAND.DWG LAST SAVED 10/23/2015 6:47 AM

AGENDA ITEM # 33

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 6

DEPARTMENT: Trinity Watershed Management

CMO: Mark McDaniel, 670-3256

MAPSCO: 32Y 42C D 43A B C D 44A F

SUBJECT

Authorize **(1)** a Local Transportation Project Advanced Funding Agreement with the Texas Department of Transportation for the design and construction of the Trinity Skyline Trail from Sylvan Avenue to the City of Irving's Campion Trail; **(2)** the receipt and deposit of Transportation Alternatives Program Funds from the Texas Department of Transportation in an amount not to exceed $2,989,994; **(3)** an increase in appropriations in the amount of $2,989,994 in the TXDOT Transportation Advance Management System Fund; and **(4)** payment to the Texas Department of Transportation in the amount of $180,000 - Not to exceed $3,169,994 - Financing: Stormwater Drainage Management Capital Construction Funds ($180,000) and TXDOT Transportation Advance Management System Funds ($2,989,994)

BACKGROUND

The Transportation Alternatives Program (TAP) was authorized under Section 1122 of Moving Ahead for Progress in the 21st Century Act (MAP-21). This transportation funding and authorization bill provides funding for programs and projects defined as transportation alternatives including pedestrian and bicycle facilities. The federally-funded Transportation Alternatives Program requires a minimum 20 percent local match. On May 30, 2014, the City of Dallas submitted an application to the North Central Texas Council of Governments for the nomination of the Trinity Skyline Trail Project under the Transportation Alternatives Program Call for Projects. On August 27, 2015, the Texas Transportation Commission passed Minute Order Number 114335 awarding funding for the Project.

BACKGROUND (Continued)

As part of North Central Texas Council of Governments Fort Worth to Dallas Regional Trail Corridor that connects the two cities, the Trinity Skyline Trail Project provides dedicated bicycle and pedestrian access from Downtown Dallas to the City of Irving. The Trinity Skyline Trail is included in the City of Dallas' Trail Network Master Plan that was adopted by the City of Dallas Park and Recreation Board in April 2005 and updated in 2008. This project calls for the design and construction of a 4.7 mile, 16-foot wide multi-use trail along the Trinity River Corridor from Sylvan Avenue to the City of Irving's Campion Trail. The proposed trail will connect to the recently completed Skyline Trail segment between Sylvan Avenue and the Santa Fe Trestle Trail.

The estimated total cost for this project is $6,036,988, of which $2,989,994 will be provided by the Transportation Alternatives Program on a reimbursement basis, $286,999 will be covered by the State, and the remaining $2,759,995 is the responsibility of the City of Dallas.

ESTIMATED SCHEDULE

Begin Design	May 2016
Complete Design	Aug 2017
Begin Construction	November 2017
Complete Construction	March 2019

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSION)

Authorized application to the North Central Texas Council of Governments for the nomination of the Trinity Skyline Trail Project under the Transportation Alternatives Program Call for Projects, on May 28, 2014, by Resolution No. 14-0830.

Information about this item will be provided to the Transportation and Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

Stormwater Drainage Management Capital Construction Funds - $180,000
TXDOT Transportation Advance Management System Funds - $2,989,994

Project Estimated Costs:

Design	$1,090,000
Construction	$3,909,990
Review, Administration and Oversight by State	$1,036,998
Total	$6,036,988

MAP

Attached

Trinity Skyline Trail
Council District: 6



MAPSCO: 32Y, 42C,D, 43A,B,C,D, 44A, F

January 13, 2016

WHEREAS, the Regional Transportation Council, comprised primarily of local elected officials, is the regional transportation policy board associated with the North Central Texas Council of Governments and the regional forum for cooperative decisions on transportation; and,

WHEREAS, the Regional Transportation Council approved approximately $28 million for the current Transportation Alternatives Program Call for Projects on February 13, 2014; and,

WHEREAS, on May 28, 2014, Resolution No. 14-0830 authorized application submission to the North Central Texas Council of Governments for the nomination of the Trinity Skyline Trail Project under the Transportation Alternatives Program Call for Projects; and,

WHEREAS, on August 27, 2015, the Texas Transportation Commission awarded funding for the Trinity Skyline Trail Project under the 2014 Transportation Alternatives Program; and,

WHEREAS, the Trinity Skyline Trail Project is now approved to receive $2,989,994 from the Transportation Alternatives Program funds to be matched by $2,759,995 of local funds; and,

WHEREAS, it is now necessary to authorize a Local Transportation Project Advance Funding Agreement with the Texas Department of Transportation and receipt of funds for the design and construction of the Trinity Skyline Trail from Sylvan Avenue to the City of Irving's Campion Trail in the amount of $2,989,994; and,

WHEREAS, the City shall remit a warrant payable to the Texas Department of Transportation following the execution of the Local Transportation Project Advance Funding Agreement in an amount not to exceed $180,000 to cover the City's share of the State's engineering review cost.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager is hereby authorized to execute a Local Transportation Project Advance Funding Agreement with the Texas Department of Transportation for the design and construction of the Trinity Skyline Trail from Sylvan Avenue to the City of Irving's Campion Trail.

Section 2. That the Chief Financial Officer is hereby authorized to receive and deposit funds from Texas Department of Transportation in accordance with the terms and conditions of the Local Transportation Project Advance Funding Agreement in the amount of $2,989,994.00, into Fund 0584, Department TWM, Unit W051, Revenue Source 6508.

Section 3. That the City Manager is hereby authorized to establish appropriations in Fund 0584, Department TWM, Unit W051, Revenue Source 6508, in the amount of $2,989,994.00.

Section 4. The Chief Financial Officer is hereby authorized to disburse funds to the Texas Department of Transportation to cover the City's share of the State's engineering review cost in accordance with the terms and conditions of the Local Transportation Project Advance Funding Agreement from:

Stormwater Drainage Management Capital Construction Fund	
Fund 0063, Dept. SDM, Unit. W051, Act. SD01	
Obj. 4111, Program PBSWW051, CT SDMW051BM01	
Vendor # 020318	$180,000.00
TXDOT Transportation Advance Management System Fund	
Fund 0584, Dept. TWM, Unit. W051, Act. SD01	
Obj. 4111, Program PBSWW051, CT SDMW051BM01	
Vendor # 020318	$2,989,994.00
Total not to exceed	$3,169,994.00

Section 5. That the Chief Financial Officer is hereby authorized to deposit any unused funds pertaining to this project into Fund 0063, Department SDM, Unit W051, Object 4111.

Section 6. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 34

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Trinity Watershed Management

CMO: Mark McDaniel, 670-3256

MAPSCO: N/A

SUBJECT

Ratify the emergency rental of pumps and pumping equipment for pumping operations to relieve flooding at Loop 12 and Eagle Ford Sump - Moir Watershed Services, L.L.C. - Not to exceed $125,600 - Financing: Stormwater Drainage Management Current Funds

BACKGROUND

This action will ratify the emergency rental of pumps and pumping equipment during the recent rainfall events. Additional pumps and pumping equipment were necessary to supplement the City's equipment to protect the Citizens of Dallas and their property from flooding due to high water after historic rainfall during the month of November. If immediate action had not been taken, properties, both residential and commercial, would have been flooded.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information regarding this item will be provided to the Transportation and Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

Stormwater Drainage Management Current Funds - $125,600.00

OWNER(S)

Moir Watershed Services, L.L.C.

James Moir, President

January 13, 2016

WHEREAS, in October 2015 the Dallas/Fort Worth area experienced historic amounts of rainfall; and,

WHEREAS, rainfall continued into November 2015; and,

WHEREAS, property was in eminent danger from flood waters; and,

WHEREAS, the City now desires ratification by the City Council of this expenditure under the Charter of the City of Dallas.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the emergency rental of pumps and pumping equipment for pumping operations to relieve flooding at Loop 12 and Eagle Ford Sump from Moir Watershed Services L.L.C. (VS0000071835), in the amount of $125,600.00, is hereby ratified as an emergency expenditure.

Section 2. That the Chief Financial Officer is authorized to disburse funds from the following appropriation in an amount not to exceed $125,600.00:

FUND	DEPT	UNIT	OBJECT	AMOUNT	ENCUMBRANCE
0061	SDM	4792	3060	$125,600.00	SDM4792BM50

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 35

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, Outside City Limits

DEPARTMENT: Water Utilities

CMO: Mark McDaniel, 670-3256

MAPSCO: Various

SUBJECT

Authorize a contract for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 Dallas Water Utilities facilities to Assured Mechanical Solutions LLC, lowest responsible bidder of two (list attached) - Not to exceed $3,822,500 - Financing: Water Utilities Capital Construction Funds

BACKGROUND

Dallas Water Utilities (DWU) consists of 240 buildings at 33 locations within Dallas and outside the Dallas city limits. DWU has over 2,600 pieces of Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) equipment, including fans, cooling towers, boilers, chillers, DX split systems, unit heaters, roof top units, air handling units, and heating coils. HVACR equipment at DWU facilities is generally exposed to more aggressive and corrosive environments due to the chemicals used in some of the treatment processes. With this exposure, HVACR materials break down at a higher rate, necessitating frequent repair and maintenance to properly manage these assets.

This action will provide annual, semi-annual and monthly maintenance services to HVACR equipment by certified technicians at DWU's 33 facilities to protect and extend the life of the existing equipment. This action will also provide minor repairs and 24/7 repair service to help mitigate extended outages that could damage process equipment at its facilities, thereby ensuring continued reliable water and wastewater services provided to approximately 2.3 million customers in Dallas and its customer cities.

ESTIMATED SCHEDULE OF PROJECT

Began Assessment	July 2012
Completed Assessment	November 2012
Begin Construction	February 2016
Complete Construction	August 2017

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Authorized a professional services contract with Conley Group to provide architectural and engineering services to perform condition assessment of the roof and HVAC systems at the Water Utilities Department's 230 facilities on June 27, 2012, by Resolution No. 12-1668.

Authorized a professional services contract with Halff Associates, Inc. to provide (1) architectural and engineering services for the design of roof and HVAC systems; and (2) a space utilization study for the Trinity Watershed Management Department on March 26, 2014, by Resolution No. 14-0523.

Information about this item will be provided to the Budget, Finance and Audit Committee on January 4, 2016.

FISCAL INFORMATION

$3,822,500.00 - Water Utilities Capital Construction Funds

Assessment	$ 1,897,800.00
Design	$ 2,583,128.64
Construction	$ 2,137,000.00
Construction (this action)	$ 3,822,500.00
Total Project Cost	$10,440,428.64

Council District	Amount
1	$ 14,305.76
2	$ 22,889.22
3	$ 87,265.16
4	$ 725,302.21
5	$ 34,333.83
6	$ 447,770.40
7	$ 37,194.99
8	$1,075,793.41
9	$ 164,516.28
10	$ 70,098.24
11	$ 20,028.07
12	$ 8,583.46
14	$ 38,625.56
Outside City Limits	$1,075,793.41
Total	$3,822,500.00

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

Assured Mechanical Solutions LLC

Hispanic Female	0	Hispanic Male	3
Black Female	1	Black Male	9
Other Female	0	Other Male	1
White Female	1	White Male	3

BID INFORMATION

The following bids with quotes were opened on September 4, 2015:

*Denotes successful bidder

Bidders	Bid Amount
*Assured Mechanical Solutions LLC P.O. Box 312 DeSoto, Texas 75123	$3,822,500.00
TDIndustries, Inc.	$6,904,850.00

OWNER

Assured Mechanical Solutions LLC

Byron Bailey, Owner and President

MAP

Attached

HVACR Maintenance and Minor Repairs

Council District	Facility Name
1	Sunset Pump Station
2	Cadiz Pump Station
3	Camp Wisdom Pump Station Red Bird Booster Pump Station Sorcey Pump Station
4	Cedar Crest Pump Station Central Wastewater Treatment Plant
5	Lake June Pump Station
6	Bachman Water Treatment Plant Irving Jamison Pump Station Lone Star Pump Station Walnut Hill Pump Station
7	Jim Miller Pump Station
8	Alta Mesa Pump Station Southcliff Pump Station Southside Wastewater Treatment Plant
9	Lake Ray Hubbard White Rock Pump Station
10	Abrams Pump Station Doran Pump Station Whispering Hills Pump Station
11	Cosa Crest Pump Station Meandering Way Booster Pump Station Walcrest Pump Station
12	Parkway Pump Station
14	Greenville Pump Station

HVACR Maintenance and Minor Repairs
Page 2

Council District	Facility Name
Outside City Limits	Beltwood Pump Station
	Cypress Waters Pump Station
	Eastside Water Treatment Plant
	Elm Fork Water Treatment Plant
	Interim Raw Water Facility
	Iron Bridge - Interconnect Facility
	Lake Fork Pump Station

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize a contract for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 Dallas Water Utilities facilities to Assured Mechanical Solutions LLC, lowest responsible bidder of two (list attached) - Not to exceed $3,822,500 - Financing: Water Utilities Capital Construction Funds

Assured Mechanical Solutions LLC is a local, minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractors.

PROJECT CATEGORY: Construction

LOCAL/NON-LOCAL CONTRACT SUMMARY

	Amount	Percent
Total local contracts	$3,440,250.00	90.00%
Total non-local contracts	$382,250.00	10.00%
TOTAL CONTRACT	$3,822,500.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION

Local Contractors / Sub-Contractors

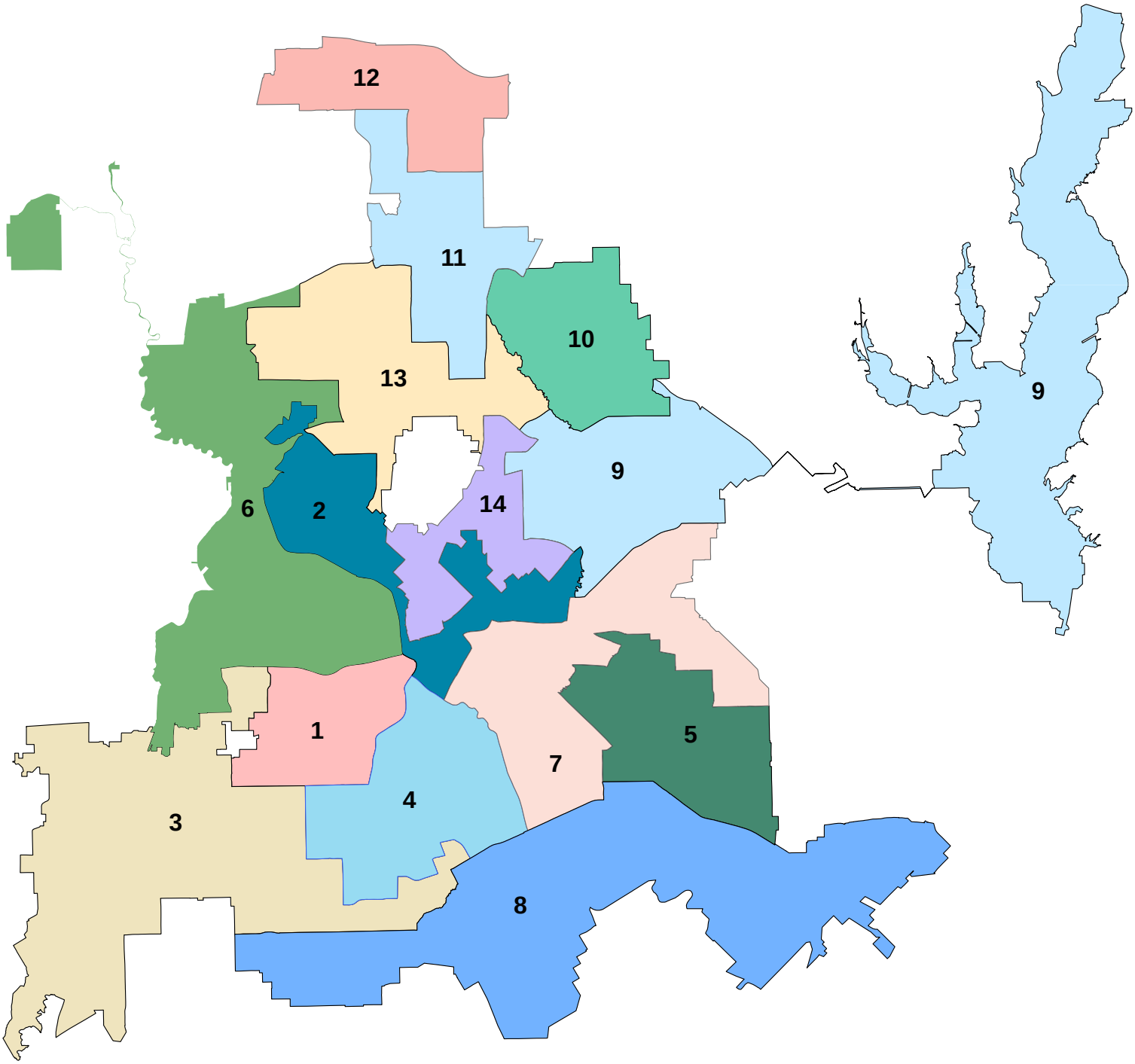
Local	Certification	Amount	Percent
Assured Mechanical Solutions LLC	BMDFW196830516	$3,249,125.00	94.44%
Advantage Supply	WFDB57587Y0516	$191,125.00	5.56%
Total Minority - Local		$3,440,250.00	100.00%

Non-Local Contractors / Sub-Contractors

Non-local	Certification	Amount	Percent
VG Electric Contracting, LLC	HMDFW169480616	$382,250.00	100.00%
Total Minority - Non-local		$382,250.00	100.00%

TOTAL M/WBE CONTRACT PARTICIPATION

	Local	Percent	Local & Non-Local	Percent
African American	$3,249,125.00	94.44%	$3,249,125.00	85.00%
Hispanic American	$0.00	0.00%	$382,250.00	10.00%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$191,125.00	5.56%	$191,125.00	5.00%
Total	$3,440,250.00	100.00%	$3,822,500.00	100.00%



Dallas Water Utilities
Contract No. 15-069/070
HVACR Maintenance and Minor Repairs
at DWU facilities

January 13, 2016

WHEREAS, bids were received on September 4, 2015 for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 Dallas Water Utilities facilities, Contract No. 15-069/070, listed as follows:

BIDDERS	**BID AMOUNT**
Assured Mechanical Solutions LLC	$3,822,500.00
TDIndustries, Inc.	$6,904,850.00

WHEREAS, the bid submitted by Assured Mechanical Solutions LLC, P.O. Box 312, DeSoto, Texas 75123, in the amount of $3,822,500.00, is the lowest and best of all bids received.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the bid submitted by Assured Mechanical Solutions LLC, in the amount of $3,822,500.00, for doing the work covered by the plans, specifications, and contract documents, Contract No. 15-069/070, be accepted.

Section 2. That the City Manager is hereby authorized to execute a contract with Assured Mechanical Solutions LLC, for Heating, Ventilation, Air Conditioning, and Refrigeration maintenance and minor repairs at 33 DWU facilities, after approval as to form by the City Attorney.

Section 3. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $3,822,500.00 from the Water Construction Fund and Wastewater Construction Fund as follows:

FUND	DEPT	UNIT	OBJ	PRO	ENCUMBRANCE	VENDOR
0102	DWU	CW42	4341	715069	CT-DWU715069EN	VS0000076725

Assured Mechanical Solutions LLC - (Contract No. 15-069) - $2,064,321.67

FUND	DEPT	UNIT	OBJ	PRO	ENCUMBRANCE	VENDOR
0103	DWU	CS42	4341	715070	CT-DWU715070EN	VS0000076725

Assured Mechanical Solutions LLC - (Contract No. 15-070) - $1,758,178.33

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 36

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 8

DEPARTMENT: Water Utilities

CMO: Mark McDaniel, 670-3256

MAPSCO: 79 C D

SUBJECT

Authorize an increase in the contract with AUI Contractors, LLC for additional construction services associated with the major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant - Not to exceed $195,126, from $8,212,864 to $8,407,990 - Financing: Water Utilities Capital Improvement Funds

BACKGROUND

On August 22, 2012, the City Council awarded a contract to AUI Contractors, LLC, for the construction of major maintenance improvements at the Southside Wastewater Treatment Plant. Among the items included were road repairs at the storage lagoons and peak flow basins, installation and repair of fire alarms, high water alarms and sprinkler systems throughout the plant, demolition and construction of a new fuel station, roof repairs at the digester complexes, and repair of the chlorine and sulfur dioxide feed systems.

This action will authorize additional work identified during the construction of the major maintenance improvements at the Southside Wastewater Treatment Plant. This work includes heat tracing of above ground conduits at the chlorine contact basin to prevent freezing, rehabilitation of the gate guides at the chlorine contact basin to restore functionality, as well as installation of a fire alarm panels at the Sulfur Dioxide building and Maintenance facility to meet fire code regulations.

ESTIMATED SCHEDULE OF PROJECT

Began Design	April 2009
Completed Design	May 2011
Began Construction	October 2012
Complete Construction	March 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Authorized a professional services contract with DAL-TECH Engineering, Inc. to evaluate deteriorated equipment and infrastructure and prepare a design report with recommendations for miscellaneous improvements associated with major maintenance and rehabilitation at the Southside Wastewater Treatment Plant on September 12, 2007, by Resolution No. 07-2588.

Authorized Supplemental Agreement No. 1 to the professional services contract with DAL-TECH Engineering, Inc. for design and construction administration services at the Southside Wastewater Treatment Plant associated with major maintenance and rehabilitation improvements on May 27, 2009, by Resolution No. 09-1347.

Authorized a contract with AUI Contractors, LLC for the construction of major maintenance and rehabilitation improvements at the Southside Wastewater Treatment Plant on August 22, 2012, by Resolution No. 12-2113.

Authorized an increase in the contract with AUI Contractors, LLC for additional work associated with the 2012 major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant on January 28, 2015, by Resolution No. 15-0191.

Information about this item will be provided to the Transportation & Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

$195,126.00 - Water Utilities Capital Improvement Funds

Design	$ 748,348.00
Supplemental Agreement No. 1	$ 1,887,707.00
Construction Contract	$ 7,971,400.00
Change Order No. 1	$ 241,464.00
Change Order No. 2 (this action)	$ 195,126.00
Total Project Cost	$11,044,045.00

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

AUI Contractors, LLC

Hispanic Female	6	Hispanic Male	81
Black Female	0	Black Male	0
Other Female	0	Other Male	3
White Female	10	White Male	65

OWNER

AUI Contractors, LLC

B. Doug Alumbaugh, President

MAP

Attached

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize an increase in the contract with AUI Contractors, LLC for additional construction services associated with the major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant - Not to exceed $195,126, from $8,212,864 to $8,407,990 - Financing: Water Utilities Capital Improvement Funds

AUI Contractors, LLC is a non-local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-contractors.
PROJECT CATEGORY: Construction

LOCAL/NON-LOCAL CONTRACT SUMMARY - THIS ACTION ONLY

	Amount	Percent
Local contracts	$51,680.55	26.49%
Non-local contracts	$143,445.45	73.51%
TOTAL THIS ACTION	$195,126.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION THIS ACTION

Local Contractors / Sub-Contractors

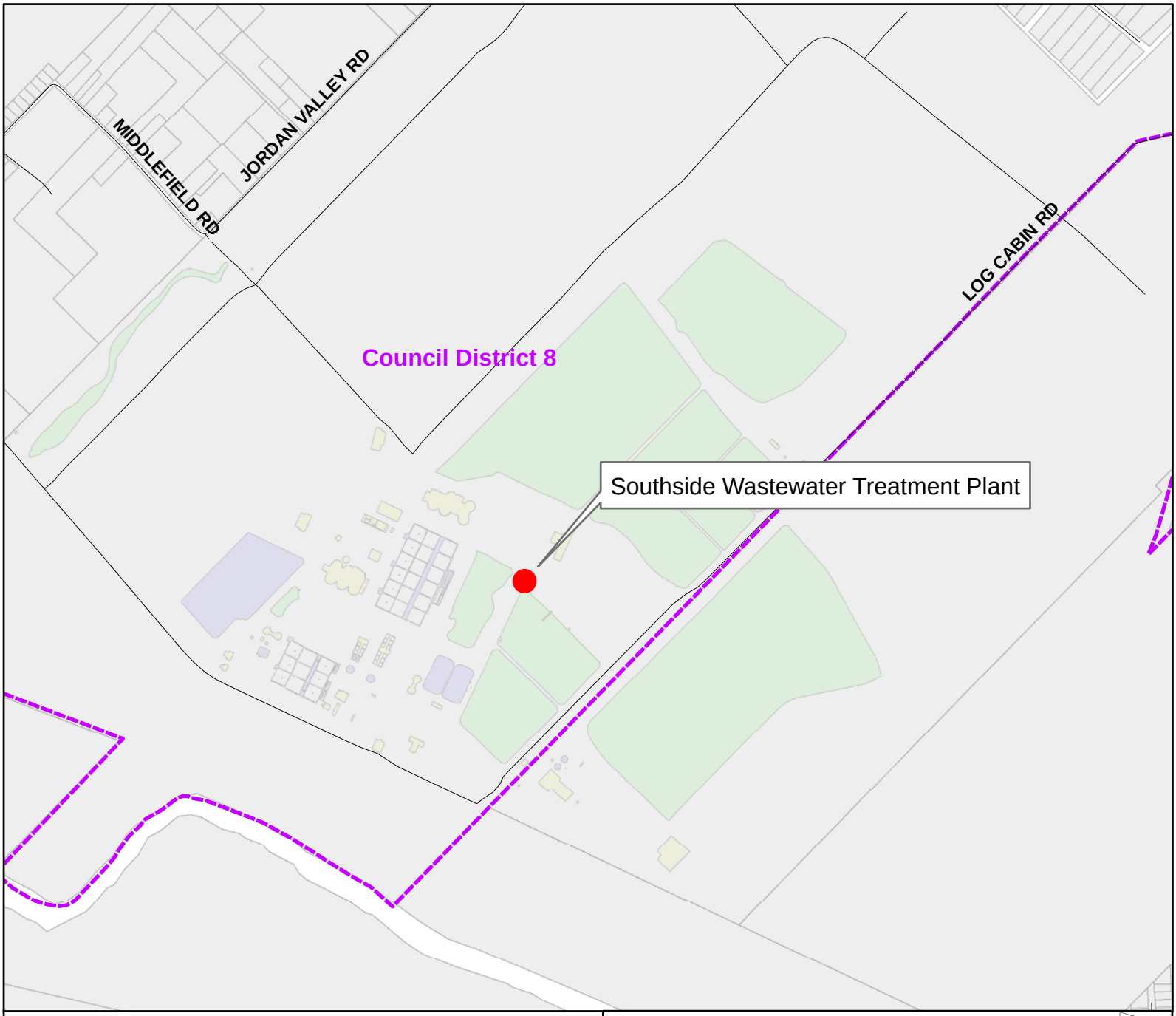
Local	Certification	Amount	Percent
DFW Aggregates	HFMB60488N0217	$47,046.80	91.03%
Ram Tool	WFWB61372N0416	$4,633.75	8.97%
Total Minority - Local		$51,680.55	100.00%

Non-Local Contractors / Sub-Contractors

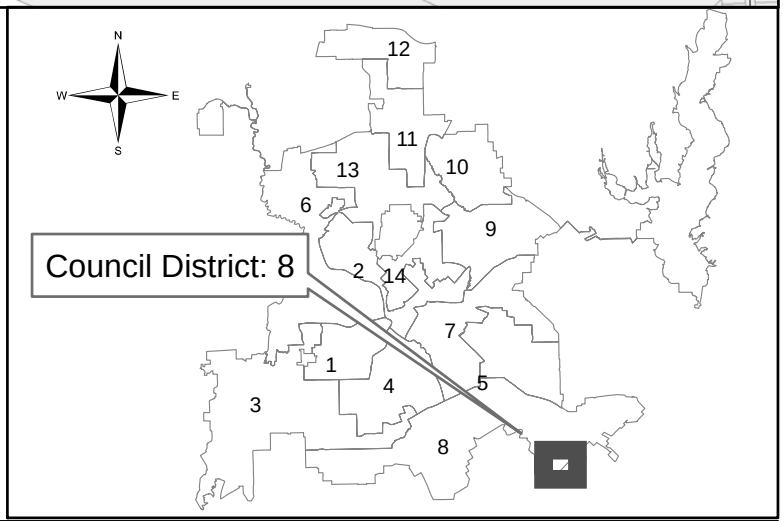
None

TOTAL M/WBE PARTICIPATION

	This Action		Participation to Date	
	Amount	Percent	Amount	Percent
African American	$0.00	0.00%	$194,950.00	2.32%
Hispanic American	$47,046.80	24.11%	$164,475.00	1.96%
Asian American	$0.00	0.00%	$0.00	0.00%
Native American	$0.00	0.00%	$230,367.00	2.74%
WBE	$4,633.75	2.37%	$1,048,839.00	12.47%
Total	$51,680.55	26.49%	$1,638,631.00	19.49%



Mapsco: 79 C D



Dallas Water Utilities
Contract No. 12-050, Change Order No. 2
Southside Wastewater Treatment Plant
Major Maintenance and Rehabilitation Improvements

January 13, 2016

WHEREAS, on August 22, 2012, the City Council awarded Contract No. 12-050 in the amount of $7,971,400.00, by Resolution No. 12-2113, to AUI Contractors, LLC, for the construction of major maintenance and rehabilitation improvements at the Southside Wastewater Treatment Plant; and,

WHEREAS, on January 28, 2015, the City Council awarded Change Order No. 1 in the amount of $241,464.00, by Resolution No. 15-0191, for additional work associated with the 2012 major maintenance and rehabilitation improvements project at the Southside Wastewater Treatment Plant; and,

WHEREAS, additional work is necessary for the completion of the major maintenance and rehabilitation improvements at the Southside Wastewater Treatment Plant; and,

WHEREAS, AUI Contractors, LLC, 4775 North Freeway, Fort Worth, Texas 76106, has submitted an acceptable proposal for this additional work; and,

WHEREAS, Dallas Water Utilities recommends that Contract No. 12-050 be increased by $195,126.00, from $8,212,864.00 to $8,407,990.00.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the proposed Change Order No. 2 be accepted and that Contract No. 12-050 with AUI Contractors, LLC, be revised accordingly.

Section 2. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $195,126.00 from the Wastewater Capital Improvement Fund as follows:

FUND	DEPT	UNIT	OBJ	PRO	ENCUMBRANCE	VENDOR
2116	DWU	PS31	4330	712050	CT-DWU712050CP	259651

AUI Contractors, LLC - (Contract No. 12-050) - $195,126.00

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 37

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 4

DEPARTMENT: Water Utilities

CMO: Mark McDaniel, 670-3256

MAPSCO: 56 J

SUBJECT

Authorize Supplemental Agreement No. 3 to the engineering services contract with HDR Engineering, Inc. for additional construction administration services associated with process improvements at the Central Wastewater Treatment Plant - Not to exceed $149,806, from $4,370,475 to $4,520,281 - Financing: Water Utilities Capital Improvement Funds

BACKGROUND

The original engineering scope and supplemental agreements included engineering services for the study, design and construction administration of process improvements at the Central Wastewater Treatment Plant. These process improvements included rehabilitation of the grit removal facilities at the Dallas Headworks and White Rock Headworks facilities to reduce operational and maintenance costs at the plant. Also included were upgrades to the sulfur dioxide and chlorine scrubber systems and chlorine distribution header to address safety and regulatory issues.

This action is for additional construction administration services and design necessary to accommodate unforeseen site conditions that have resulted in extended performance on the contract. These services include additional shop drawing review, site visits and design work to address underground conflicts with existing utilities and repair concrete infrastructure that has deteriorated due to the harsh environment. This item also provides additional compensation as a result of the extended contract time associated with these unforeseen site conditions.

ESTIMATED SCHEDULE OF PROJECT

Began Design	September 2011
Completed Design	August 2012
Began Construction	December 2012
Complete Construction	March 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Authorized a professional services contract with HDR Engineering, Inc. to provide engineering services associated with process improvements at the Central Wastewater Treatment Plant on May 12, 2010, by Resolution No. 10-1233.

Authorized Supplemental Agreement No. 1 to the professional services contract with HDR Engineering, Inc. for additional design and construction administration services associated with process improvements at the Central Wastewater Treatment Plant on September 14, 2011, by Resolution No. 11-2421.

Authorized Supplemental Agreement No. 2 to the engineering services contract with HDR Engineering, Inc. for additional construction administration services associated with the process improvements project at the Central Wastewater Treatment Plant on December 10, 2014, by Resolution No. 14-2130.

Information about this item will be provided to the Transportation & Trinity River Project Committee on January 11, 2016.

FISCAL INFORMATION

$149,806.00 - Water Utilities Capital Improvement Funds

Design	$ 792,469.00
Supplemental Agreement No. 1	$3,386,180.00
Supplemental Agreement No. 2	$ 191,826.00
Supplemental Agreement No. 3 (this action)	$ 149,806.00
Total Project Cost	$4,520,281.00

M/WBE INFORMATION

See attached.

ETHNIC COMPOSITION

HDR Engineering, Inc.

Hispanic Female	7	Hispanic Male	20
Black Female	5	Black Male	4
Other Female	3	Other Male	12
White Female	58	White Male	151

OWNER

HDR Engineering, Inc.

George A. Little, Chairman and Chief Executive Officer

MAP

Attached

BUSINESS INCLUSION AND DEVELOPMENT PLAN SUMMARY

PROJECT: Authorize Supplemental Agreement No. 3 to the engineering services contract with HDR Engineering, Inc. for additional construction administration services associated with process improvements at the Central Wastewater Treatment Plant - Not to exceed $149,806, from $4,370,475 to $4,520,281 - Financing: Water Utilities Capital Improvement Funds

HDR Engineering, Inc. is a local, non-minority firm, has signed the "Business Inclusion & Development" documentation, and proposes to use the following sub-consultants.

PROJECT CATEGORY: Architecture & Engineering

LOCAL/NON-LOCAL CONTRACT SUMMARY - THIS ACTION ONLY

	Amount	Percent
Local contracts	$149,806.00	100.00%
Non-local contracts	$0.00	0.00%
TOTAL THIS ACTION	$149,806.00	100.00%

LOCAL/NON-LOCAL M/WBE PARTICIPATION THIS ACTION

Local Contractors / Sub-Contractors

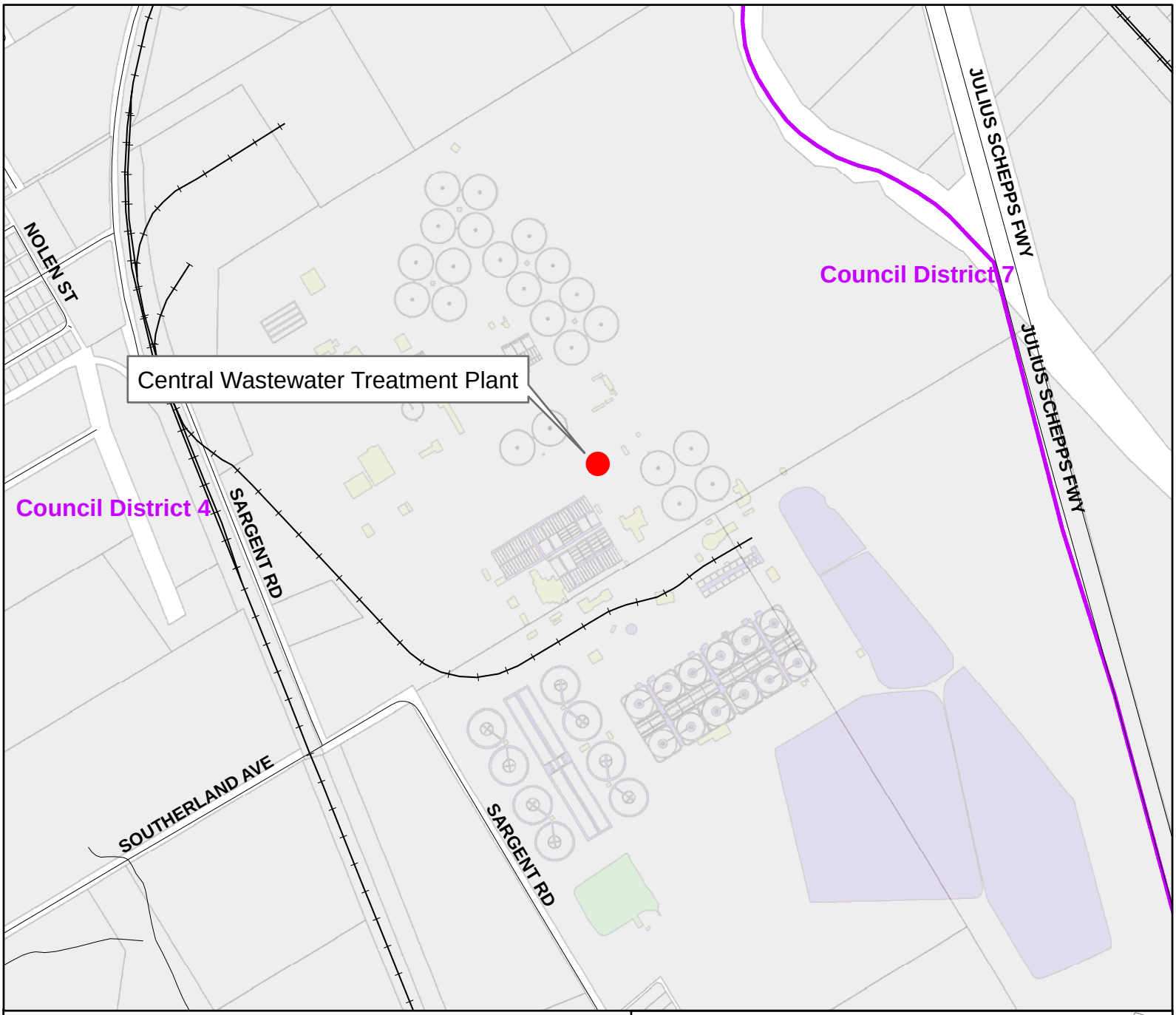
Local	Certification	Amount	Percent
Technical Associates Services, Inc.	BMDB27862Y0716	$4,000.00	2.67%
Gupta & Associates, Inc.	PMMB62419Y0716	$15,900.00	10.61%
Total Minority - Local		$19,900.00	13.28%

Non-Local Contractors / Sub-Contractors

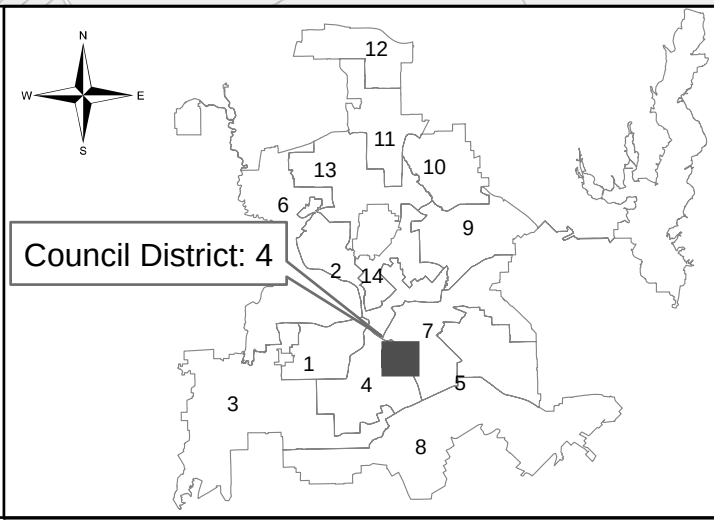
None

TOTAL M/WBE PARTICIPATION

	This Action		Participation to Date	
	Amount	Percent	Amount	Percent
African American	$4,000.00	2.67%	$318,485.00	7.05%
Hispanic American	$0.00	0.00%	$238,846.00	5.28%
Asian American	$15,900.00	10.61%	$659,735.00	14.59%
Native American	$0.00	0.00%	$0.00	0.00%
WBE	$0.00	0.00%	$385,157.00	8.52%
Total	$19,900.00	13.28%	$1,602,223.00	35.45%



Mapsco: 56 J



Dallas Water Utilities
Contract No. 10-022E, Supplemental Agreement No. 3
Central Wastewater Treatment Plant
Process Improvements

January 13, 2016

WHEREAS, on May 12, 2010, the City Council awarded Contract No. 10-022E in the amount of $792,469.00, by Resolution No.10-1233, to HDR Engineering, Inc., to provide engineering services associated with process improvements at the Central Wastewater Treatment Plant; and,

WHEREAS, on September 14, 2011, the City Council awarded Supplemental Agreement No. 1, in the amount of $3,386,180.00, by Resolution No. 11-2421, to HDR Engineering, Inc., for additional design and construction administration services associated with process improvements at the Central Wastewater Treatment Plant; and,

WHEREAS, on December 10, 2014, the City Council awarded Supplemental Agreement No. 2, in the amount of $191,826.00, by Resolution No. 14-2130, to HDR Engineering, Inc., for additional construction administration services associated with the process improvements project at the Central Wastewater Treatment Plant; and,

WHEREAS, Dallas Water Utilities has recognized that additional construction administration services are required for process improvements at the Central Wastewater Treatment Plant; and,

WHEREAS, HDR Engineering, Inc., 17111 Preston Road, Suite 200, Dallas, Texas 75248, has submitted an acceptable proposal to provide these engineering services; and,

WHEREAS, Dallas Water Utilities recommends that Contract No. 10-022E be increased by $149,806.00, from $4,370,475.00 to $4,520,281.00.

Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the proposed Supplemental Agreement No. 3 be accepted and that Contract No. 10-022E with HDR Engineering, Inc., be revised accordingly.

Section 2. That the City Manager is hereby authorized to execute the contract after it has been approved as to form by the City Attorney.

Section 3. That the Chief Financial Officer is hereby authorized to disburse funds in an amount not to exceed $149,806.00 from the Wastewater Capital Improvement Fund as follows:

January 13, 2016

FUND	DEPT	UNIT	OBJ	PRO	ENCUMBRANCE	VENDOR
2116	DWU	PS30	4111	710022	CT-DWU710022CP	181219

HDR Engineering, Inc. - (Contract No. 10-022E) - $149,806.00

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 39

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Office of Economic Development

CMO: Ryan S. Evans, 671-9837

MAPSCO: N/A

SUBJECT

Authorize a New Markets Tax Credit transaction between the Dallas Development Fund and its subsidiaries, JPMorgan Chase Bank, N.A., and its subsidiaries, and The Family Place, and its affiliates for the construction of improvements related to The Family Place facility - Financing: No cost consideration to the City

BACKGROUND

The City of Dallas authorized the creation of the Dallas Development Fund (DDF), a non-profit Community Development Entity (CDE), by Resolution No. 09-0461 on February 11, 2009, to apply for a New Markets Tax Credit (NMTC) allocation from the U.S. Department of Treasury's Community Development Financial Institutions Fund in its 2009 funding cycle. DDF was awarded a $55 million allocation under the 2009 cycle, and that allocation was officially accepted by DDF on March 31, 2010. DDF applied for additional allocation in 2012, and was awarded $30 million in the 2012 funding cycle, and again applied for allocation in 2014, and was awarded $45 million under that funding cycle.

The NMTC program permits taxpayers to receive a credit against federal income taxes for making qualified equity investments in designated CDEs. These investments must be used by the CDE for projects and investments in low-income communities, as defined by the NMTC program. The credit provided to the investor totals 39 percent of the cost of the investment and is claimed over a 7-year credit allowance period.

On November 17, 2015, DDF considered and approved a NMTC transaction between DDF, JPMorgan Chase, and The Family Place, and its affiliates. This NMTC allocation will use up to $11.5 million of DDF's $45 million NMTC allocation; JPMorgan Chase will invest up to $11.5 million in NMTC allocation from DDF which will in turn generate approximately $3.8 million in gross NMTC equity for the benefit of the Project. The total project cost is approximately $11.8 million.

BACKGROUND (Continued)

The Family Place (TFP) is the largest provider of services for victims of domestic violence in the state of Texas, and is committed to finding the most effective and innovative ways to break the cycle of family violence. Since its founding, TFP has sheltered more than 22,000 women, children, and men, provided counseling to more than 225,000 clients, and answered more than 550,000 calls for help. The Family Place Ann Moody Place (the "Project") will be a secure 2.41 acre campus in the Dallas Medical District that includes 30 beds of safe emergency shelter, space for counseling, childcare, other social services, and TFP's administrative offices. The $11.8 million project will include the renovation of 18,000 square feet of existing warehouse space adjacent to the construction of a new 34,000 square foot office and residential building. TFP will operate 44,000 square feet of the total space, including 14,000 square feet for 30 emergency shelter beds, 18,000 square feet for counseling, youth services, and job training and 12,000 square feet for administrative offices. TFP plans to sublease 10,000 square feet at the Project to a childcare operator to provide childcare to 150-170 children of clients and local residents.

Without NMTC assistance, The Family Place would have a financing gap of approximately $3 million, forcing TFP to reduce the project scope and/or wait to complete the project.

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On February 11, 2009, the City Council authorized the creation of the Dallas Development Fund (DDF), a non-profit Community Development Entity (CDE), by Resolution No. 09-0461.

On January 13, 2010, the City Council authorized the acceptance of the $55 million NMTC allocation, by Resolution No. 10-0210.

On January 19, 2010, the Economic Development Committee was briefed on the DDF and the NMTC program.

On September 21, 2015 the Economic Development Committee was briefed on the DDF and the NMTC program.

On November 17, 2015, the Dallas Development Fund was briefed on the Family Place Project and approved the transaction.

Information about this item was provided to the Economic Development Committee on December 7, 2015.

FISCAL INFORMATION

No cost consideration to the City

OWNER

The Family Place

Paige Fink, Executive Director

January 13, 2016

WHEREAS, the City of Dallas is committed to supporting enhanced economic development opportunities for low-income communities within the City and to low-income persons residing within those communities; and

WHEREAS, the United States Department of Treasury has established the New Markets Tax Credit (NMTC) program to stimulate investments in predominately low-income communities; and

WHEREAS, the goals and purposes of the NMTC program are consistent with and complementary to the economic development programs previously established by the City to support expanded economic development opportunities for low-income communities within the City and to low-income persons residing within those communities; and

WHEREAS, under the NMTC program, tax credits are competitively awarded annually by the Treasury Department through its Community Development Financial Institutions (CDFI) Fund to qualified Community Development Entities (CDEs) after review and evaluation of applications submitted by CDEs, which are then made available to investors; and

WHEREAS, the City of Dallas created the Dallas Development Fund (DDF) as a non-profit Texas corporation in order to apply for an award under the NMTC program; and

WHEREAS, the DDF was awarded a $55 million NMTC allocation under the 2009 NMTC program; and

WHEREAS, the DDF was awarded a $30 million NMTC allocation under the 2012 NMTC program; and

WHEREAS, the DDF was awarded a $45 million NMTC allocation under the 2014 NMTC program; and

WHEREAS, the DDF board has approved awarding of up to $11.5 million in NMTC allocation to The Family Place for the construction of a facility to provide services to victims of domestic violence.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Council hereby authorizes a New Markets Tax Credit transaction between the Dallas Development Fund and its subsidiaries, JPMorgan Chase Bank, N.A., and its subsidiaries, and The Family Place, and its affiliates for the construction of improvements related to The Family Place facility as further described in **Attachment A**.

Section 2. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

DALLAS
DEVELOPMENT
FUND

DATE: November 2015

SUBJECT: The Family Place Ann Moody Place

FROM: City of Dallas Office of Economic Development

Project Description

Applicant

Since 1978, The Family Place (TFP) has empowered victims of family violence by providing safe housing, counseling, and skill development to heal and build independence. As the largest provider of domestic violence services in the state of Texas, TFP is committed to finding the most effective and innovative ways to break the cycle of family violence. Since its founding, TFP has sheltered more than 22,000 women, children, and men, provided counseling to more than 225,000 clients, and answered more than 550,000 calls for help. While many of its clients are women, TFP also has programs targeted to serve the specific challenges of abuse among children, men, and the LGBT community. Beyond direct services for the victims of family violence, TFP also operates prevention and intervention training for batterers to encourage change and educates thousands of students about relationship violence every year.

In 2014, TFP served 11,523 clients, 38% of whom are from Southern Dallas, with 164,672 hours of service in both Spanish and English. TFP currently operates six facilities across Dallas County, including a 2,926 SF counseling center at Hampton and Illinois in Southern Dallas and the 60,000 SF Safe Campus in East Dallas, a 106-bed emergency shelter that is the largest of its kind in Dallas. Today, demand for safe emergency housing in Dallas far exceeds current capacity, forcing TFP to shelter at-risk women in hotels at a cost of $550,000 per year. Beyond emergency shelter, TFP provided counseling to 1,689 clients, provided health screenings and care to 254 women and children, and operated the BeProject, an outreach project around bullying and family violence, to 5,370 youth, among other activities.

Project Description

The Family Place Ann Moody Place (the “Project”) will be a secure 2.41 acre campus in the Dallas Medical District that includes 30 beds of safe emergency shelter, space for counseling, childcare, other social services, and TFP’s administrative offices. The $11.8MM Project will include the renovation of 18,000 SF of existing warehouse space adjacent to the construction of a new 34,000 SF office and residential building. TFP will operate 44,000 SF of the total space, including 14,000 SF for 30 emergency shelter beds, 18,000 SF for counseling, youth services, and job training, and 12,000 SF for administrative offices. TFP plans to sublease 10,000 SF at the Project to a childcare operator to provide childcare to 150-170 children of clients and local residents. TFP has shortlisted two candidate operators for the childcare components and is in the late stages of selecting that provider.

The Project will be located in the Dallas Medical District near Parkland Hospital, providing excellent access via DART bus and rail. The site is located in a Census Tract that qualifies as highly distressed based on a median income of only 46% of Dallas regional median.

Related/Sponsoring Entities

The NMTC borrower is anticipated to be a newly formed special purpose entity designated by The Family Place to own and develop the Project. The Leverage Lender is anticipated to be The Family Place.

Financing Terms

NMTC Allocation Proposed

Up to $11.5 Million

NMTC Investor

J.P. Morgan Chase (Chase)

Anticipated Closing Costs and Fees

Dallas Development Fund will charge upfront fees totaling 4% of the QEI (estimated at $460,000). In addition, DDF will charge an annual Asset Management Fee of $40,250 per year.

DDF will separately secure reimbursement for costs associated with closing this transaction, as well as audit and tax return preparation costs associated with maintaining the financing structure during the 7-year NMTC compliance period.

Financing Structure

As NMTC Equity investor, Chase will provide up to approximately $3.857 million in NMTC Equity ($0.86 pricing—a new high for transactions in which DDF has participated to date). TFP will provide the balance of the $7.873 million in funding to the project as a "Leverage Loan" for the transaction. The underlying sources for the Leverage Loan will include previously expended capital campaign proceeds and a capital campaign bridge loan anticipated to be provided by Bank of Texas. Chase will form a special purpose investment fund entity and will be responsible for management of this fund. The equity and leverage debt will be combined to capitalize the investment fund, which in turn will make a Qualified Equity Investment (QEI) of up to $11.5 million into a subsidiary of Dallas Development Fund ("Sub-CDE") and pay a 2% CDE Fee to DDF.

Dallas Development Fund (DDF), through the aforementioned Sub-CDE, will in turn make one or more Qualified Low-Income Community Investment (QLICI) loans. Pursuant to DDF's Allocation Agreement, CDF will take a fee of 2% of the QEI in order to finance its activities. The total QLICI loan(s) to the QALICB will be up to approximately $11.27 million.

The financing sources for this project are summarized in the table below. In addition, a preliminary chart illustrating the structure of the proposed transaction is provided in Table 1.

Closing Timeline

This Project financing is expected to close in Quarter 1 2016.

Table 1: Preliminary Project Sources and Uses

Sources	Total
"B Loan" (NMTC equity less Allocatee upfront fees)	$ 3,397,100
Capital Campaign Bridge Loan (used to source Leverage Loan)	$ 4,660,477
Previously Expended Equity (reimbursed with Short-Term Bridge Loan)	$ 3,212,423
QALICB Equity (portion of prior expenditures)	$ 510,177
Total Base Project Sources	**$ 11,780,177**
Uses	**Total**
Land Acquisition	$ 3,052,427
Hard Costs	$ 6,746,927
Legal Fees	$ 10,000
Civil Engineering Fees	$ 33,350
Landscape Architect Fees	$ 19,000
Environmental Consulting Fees	$ 20,000
Vapor Mitigation	$ 250,000
Structural Engineering Fees	$ 12,750
MEP Engineering Fees	$ 46,200
Technology Fees	$ 19,200
Kitchen Fees	$ 16,000
Roofing Fees	$ 6,500
Architect Fees	$ 150,000
Equipment and Technology	$ 385,017
FF&E	$ 285,056
NMTC Reserves	$ 377,750
NMTC Closing Costs	$ 350,000
Total Uses (non NMTC costs)	**$ 11,780,177**

Community Benefits and Need for Assistance

Community Benefits

1) **Emergency Shelter.** The Project will create 30 emergency shelter beds that are expected to serve 400 women and children annually. This shelter facility expands TFP's 106-bed Safe Campus operations to provide the safe, secure environment for women and children to begin healing and reestablishing their lives. All shelter clients will have access to the social services described below. Furthermore, the Project's location within the Dallas Medical District allows TFP's emergency shelter clients to have better access to medical care through Parkland Hospital and U.T. Southwestern.

2) **Social Services.** The Project will offer an array of services to victims of domestic abuse and family violence from across Dallas. Some of the anticipated impacts include:
    - Counseling services to 2,900 clients annually. The new facility will expand TFP's counseling services, especially for children.
    - Job and Employment Assistance services to 60 clients per year. Since 2014, TFP's Dignity at Work job-readiness program provides career and financial empowerment training and will be able to expand its offerings thanks to new space at the Project.
    - Childcare for up to 170 children at a time. The Project's 10,000 SF childcare center will be operated by a highly qualified third-party operator and have an emphasis on serving children whom have experienced trauma. TFP estimates that 50% of the childcare center's capacity will be used by emergency shelter clients and low-income children.
    - 24-Hour Crisis Hotline for over 31,000 calls annually. Expanding on TFP's existing hotline, the Project will include a centralized hotline/call center to house the Crisis Hotline and connect callers with all of TFP's shelter or counseling facilities.

3) **Job Creation and Retention.** The project will retain and create new, quality jobs, many of which are accessible to low-income persons and/or residents of low-income communities in Dallas. Specifically, the Project is expected to retain 58 full-time jobs (Average Salary: $49,500; 100% have benefits) and 8 part-time jobs (Average Wage: $21/hour; 50% have benefits). In addition to these retained jobs, the Project will create 53 full-time jobs (Average Salary: $31,800; 100% have benefits) and 7 part-time jobs (Average Wage: $15/hour, 50% have benefits). Among the newly created positions, most will be jobs in maintenance, day-care, healthcare, and food-service, which are highly accessible to residents of Low-Income Communities.

Need For NMTC Assistance

But for DDF's NMTC financing, The Family Place would have a financing gap of approximately $3 million, forcing TFP to reduce the project scope and/or wait to complete the project.

It is critical for TFP to operate a new emergency shelter that are connected to expanded services as soon as possible. Today, TFP's 106 existing emergency shelter beds do not provide enough capacity to serve the increasing local need for safe shelter. Consequently, TFP spends $550,000 annually—nearly half of its occupancy expense—to shelter women and children in hotel rooms. This hotel expense is being paid from TFP's operations and is expected to continue to increase as the need persists. Beyond the impacts of relying on hotels for TFP's bottom line, using hotels as emergency shelter is not the most effective

way to deliver TFP's social services to address trauma and begin the healing process.

Beyond the timing necessity, TFP's choice to locate in the Medical District has created higher acquisition costs than if TFP were to develop a facility in in other areas of the city. This location, however, is important for client security and the delivery of services. By locating in the Medical District, the Project will have some of the strongest transit access in the region, making it easier to access for all clients. Moreover, by being surrounded by large hospitals and medical offices, the Project will blend into the surrounding environment, providing a level of anonymity, and consequently, added safety for TFP's clients.

Finally, TFP anticipates the Project will result in an estimated approximately $225,000 of additional operating expenses annually. Without an immediate revenue source to cover these new expense, TFP would have to fundraise specifically for operating expenses. NMTC financing will allow TFP to use some of its existing capital campaign proceeds to fund these startup operating expenses, typically the most challenging component of a capital campaign to fundraise, prior to attainment of full stabilized annual operational funding for these expanded costs.

AGENDA ITEM # 40

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 4

DEPARTMENT: Office of Economic Development

CMO: Ryan S. Evans, 671-9837

MAPSCO: 65 G

SUBJECT

Authorize **(1)** a Chapter 380 economic development grant agreement with City Wide Community Development Corporation for costs associated with development of a commercial office/retail building of approximately 8,400 square feet to be located at 3111 - 3115 South Lancaster Road in Dallas, Texas that will address a shortage of business rental space in the area and continue redevelopment in the Lancaster Corridor; and **(2)** third amendment to grant agreement between City Wide Community Development Corporation and the City of Dallas to extend the completion deadline from September 12, 2016 to March 31, 2017 - Not to exceed $825,000 - Financing: 2012 Bond Funds

BACKGROUND

City Wide Community Development Corporation, (City Wide) is a 501(c)3 non-profit corporation engaged in development and redevelopment activity throughout the city with a focus on Southeast Oak Cliff, primarily zip code 75216. City Wide has completed several redevelopment projects in the Lancaster Corridor, including Lancaster Urban Village, a 193 unit mixed use project, Rudy's Chicken, a long time very popular locally owned fast food establishment, Serenity, a 45 unit permanent supportive housing development for families with children and several single family homes, both new construction and rehab.

The Lancaster Corridor is a vital main street for South Central Dallas and is a high City Council priority for development and redevelopment options that will improve communities all along the corridor. In 2012, the Housing Committee approved the Lancaster Kiest Village development plan and Council approved $3.4 million from 2006 Bond funds to acquire land and demolish structures to make way for the four phase development in the northwest quadrant of Lancaster Road and Kiest Boulevard.

BACKGROUND (Continued)

Phase I has been completed with the Rudy's Chicken relocation and reconstruction. Phase II includes approximately 8,400 square feet of two story retail/commercial development to be developed pursuant to this new conditional loan agreement. Phase III includes approximately 32 live/work townhomes to be developed in the future. Phase IV has been completed with the opening of Serenity Place, the permanent supportive housing for women and children that was completed in October 2015.

The office/retail commercial development is a mile north of the North Texas Veterans Administration Medical Center (VA). The VA, one of the largest employers in Dallas with over 1 million visitors annually continues to expand and has expressed a need for additional administrative space as well as parking. VA has leased 7,000 square feet of space in the Lancaster Urban Village complex and leases other less convenient locations throughout southern Dallas.

The City Council is asked to consider authorizing a Chapter 380 economic development grant with City Wide Community Development Corporation in the amount of $825,000 to complete financing needed for the $2,233,000 project. LegacyTexas Bank is providing $810,000 in bank financing. The land cost of $548,200 was funded under City Wide's Lancaster Keist development loan and was acquired as part of the Rudy's Chicken project.

ESTIMATED SCHEDULE OF REDEVELOPMENT

Begin development	February 2016
Complete development	March 2017

PRIOR ACTION / REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Information about this item was provided and briefed to the Economic Development Committee regarding a Chapter 380 economic development grant agreement with City Wide Community Development Corporation for continued development of the Lancaster Kiest project on December 7, 2015.

FISCAL INFORMATION

$825,000 - 2012 Bond Funds

OWNER

City Wide Community Development Corporation

Sherman Roberts
President/Chief Executive Officer

DEVELOPER

City Wide Community Development Corporation

Sherman Roberts
President/Chief Executive Officer

MAP

Attached.

Lancaster-Kiest Project



DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 12.15.15, Last Updated 12.15.15 - FileName.Lancaster-Kiest

Legend

Roads

Project Area
3111-3115 S. Lancaster Road

Data Source:

WHEREAS, the City recognizes the importance of its role in local economic development; and

WHEREAS, the City seeks to spur acquisition and redevelopment of certain areas in the southern sector, including the Lancaster Corridor, to foster the public purpose of economic development; and

WHEREAS, on June 13, 2012, City Council, pursuant to Resolution No. 12-1520 authorized approval to: (1) adopt revised Public/Private Partnership Program – Guidelines and Criteria, which established certain guidelines and criteria for the use of City incentive programs for private development projects; and (2) establish programs for making loans and grants of public money to promote local economic development and to stimulate business and commercial activity in the City of Dallas pursuant to the Economic Development Programs provision under chapter 380 of the Texas Local Government Code, (the "Act"); and

WHEREAS, on June 13, 2012, City Council elected to continue its participation in economic development loans and grants pursuant to Chapter 380 of the Texas Local Government Code by Resolution No. 12-1520, as amended; and

WHEREAS, the City Wide Community Development Corporation seeks to continue redevelopment of sites in the Lancaster Corridor; and

WHEREAS, the proposed project will foster the public purpose of economic development in accordance with the City Council's goals as outlined in the City's Public Private Partnership Program; and

WHEREAS, the City desires to enter into an economic development grant agreement with City Wide Community Development Corporation, 3730 S. Lancaster Road, Dallas, Texas 75216.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager, upon approval as to form by the City Attorney is hereby authorized to execute a Chapter 380 economic development grant agreement with City Wide Community Development Corporation related to costs associated with development of a commercial office/retail building to be located at 3111 – 3115 S. Lancaster Road in Dallas, Texas that will address a shortage of business rental space, and continue redevelopment in the Lancaster Corridor.

Section 2. That the economic development grant with City Wide Community Development Corporation in an amount not to exceed $825,000 will be disbursed to LegacyTexas bank by a Tri - Agreement to manage and control disbursements for the City Wide Community Development Corporation commercial office/retail building project being developed at 3111 – 3115 S. Lancaster Road, Dallas Texas 75216 under the terms of the bank's Commitment Letter dated October 20, 2015.

Other terms of the loan documents shall include:

a. Borrower's note payable to the City of Dallas will have a maturity date of March 31, 2017.
b. If Borrower fails to timely comply with requirements in Section 2(a) hereof, any proceeds advanced under the Grant Agreement will become due and payable.
c. Borrower shall execute 1st Lien Deed of Trust to be subordinated to LegacyTexas Bank upon the banks first advance under their Commitment Letter, along with Deed Restrictions on the subject property to secure the purpose for which the grant is given.
d. No approval by the City of the expenditure of any grant funds shall bind or obligate the City to approve any zoning or re plat change that Borrower may request for the properties.
e. Borrower shall obtain approval from the City for permitted uses of the properties. "Permitted uses" includes those uses that are permitted under the Dallas Development Code on the property, but in no event may they include any use that requires a sexually oriented business license under Chapter 41A of the Dallas City Code, or a liquor store, a pawn shop, a body piercing studio, or a tattoo studio as those terms are defined by the Dallas Development Code.
f. Once a Certificate of Occupancy has been obtained for the fully constructed structure, Borrower will be released from the indebtedness on the note.
g. Intermediate benchmarks for progress acceptable to the City of Dallas may be established in the grant documents.

Section 3. That the grant {secured by a lien on the real property} will provide for 0% annual interest and repayment on or before March 31, 2017 and will be forgivable if commercial development of the site is completed and the structure is completely constructed with a Certificate of Occupancy by March 31, 2017.

Section 4. That the Chief Financial Officer is hereby authorized to encumber and disburse funds from: Fund 3U52, Department ECO, Unit S801 Object 3016, Activity ECNR, Encumbrance No. ECOS801C264, Vendor No. VS0000026872, as necessary to make payments as described above in Section 2 in an amount not exceed $825,000.

Section 5. That nothing in this resolution shall be construed as a binding contract or agreement upon the City and that there will be no liability or obligation on the City until final contract documents are approved and executed.

Section 6. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

AGENDA ITEM # 41

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 8

DEPARTMENT: Office of Economic Development

CMO: Ryan S. Evans, 671-9837

MAPSCO: 63 S T W X

SUBJECT

Authorize a Chapter 380 economic development grant agreement with 3662 W Camp Wisdom LLC and/or its affiliates or parent ("Developer") in an amount not to exceed $2,400,000 in consideration of the Developer's causing a minimum investment of $15,000,000 at Southwest Center Mall - Not to exceed $2,400,000 - Financing: Public/Private Partnership Funds

BACKGROUND

3662 W Camp Wisdom LLC and/or its affiliates or parent (“Developer") seeks City Council approval of an economic development grant agreement in an amount not to exceed $2,400,000 in consideration of the Developer's causing a minimum investment of $15,000,000.–This project is referred to as the Southwest Center Mall (“Mall”) Partnership (“Partnership”).

The Red Bird community and southern Dallas have endured the decline of the Mall (formerly Red Bird Mall) over the past twenty (20) years. During that time, the City has struggled with how to deal effectively with the Mall. The Developer’s recent decision to take a risk and invest in the Mall is a significant and rare opportunity for the City to forge a partnership to facilitate meaningful redevelopment and revitalization of the Mall and surrounding area. With two of the three remaining anchors (Macy’s and Seritage/Sears) in the process of evaluating whether to remain at the Mall, the time to act is now.

Based on an expectation of City participation (subject to City Council approval), the Developer recently invested significant personal capital in property acquisition through an auction process. The Developer acquired the in-line portion of the Mall as well as the former Dillard’s anchor property. The Developer also has an option to acquire the former JC Penney’s anchor property.

BACKGROUND (Continued)

The proposed Partnership represents a catalyst first step to jumpstart a larger, multi-phased redevelopment effort of the entire Southwest Center Mall site. With the proposed Partnership, the required minimum private investment (not including land acquisition costs) is $15,000,000:

- Maximum of $2,000,000 for rehabilitation costs to the existing in-line Mall building and site; and

- Minimum of $13,000,000 for vertical improvement costs, including adaptive reuse of the former Dillard's anchor building, construction of new vertical building improvements for retail/grocery/personal service uses, office uses, entertainment uses, educational uses, community uses, multi-family residential uses, and/or single-family residential uses, and improvements to utilities or infrastructure (public or private) constructed in conjunction with the new vertical building improvements and/or the adaptive reuse of the former Dillard's anchor building.

The proposed grant is subject to the following key terms:

- The City receives collateral property in an appraised value at least equal to the grant amount.

- The collateral property may include the former Dillard's anchor property, the former JC Penney's anchor property, or other property in the subject area as approved by the Director of the Office of Economic Development.

- The proposed grant is to be paid upon City's receipt of the required documentation for the pledge of the collateral property, including an independent appraisal of the valuation of the collateral property and the execution of a performance deed of trust in favor of the City for the collateral property without contingent liabilities.

- On or before July 31, 2018, the Developer shall obtain approval from the Director of the Office of Economic Development of a scope of work for the vertical improvements established based on the Developer's process of community engagement.

- Upon the closing of sufficient construction financing to complete the required minimum private investment and so long as the City agrees in its sole discretion that the terms and amount of the senior financing is sufficient to ensure completion of the required minimum private investment, the City agrees to subordinate its performance deed of trust to all senior lenders.

- On or before December 31, 2019, the Developer shall obtain a certificate of occupancy for the vertical improvements.

BACKGROUND (Continued)

- If applicable, on or before December 31, 2019, the Developer shall also obtain final acceptance of public infrastructure improvements that are included in the vertical improvements and submit documentation to the Office of Economic Development. If acceptance is prevented due to ongoing construction of additional improvements that are beyond the scope of the vertical improvements, the deadline for acceptance may be extended by the Director of the Office of Economic Development for the duration of the permits for such construction.

- If the Developer provides the City with sufficient evidence verifying compliance with the required minimum private investment and with the benchmark deadlines, then the release of the performance deed of trust will be executed and recorded by the City.

- The Director of the Office of Economic Development may authorize a one-time extension of the deadline of up to six (6) months.

ESTIMATED SCHEDULE OF PROJECT

Begin Construction	September 2017
Complete Construction	December 2018

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On December 7, 2009, the Economic Development Committee was briefed on a purchase option for the former JC Penney property at Southwest Center Mall.

On May 14, 2014, City Council authorized the establishment (i.e. designated) of the Mall Area Redevelopment TIF District by Ordinance Number 29340.

On June 17, 2015, City Council authorized the final Project Plan and Reinvestment Zone Financing Plan for the Mall Area Redevelopment TIF District by Ordinance No. 29771.

Information about this item was briefed to the Economic Development Committee regarding the Southwest Center Mall Partnership proposal on November 16, 2015.

FISCAL INFORMATION

$2,400,000 – Public/Private Partnership Funds

OWNER

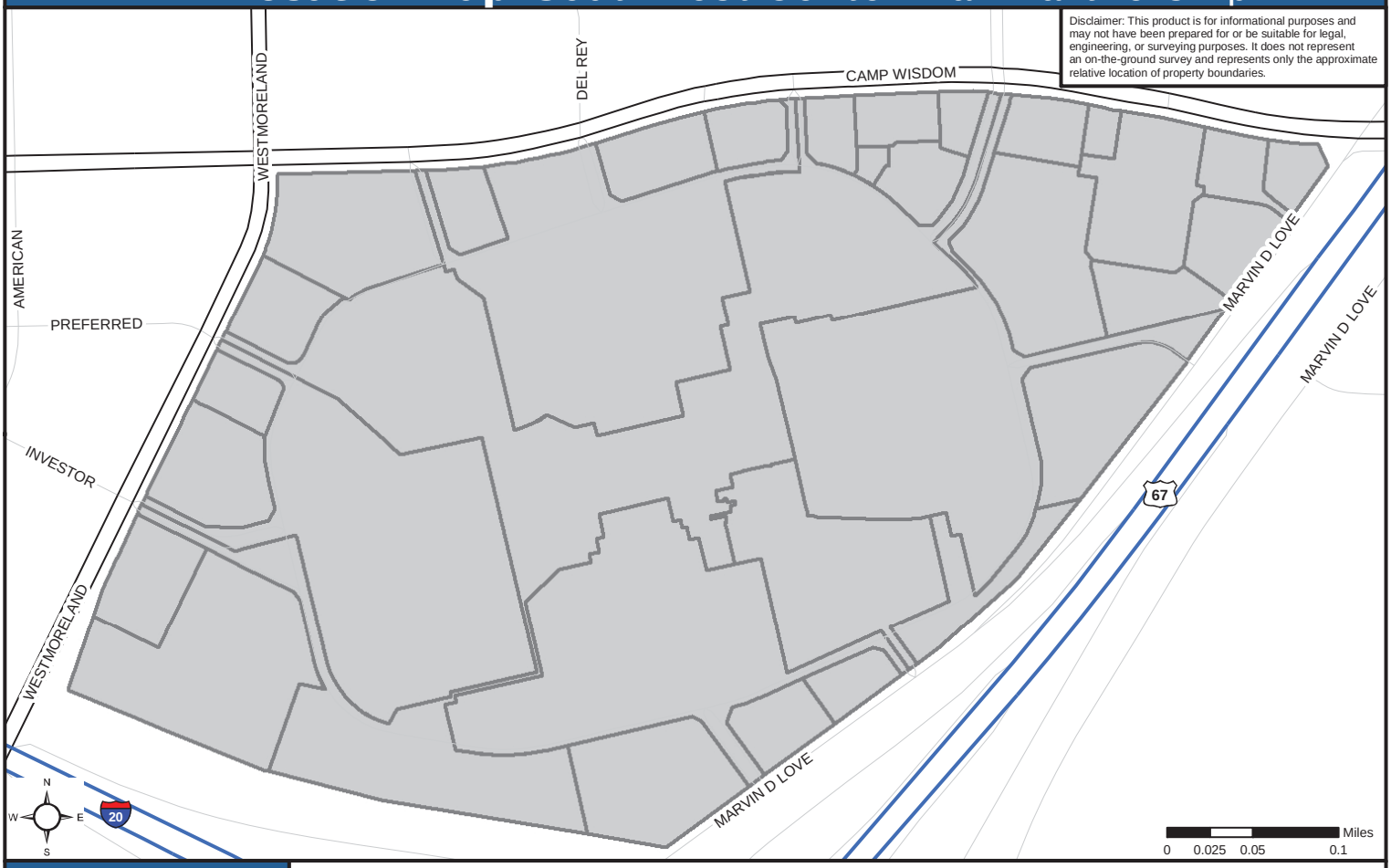
3662 W Camp Wisdom LLC

Peter Brodsky, Manager

MAP

Attached.

Location Map: Southwest Center Mall Partnership



Disclaimer: This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 11.11.15, Modified 11.24.15 - SWC_Ownership_Small_BW.TCG

Legend

- Subject Area
- Freeway
- Tollway
- Highway
- Arterial
- Local Road

Source: Parcels - DCAD, 2015; All Other Data - City of Dallas, 2015

WHEREAS, the City recognizes the importance of its role in local economic development; and

WHEREAS, the use of economic development incentives is a necessary tool in attracting catalyst developments to southern Dallas; and

WHEREAS, on June 25, 2014, pursuant to Resolution No. 14-0993, City Council elected to continue its authorization of the City of Dallas' Public/Private Partnership Program Guidelines and Criteria governing tax abatement agreements as specified in the Property Redevelopment and Tax Abatement Act and other City of Dallas economic development programs including the Business Development Chapter 380 Grant/Loan Program for the period June 25, 2014 through June 25, 2016; and

WHEREAS, on November 16, 2015, the Economic Development Committee reviewed the Southwest Center Mall ("Mall") Partnership ("Partnership") proposal and recommended City Council consideration of a Chapter 380 economic development grant agreement with 3662 W Camp Wisdom LLC and/or its affiliates or parent (''Developer'') in an amount not to exceed $2,400,000; and

WHEREAS, the Red Bird community and southern Dallas have endured the decline of Mall over the past twenty (20) years, and, during that time, the City has struggled with how to deal effectively with the Mall; and

WHEREAS, based on an expectation of City participation (subject to City Council approval), the Developer recently invested significant personal capital in property acquisition of the Mall through an auction process; and

WHEREAS, the Developer's recent decision to take a risk and invest in the Mall is a significant and rare opportunity for the City to forge a partnership to facilitate meaningful redevelopment and revitalization of the Mall and surrounding area; and

WHEREAS, with two of the three remaining retail anchors in the process of evaluating whether to remain at the Mall, the time to act is now; and

WHEREAS, the proposed Partnership represents a catalyst first step to jumpstart a larger, multi-phased redevelopment effort of the entire Mall site; and

WHEREAS, the City desires to enter into a Chapter 380 economic development grant agreement with 3662 W Camp Wisdom LLC and/or its affiliates or parent (''Developer'') in an amount not to exceed $2,400,000 to stimulate private sector investment of at least $15,000,000, promote economic development, encourage job creation, and grow the tax base at the Mall site in southern Dallas.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager, upon approval as to form by the City Attorney, is hereby authorized to execute an economic development grant agreement pursuant to Chapter 380 of the Texas Local Government Code in accordance with the City's Public/Private Partnership Program with 3662 W Camp Wisdom LLC and/or its affiliates or parent ("Developer") in consideration of the Developer's causing a minimum investment of $15,000,000 at Southwest Center Mall.

Section 2. That the Chief Financial Officer is hereby authorized to encumber and disburse funds from: Fund 0352, Department ECO, Unit 9992, Object 3016, Activity PPPF, Encumbrance No. ECO9992B263, Vendor No. VS90023, in an amount not to exceed $2,400,000.

Section 3. That the required minimum private investment (not including land acquisition costs) shall be $15,000,000 in the subject area, which is graphically depicted in **Exhibit A**.

Section 4. That, of the required minimum of $15,000,000 in private investment, a maximum of $2,000,000 can be satisfied by costs ("rehabilitation costs") incurred to upgrade, reconfigure, and renovate the existing in-line Mall building and site for the purpose of attracting additional investment/development partners, and/or activities such as strategic and selective demolition; relocation of tenants; retention of tenants; private utility or infrastructure improvements; significant interior improvements (e.g. food court); and significant exterior improvements (e.g. signage; lighting; landscaping; parking lots). Expenditures for ordinary maintenance and repairs shall not be used to satisfy the required minimum private investment.

Section 5. That, of the required minimum of $15,000,000 in private investment, a minimum of $13,000,000 shall be satisfied by the construction of "vertical improvements," including one or more of the following components:

1. Adaptive reuse of all or a portion of the former Dillard's anchor building (total size approximately 156,000 square feet), including selective demolition reconfiguration, rehabilitation of the building's mechanical, electrical, plumbing and life safety systems, significant interior upgrades, and/or significant upgrades to the building's shell. For purposes of this component, "adaptive reuse" does not mean that the new occupant of the building may not be another retail use.

Section 5. (Continued)

2. Hard and soft construction costs of new vertical building improvements for retail/grocery uses, office uses, entertainment uses, educational uses, community uses, multi-family residential uses, and/or single-family residential uses.
3. Improvements to public or private utilities or infrastructure constructed in conjunction with the new vertical building improvements or the adaptive reuse of the former Dillard's anchor building.

Section 6. That grant payment to the Developer under the grant agreement is hereby expressly made subject to the following key terms and benchmark deadlines:

1. The City receives collateral property in an appraised value at least equal to the grant amount.
2. The collateral property may include the former Dillard's anchor property, the former JC Penney's anchor property, or other property in the subject area as approved by the Director of the Office of Economic Development.
3. The grant shall be paid upon City's receipt of the required documentation for the pledge of the collateral property, including an independent appraisal of the valuation of the collateral property and the execution of a performance deed of trust in favor of the City for the collateral property without contingent liabilities.
4. On or before July 31, 2018, the Developer shall obtain approval from the Director of the Office of Economic Development of a scope of work for the vertical improvements established based on the Developer's process of community engagement.
5. On or before September 30, 2018, the Developer shall secure and provide evidence of construction funds or financing for the vertical improvements.
6. Upon the closing of sufficient construction financing to complete the required minimum private investment and so long as the City agrees in its sole discretion that the terms and amount of the senior financing is sufficient to ensure completion of the required minimum private investment, the City agrees to subordinate its performance deed of trust to all senior lenders.
7. On or before December 31, 2018, the Developer shall obtain a building permit for the vertical improvements.
8. On or before December 31, 2019, the Developer shall obtain a certificate of occupancy for the vertical improvements.

Section 6. (Continued)

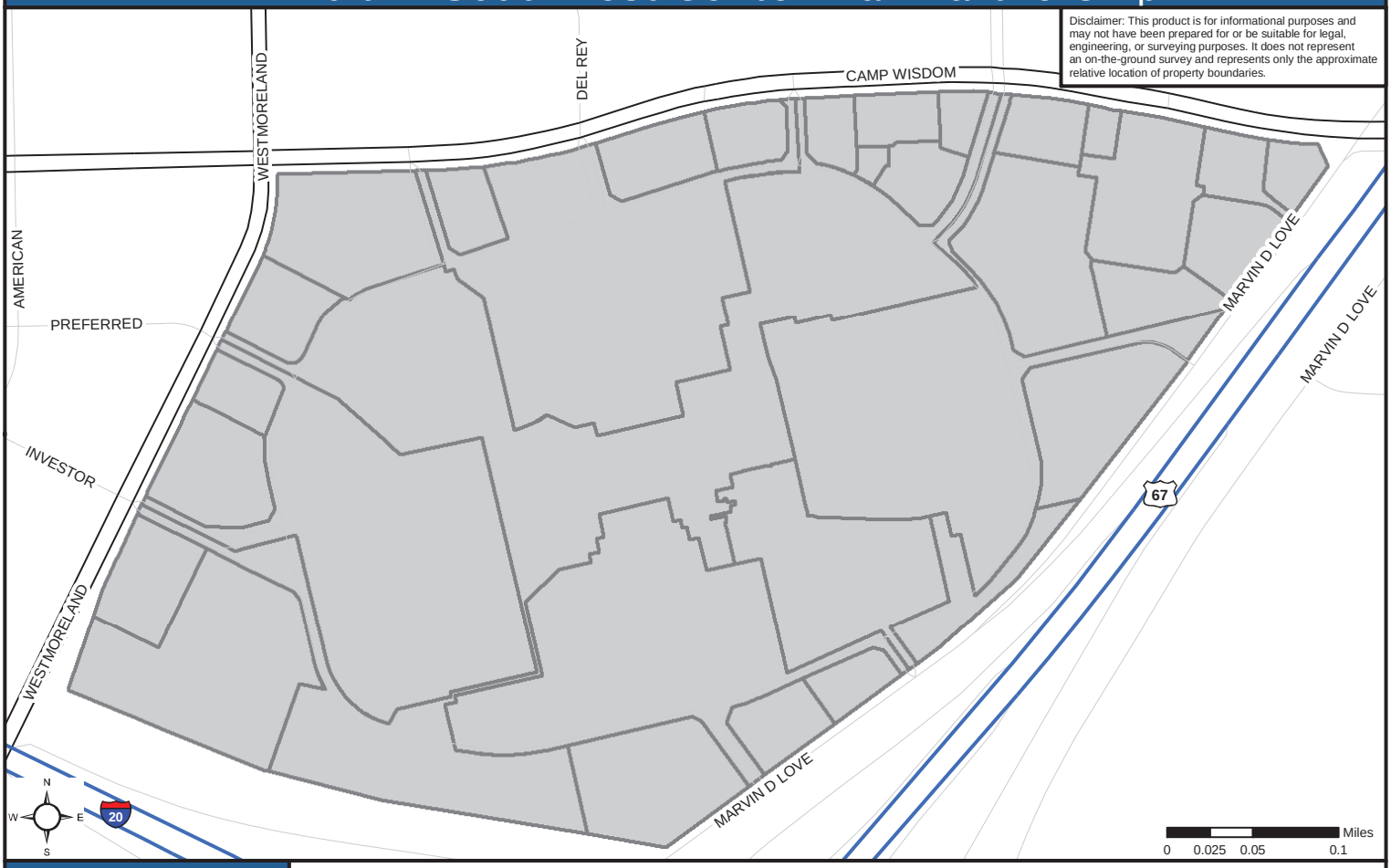
9. If applicable, on or before December 31, 2019, Developer shall also obtain final acceptance of public infrastructure improvements that are included in the vertical improvements and submit documentation to the Office of Economic Development. If acceptance is prevented due to ongoing construction of additional improvements that are beyond the scope of the vertical improvements, the deadline for acceptance may be extended by the Director of the Office of Economic Development for the duration of the permits for such construction.
10. If the Developer provides the City with sufficient evidence verifying compliance with the requirement minimum private investment and compliance with the benchmark deadlines, then the release of the performance deed of trust shall be executed and recorded by the City.
11. Developer shall submit design plans for the proposed vertical improvements to the Office of Economic Development staff and shall consult with CityDesign Studio staff and the City of Dallas Urban Design Peer Review Panel who will work with Developer collaboratively and in an advisory capacity toward the objective of having buildings, streets, and open space proposed with the vertical improvements generally: (1) respect the character of existing development as well as TIF plan goals, (2) advance a more pedestrian-oriented development pattern and promote street-level activity, and (3) promote a more enduring and sustainable built environment consistent with the spirit and intent of the Urban Design Guidelines for Projects located in Tax Increment Financing Districts.

Section 7. That the Director of the Office of Economic Development may authorize a one-time extension of deadlines up to six (6) months.

Section 8. That it is acknowledged that other sources of public funding (e.g. Mall Area Redevelopment TIF District) may be considered to support additional redevelopment projects in the Southwest Center Mall area that are proposed by the Developer and/or its affiliates, successors, and/or assigns or the expansion of vertical improvements significantly in excess of the minimum private investment described in Section 6 and that any TIF funding support will be subject to TIF board and City Council approval of separate development agreement(s).

Section 9. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

Exhibit A: Southwest Center Mall Partnership



Disclaimer: This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 11.11.15, Modified 11.24.15 - SWC_Ownership_Small_BW.TCG

Legend

- Subject Area
- Freeway
- Tollway
- Highway
- Arterial
- Local Road

Source: Parcels - DCAD, 2015; All Other Data - City of Dallas, 2015

AGENDA ITEMS # 42,43

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 3

DEPARTMENT: Office of Economic Development

CMO: Ryan S. Evans, 671-9837

MAPSCO: 62 B C

SUBJECT

Neighborhood Empowerment Zone and Business Personal Property Tax Abatement Authorization

* Authorize a resolution designating the approximately 70.7 acres of property located at 3420 Duncanville Road, 3548 Duncanville Road and 3433 Morse Drive, in Dallas Texas, as City of Dallas Neighborhood Empowerment Zone No. 4 ("NEZ No.4"), pursuant to Chapter 378 of the Local Government Code to promote an increase in economic development in the zone, establishing the boundaries of the Neighborhood Empowerment Zone and providing for an effective date – Financing: No cost consideration to the City

* Authorize a 75 percent business personal property tax abatement agreement for 8 years with Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. in consideration of a warehouse consolidation that will generate new taxable investment and job creation to be located at 3548 Duncanville Road, Dallas, Texas furthering the City of Dallas' economic development goals pursuant to the City's Public/Private Partnership Program Guidelines and Criteria - Revenue: First year revenue estimated at $125,528; eight-year revenue estimated at $746,889 (Estimated revenue foregone for eight-year business personal property tax abatement estimated at $2,240,665)

BACKGROUND

For the past several months, City staff has been in discussions with representatives of Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. (Frito-Lay) about where the company will locate a planned product distribution facility. In response to proposals made by City and County staff, the company is considering making a substantial re-investment at its former manufacturing facility located at 3420 Duncanville Road, 3538 Duncanville Road and 3433 Morse Drive, Dallas, Texas.

BACKGROUND (Continued)

The company considered a number of facilities outside of Dallas for the operation and this project competed internally with other company projects nationwide for funding. Frito-Lay relocated its manufacturing operation previously at this site outside of the City of Dallas in 2014.

Frito-Lay anticipates investing a total of approximately $80 million on the project which includes a substantial redevelopment of the building at 3433 Morse Drive and installation of the latest in material product handling equipment to assemble store orders in a 100,000 square feet expansion on the 3548 Duncanville Road property. Presently, Frito-Lay maintains approximately 150 positions on the property which is utilized for storage, warehousing and a traffic center. With this project, Frito-Lay, Inc. anticipates adding up to 80 additional jobs with its FL Transportation, Inc. and Rolling Frito-Lay Sales affiliates with an average salary of approximately $48,000.

Frito-Lay requests City Council consideration of a 75 percent business personal property tax abatement for 8-years on the added value of equipment and other new business personal property at the facility. The incentive will help reduce operational costs associated with project resulting in the site being a cost competitive option for the company to choose relative to other sites and projects considered.

In consideration of the proposed tax abatement, Frito-Lay will: (1) invest a minimum of $10,000,000 in business personal property improvements and other related costs such as design, engineering, architects, etc.; (2) invest a minimum of $50,000,000 in business personal property on material handling equipment and systems; (3) substantially complete the renovation and initiate operations by December 31, 2017; and (4) employ a minimum of 200 employees onsite by December 31, 2017 and 230 jobs onsite by December 31, 2018.

The forgone revenue associated with the abatement is $2,240,665 over the 8-year term. The 10-year net estimated fiscal impact of this project is $1,188,870 and $5,888,036 over 20-years.

In 1994, pursuant to Resolution No. 94-3523 (as amended by Resolution Nos. 95-4195 and 97-0157), the City Council previously authorized a tax abatement agreement with Frito-Lay for the manufacturing operation on this property. The company invested $46,300,000 and maintained 169 jobs pursuant to that agreement. The tax abatement resulted in approximately $1,016,634 of foregone revenue through the term of the agreement which ended in 2004.

In order to provide tax abatement at this location, state law requires the City to create a Reinvestment Zone or a Neighborhood Empowerment Zone. City staff proposes the creation of Neighborhood Empowerment Zone No. 4 and recommends favorable consideration of the proposed incentive.

BACKGROUND (Continued)

Frito-Lay, Inc., a division of Plano based PepsiCo, manufactures, markets and sells corn chips, potato chips and other snack foods. Primary snack food brands in North America produced under the Frito-Lay name include Fritos, Cheetos, Doritos, Tostitos, Lay's, Ruffles, and Rold Gold pretzels.

ESTIMATED SCHEDULE OF THE PROJECT

Begin Construction	March 2016
Substantial Completion	December 2017

PRIOR ACTION / REVIEW (COUNCIL, BOARDS, COMMISSIONS)

Pursuant to Resolution Nos. 94-3523, 95-4195 and 97-0157, City Council authorized a 10-year 75 percent business personal property tax abatement at this property with Frito-Lay.

Information about this item was provided to the Economic Development Committee on December 7, 2015.

FISCAL INFORMATION

No cost consideration to the City

OWNER

Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc.

Robert Aurand, Vice President, Supply Chain

MAP

Attached.

NEIGHBORHOOD EMPOWERMENT ZONE #4



DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 12.02.15, Last Updated 12.02.15 - NEP4

Legend

NEIGHBORHOOD EMPOWERMENT ZONE #4

Data Source

WHEREAS, the City recognizes the importance of its role in local economic development; and

WHEREAS, the City wishes to encourage economic development in the Southern Sector of the City of Dallas, and, in particular, within the area commonly known as the Red Bird industrial market; and

WHEREAS, Chapter 378 of the Local Government Code allows the City to create a neighborhood empowerment zone if the City finds that the creation of the zone would promote: (1) the creation or rehabilitation of affordable housing in the zone, or (2) an increase in economic development in the zone, or (3) an increase in the quality of social services, education or public safety provided to the residents of the zone; and

WHEREAS, the City Council determines that the designation of approximately 70.7 acres of land located at 3420 Duncanville Road, 3548 Duncanville Road, and 3433 Morse Drive, Dallas Texas 75236 as City of Dallas Neighborhood Empowerment Zone No. 4 ("City of Dallas NEZ No. 4") pursuant to Chapter 378 of the Local Government Code will promote an increase in economic development in the zone by promoting job creation and additional business activity at this southern Dallas location; and

WHEREAS, the City Council finds that the creation of the City of Dallas NEZ No. 4 benefits the public and is for the public purpose of increasing the public health, safety, and welfare of the persons in the municipality; and

WHEREAS, the City Council further finds that the creation of the zone satisfies the requirements of Section 312.202 of the Tax Code and, in particular, that the creation of City of Dallas NEZ No. 4 is reasonably likely to contribute to the retention or expansion of primary employment or to attract major investment in the zone that would be a benefit to the property and that would contribute to the economic development of the municipality.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the facts and recitations contained in the preamble of this resolution are hereby found and declared to be true and correct.

Section 2. That the City designates the 70.7 acres located at 3420 Duncanville Road, 3548 Duncanville Road, and 3433 Morse Drive, Dallas Texas 75236 within the Red Bird industrial market as described in the legal description and map attached herein as **Exhibit A** as a neighborhood empowerment zone pursuant to Chapter 378 of the Local Government Code to be known as City of Dallas Neighborhood Empowerment Zone No. 4 ("City of Dallas NEZ No. 4") to promote an increase in economic development in the zone.

Section 3. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

EXHIBIT A



DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 12.02.15, Last Updated 12.02.15 - NEP4

Legend

NEIGHBORHOOD EMPOWERMENT ZONE #4

Data Source

WHEREAS, the City recognizes the importance of its role in local economic development; and

WHEREAS, on June 25, 2014, by Resolution No. 14-0993, City Council elected to continue its participation in tax abatement and the Public/Private Partnership Program Guidelines and Criteria governing tax abatement agreements to be entered by the City as required by the Property Redevelopment and Tax Abatement Act, as amended, V.T.C.A. Tax Code, Chapter 312 (the "Act") by Resolution No. 12-1520 as amended; and

WHEREAS, on January 13, 2016, the City created the City of Dallas Neighborhood Empowerment Zone No. 4 (City of Dallas NEZ No. 4); and

WHEREAS, Title 12 of the Local Government Code, Section 378.002 requires that the creation of City of Dallas NEZ No. 4 promote (1) the creation or rehabilitation of affordable housing in the zone, or (2) an increase in economic development in the zone, or (3) an increase in the quality of social services, education or public safety provided to the residents of the zone; and

WHEREAS, the City finds that the City of Dallas NEZ No. 4 satisfies the requirements of Chapter 312.202 of the Property Redevelopment and Tax Abatement Act to permit tax abatements for eligible properties; and

WHEREAS, Title 12 of the Local Government Code, Section 378.004 empowers municipalities to enter into agreements abating municipal property taxes on property in the zone subject to the duration limits of Section 312.2004, Tax Code; and

WHEREAS, Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. proposes to make a substantial investment to redevelop an existing facility for the purpose of operating a product distribution operation within City of Dallas NEZ No. 4, thereby promoting economic development, job creation and increased business activity in the zone; and

WHEREAS, the City desires to enter into a business personal property tax abatement agreement with Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. for added value to business personal property located within City of Dallas NEZ No. 4 as further described by the property Metes and Bounds attached as Exhibit A.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager upon approval as to form by the City Attorney is hereby authorized to execute a business personal property tax abatement agreement with Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. for added value to the business personal property in accordance with the Act and the City's Public/Private Partnership Guidelines and Criteria.

Section 2. That the approval and execution of the tax abatement agreement by the City is not conditional upon approval and execution of any other tax abatement agreement by any other taxing entity.

Section 3. That the property location which will be described in the tax abatement agreement is attached hereto as **Exhibit A (Metes and Bounds)** and depicted on the attached site map as **Exhibit B (Map - the "Property")**.

Section 4. That the tax abatement agreement shall provide, among other provisions, the following:

(a) The Property subject to tax abatement shall be located entirely within City of Dallas NEZ No. 4, City of Dallas, Texas.

(b) None of the Property subject to tax abatement is owned or leased by a member of the City Council of the City of Dallas or by a member of the City Plan Commission.

(c) That the development of the Property will conform to all requirements of the City's zoning ordinance, and that the use of the Property is consistent with the general purpose of encouraging development or redevelopment in the reinvestment zone during the period the tax abatement is in effect.

(d) The City will provide Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. a 75 percent abatement of the added value to the business personal property for a period of eight years located on the business personal property within City of Dallas NEZ No. 4 as provided in **Exhibit A (Metes and Bounds)**. The tax abatement will commence on or before January 1, 2018.

(e) That in order for Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. to receive the tax abatement during any year of the agreement, it must document and certify annually that it is compliant with the terms outlined in the tax abatement agreement.

Section 4. (Continued)

(f) That the proposed project shall result in a minimum investment of (1) $10,000,000 in business personal property improvements including design, engineering and other hard and soft costs and (2) $50,000,000 for new business personal property located at the facility.

(g) That the required investment shall be substantially completed by December 31, 2017. The Director of the Office of Economic Development may, at his sole discretion, extend the substantial completion date for a period up to six months for just cause.

(h) That Rolling Frito-Lay Sales, LP and/or its affiliates Frito-Lay, Inc. and FL Transportation Inc. will ensure that at least 200 jobs are maintained on the property by December 31, 2017 and that 230 jobs are maintained on the property by December 31, 2018 through the remaining term of the agreement.

(i) A description of the nature, location and costs of all proposed improvements to the Property will be provided to the Office of Economic Development.

(j) That access to the Property will be provided to allow for the inspection by City inspectors and officials to ensure that the improvements are made according to the specification and terms of the tax abatement agreement.

(k) That the Dallas City Council may terminate or modify the agreement if the property owner fails to comply with the agreement.

(l) That the tax abatement agreement shall be personal to Rolling Frito-Lay Sales, LP and/or its affiliate Frito-Lay, Inc. and shall only be assignable upon written approval of the assignment by the City's Director of the Office of Economic Development.

Section 5. That this resolution take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

EXHIBIT A

BEING all of Block C/8018 of REDBIRD PLAZA, FIFTH SECTION ADDITION, an addition to the City of Dallas, Dallas County, Texas, recorded in volume 72136, page 2479, of the Deed Records of Dallas County, Texas, and being more particularly described as follows:

BEGINNING at 3/4' iron rod for corner at the present intersection of the southwest right-of-way line of Walton Walker Boulevard (a variable width right-of way) with the west right-of-way line of Morse Road (a 60foot right-of-way – formerly Noedham Lane)

THENCE South 03 degrees 51 minutes 20 seconds West, 936.08 with the west line of Morse Road to a 3/4' iron rod for corner in the north line of Block D/8018 of Red Bird Plaza, Sixth Section, an addition to the City of Dallas, Texas, recorded in volume 75126, page 2100 of the Deed Records of Dallas County, Texas;

THENCE North 86 degrees 08 minutes 40 seconds West, 525.00 feet with the common addition line to a 3/4' iron rod for corner in the east line of the A. T. & S. F. Railway Co. right-of-way (a 50 foot right-of-way); THENCE North 03 degrees 51 minutes 20 seconds East, 1435.67 feet with the east line of the railroad to a 1/2' iron rod for corner in the southwest line of Walton Walker Boulevard;

THENCE South 36 degrees 43 minutes 00 seconds East, 130.17 feet with the southwest line of Walton Walker Boulevard to an 1/2' iron rod for corner;

THENCE South 43 degrees 50 minutes 30 seconds East, 595.37 feet with the southwest line of Walton Walker Boulevard to the PLACE OF BEGINNING and CONTAINNG 617,778.05 square feet or 14.1822 acres of land, more or less.

EXHIBIT A

BEING a tract of land out of the S. P. Loving Survey, Abstract No. 773, and being part of City Block 8018 in the City of Dallas, Dallas County, Texas, and being more particularly described as follows:

BEGINNING at a corner formed by the Southwest right-of-way line of Walton Walker Boulevard and the West right-of-way line of the GC&SF Railroad;

THENCE South 4 degrees 11 minutes 27 seconds West, along the West right-of-way line of GC&SF Railroad, a distance of 1390.14 feet to a nail set in concrete for a corner;

THENCE departing from the West right-of-way line of GC&SF Railroad North 89 degrees 50 minutes 27 seconds West, a distance of 1516.35 feet along the South boundary of the tract of land described in deed dated January 9, 1975, from Mobil Research and Development Corporation to Mobil Foundation, Inc., recorded in Volume 76034 at page 0677 of the Deed Records of Dallas County, Texas, to and iron rod for a corner in the East right-of-way line of Duncanville Road;

THENCE North along the East line of a 30.0 foot strip of land deeded to Dallas County for the improvement of Duncanville Road by deed dated August 5, 1981, and recorded in Volume 81179 at page 0323 of the Deed Records of Dallas County, Texas a distance of 595.63 feet to an iron rod for a corner;

THENCE departing from the East right-of-way line of Duncanville Road, South 89 degrees 56 minutes 10 seconds East, a distance of 280.45 feet to an iron rod for a corner;

THENCE along the East boundary line of the United Gas Pipe Line Company's tract as described under the caption "Dallas County" in deed dated September 25, 1937, from United Gas public Service Company to United Gas Pipe line Company and recorded in Volume 2050, page 135 of the Deed Records of Dallas County, Texas, North 0 degrees 9 minutes 2 seconds East, a distance of 1221.64 feet to an iron rod in the right-of-way of Kiest Boulevard;

THENCE South 89 degrees 7 minutes 30 seconds East, a distance of 517.18 feet to an iron rod in the South right-of-way line of Kiest Boulevard;

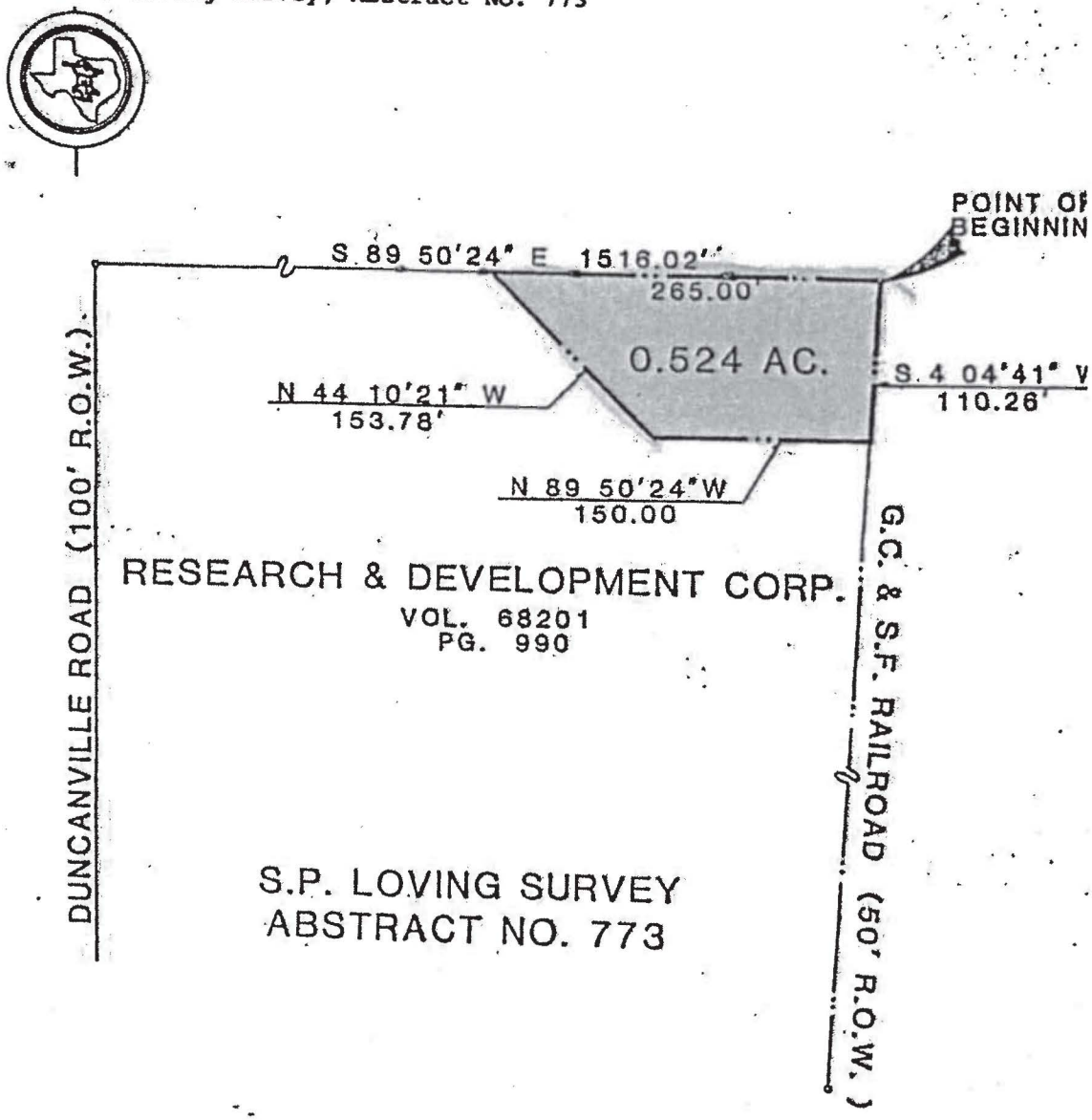
THENCE continuing along the South right-of-way line of Kiest Boulevard South 84 degrees 9 minutes 30 seconds East, a distance of 546.36 to an iron rod in the Southwest right-of-way line of Walton Walker Boulevard;

THENCE along the Southwest right of way line of Walton Walker Boulevard South 36 degrees, 23 minutes, 35 seconds East, a distance of 461.19 feet to an iron rod in the West right-of-way line of the GC&SF Railroad and the point of beginning of this survey and containing 55.987 acres of land, which is 2,438,781.30 square feet, more or less.

EXHIBIT "A"

Page 3

SITUATED in Dallas County, Texas, and being 0.524 acres out of City Block 8018 in the S.P. Loving Survey, Abstract No. 773



NOTE:
BEARINGS AND DISTANCES ARE TAKEN FROM ESPEY, HUSTON & ASSOCIATES, INC., PLAT DATED 5-21-82

Geogram Corporation
Land Surveyors - Engineers

FRITO - LAY

DWG. BY: J. A. C.	APPV'D. BY:	DATE: 4-4-83	SCALE: 1" = 100'	JOB NO.:	BK. NO.:

EXHIBIT B



DALLAS
ECONOMIC DEVELOPMENT

Research & Information Division
214.670.1685
dallas-ecodev.org

Created 12.02.15, Last Updated 12.02.15 - NEP4

Legend

NEIGHBORHOOD EMPOWERMENT ZONE #4

Data Source

AGENDA ITEM # 44

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2, 14

DEPARTMENT: Planning and Urban Design

CMO: Alan Sims, Chief of Neighborhood Plus, 670-1611

MAPSCO: 45 A B E F K L P & Q

SUBJECT

Authorize a professional services contract with MIG, Inc. for the preparation of an update to the City's Downtown Dallas 360 Plan adopted by City Council on April 13, 2011 - Not to exceed $250,000 - Financing: Downtown Connection TIF District Funds

BACKGROUND

In 2011, City Council adopted the Downtown Dallas 360 Plan. The plan's adoption was the culmination of a partnership between the City of Dallas and Downtown Dallas Inc. and a one-and-a-half year long process which included two community forums, four stakeholder work sessions, numerous individual stakeholder meetings, six Technical Committee meetings, and a regularly maintained project web site. MIG, Inc. was selected by the City, through a request for proposals process in 2009, to complete the original Downtown Dallas 360 Plan.

The Downtown Dallas 360 Plan established a shared vision for achieving three overarching goals Downtown: (1) creating an exciting urban experience; (2) a balanced transportation system; and (3) an inclusive environment. The Plan primarily addressed seven districts within the freeway loop that forms the core central business district (CBD) area, established important relationships between the core and surrounding 9 square mile area of supporting districts, articulated actions to achieve the vision by focusing on transformative strategies and geographic focus areas within the core CBD area. The plan concluded with a matrix of 67 prioritized actions categorized as short term (1 to 2 years), medium term (3 to 5 years) and long term (5 to 10 years) to guide and focus public and private efforts, as well as "quick win" actions that provided immediate results and sustained downtown momentum.

BACKGROUND (Continued)

Since the plan's adoption in 2011, the core has transformed greatly. Downtown has experienced an increase in overall population, renovation Since the plan's adoption in 2011, the core has transformed greatly. Downtown has experienced an increase in overall population, renovation is underway for the last remaining large vacant buildings in the core, announcement of high speed rail service to Houston, finalization of a portion of the D2 alignment, privatization of the Farmers Market, etc., all of which impact the downtown core and surrounding areas, emphasizing the need for coordination, connection and consensus around the next phase of Downtown Dallas' economic, social and environmental growth and development.

The City's Contracting Policy, A.D. 4-5, Section 9.3.5 provides for the ability to contract for consulting services with a specific firm without utilizing the City's procurement process, if there is only one consultant that can best provide the required service. MIG is best and uniquely qualified to perform the services, as they prepared the original Downtown Dallas 360 Plan and was awarded the original service contract through the City's RFP process.

The scope of the update includes:

1. Market Analysis, Economics, and Finance – Analysis of job growth (current, projected, and strategies), economic indicators, development strategies, and finance mechanisms.

2. Mobility - systematic look at opportunities, connections and transportation options that are needed to balance vehicular trips in the greater downtown area, provide connections to major destinations and corridors of activity and address how the City's core interface with the regional transportation system.

    a. Regional System Integration
        i. Define wants for regional transportation system, specific to Interstates 30-35-345 (TxDOT). This task will work with HNTB and TxDOT to coordinate plan processes, ultimately advancing scenarios best for Downtown.
        ii. Review and analyze High Speed Rail potential with recommendations on how to best connect regional, local and all forms of transportation to the station.
        iii. Lower Stemmons IH35 and The Canyon IH30: Analyze and recommend strategies for reconciling conflicting regional to local relationship between the local street system and the regional highway network with specific focus on: the "arrival experience" to Downtown, including improved east-west connections, MHH Bridge grade interface, Commerce cloverleaf
        iv. Analyze modifications and decking opportunities for I-30 ramp.

BACKGROUND (Continued)

b. Street Typologies
   i. Update and refine Complete Streets (360 expanded geographic scope) and 360, including design standards and transportation performance metrics.

c. Circulation Framework
   i. Update and refine 360's circulation framework to incorporate specific corridor modifications related to road diets, multi-modal integration (bike, streetcar, etc.), directional conversions, District connectors and signature streets.

d. Design Guidelines and/or Standards: Mobility and the Public Realm
   i. Complete a Modern Street Design Manual based on Complete Streets refinement, upon adoption by City Council, tree and landscape standards.

e. Integration of Mobility section into neighborhood mircroplans to address specific needs.

3. Housing

a. Build on Neighborhoods Plus; enhance 360 housing strategies with holistic neighborhood development, including housing, services, education, health and recreation.

b. Analyze and create across districts a strategy for sustainable and socially equitable mix of product and price point within the city's urban core, within emphasis on infill strategies for new construction and economics of providing and maintaining an affordable product.

4. Neighborhood Microplans

a. Complete specific plans addressing neighborhood issues in all 15 (or more) districts such as: urban design, land use, walkability, retail, commercial office, entertainment, education, and innovation, at a tailored and varied scale according to neighborhood needs.

5. Implementation Strategy

a. Tactical implementation plan with associated responsibilities, costs, and timelines; will also include bond priority recommendations and organizational structures for effective results.

BACKGROUND (Continued)

Downtown Dallas Inc. (DDI) has allocated $250,000 to the update effort and has nearly completed Phase I – Outreach and Assessment portion of the update. Phase 1 included (1) inventory of concurrent planning efforts, identifying project that impact the areas of the 360 plan; (2) stakeholder and community engagement; (3) neighborhoods needs and assessment, a physical inventory of existing conditions, current projects, short and long term needs, and market conditions for each area; and (4) refinement and prioritization of scope and resources for further plan products. City is requesting the authorization of a professional services contract with MIG in the amount of $250,000 to match DDI's contribution the plan's update.

ESTIMATED SCHEDULE OF PROJECT

Project Started June 2015
Project Completion June 2016

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On April 22, 2009, City Council authorized a contract with MIG, Inc. to develop a strategic plan for the downtown area, by Resolution No. 09-1109.

On April 13, 2011, City Council authorized the adoption of the Downtown Dallas 360 Plan, by Resolution No. 11-0996.

On December 10, 2015, the Downtown Connection TIF District board of directors reviewed and recommended approval of a professional services contract with MIG, Inc. for the preparation of an update to the City's Downtown Dallas 360 Plan in amount not to exceed $250,000.

Council will be briefed by memorandum regarding this item.

FISCAL INFORMATION

$250,000 – Downtown Connection TIF District Funds

COUNCIL DISTRICT	AMOUNT
2	$125,000
14	$125,000

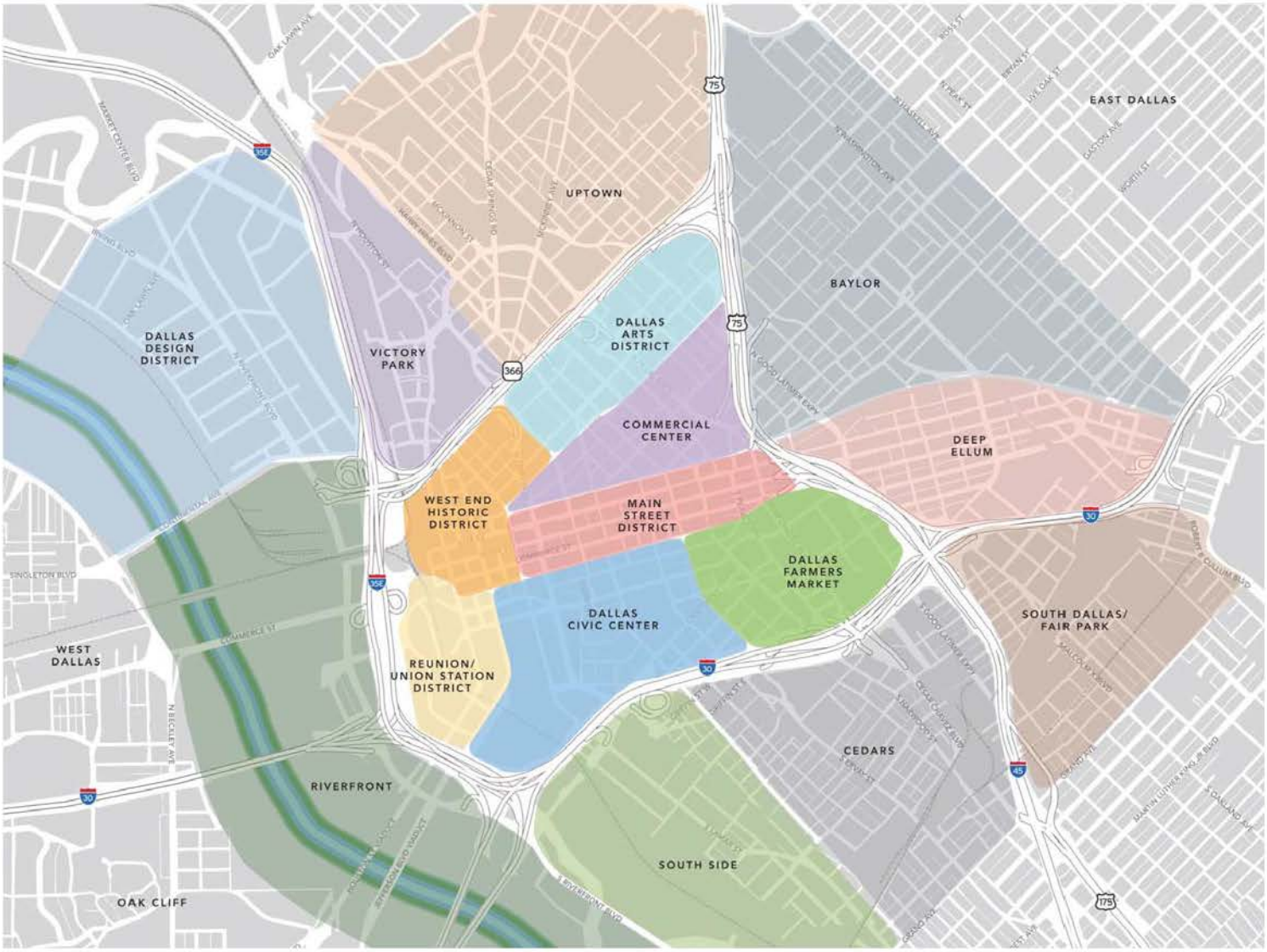
DEVELOPER

MIG, Inc.

Susan Goltsman, President
Carolyn Verheyen, Secretary
Daniel Iacofano, Treasurer

MAP

Attached.


UPTOWN
EAST DALLAS
BAYLOR
DALLAS DESIGN DISTRICT
VICTORY PARK
DALLAS ARTS DISTRICT
COMMERCIAL CENTER
DEEP ELLUM
WEST END HISTORIC DISTRICT
MAIN STREET DISTRICT
DALLAS FARMERS MARKET
DALLAS CIVIC CENTER
SOUTH DALLAS/ FAIR PARK
WEST DALLAS
REUNION/ UNION STATION DISTRICT
CEDARS
RIVERFRONT
SOUTH SIDE
OAK CLIFF
75
35E
366
30
45
175

January 13, 2016

WHEREAS, the City recognizes the importance of its role in local economic development initiatives and programs; and

WHEREAS, on June 8, 2005, City Council authorized the establishment of Tax Increment Financing Reinvestment Zone Number Eleven (Downtown Connection TIF District) and established a Board of Directors for the District to promote development or redevelopment in the Downtown Connection area by Ordinance No. 26020, as authorized by the Tax Increment Financing Act, Chapter 311 of the Texas Tax Code; and

WHEREAS, on August 29, 2005, City Council authorized the Project Plan and Reinvestment Zone Financing Plan for Tax Increment Financing Reinvestment Zone Number Eleven, (Downtown Connection TIF District); and authorized a participation agreement with Dallas County for the Downtown Connection TIF District by Ordinance No. 26096; and

WHEREAS, on April 22, 2009, City Council authorized a contract with MIG, Inc. to develop a strategic plan for the downtown area in an amount not to exceed $515,000 by Resolution No. 09-1109; and

WHEREAS, on April 13, 2011, City Council authorized the adoption of the Downtown Dallas 360 Plan, by Resolution No. 11-0996; and

WHEREAS, since the Downtown Dallas 360 plan’s adoption in 2011, the core has transformed greatly and has experienced an increase in overall population, renovation is underway for the last remaining large vacant buildings in the core, announcement of high speed rail service to Houston, finalization of a portion of the D2 alignment, privatization of the Farmers Market, etc., all of which impact the Downtown Connection TIF District and surrounding areas; and

WHEREAS, in furtherance of the Downtown Connection TIF District Project Plan and to ensure development priorities and implementation strategies are aligned with the City's vision for downtown, the City desires to enter into a services contract with MIG, Inc. to update the Downtown Dallas 360 plan to address changes in the downtown core of the past five years and address and/or update comprehensive issues such as mobility, urban design, housing, open space, Smart City, economics and land use.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

Section 1. That the City Manager, upon approval as to form by the City Attorney is hereby authorized to execute a professional services contract with MIG, Inc. in an amount not to exceed $250,000.

Section 2. That the professional services contact shall provide, among other provisions:

a. MIG, Inc. shall complete an update to the Downtown Dallas 360 plan for the greater downtown area, as depicted on **Exhibit A**.

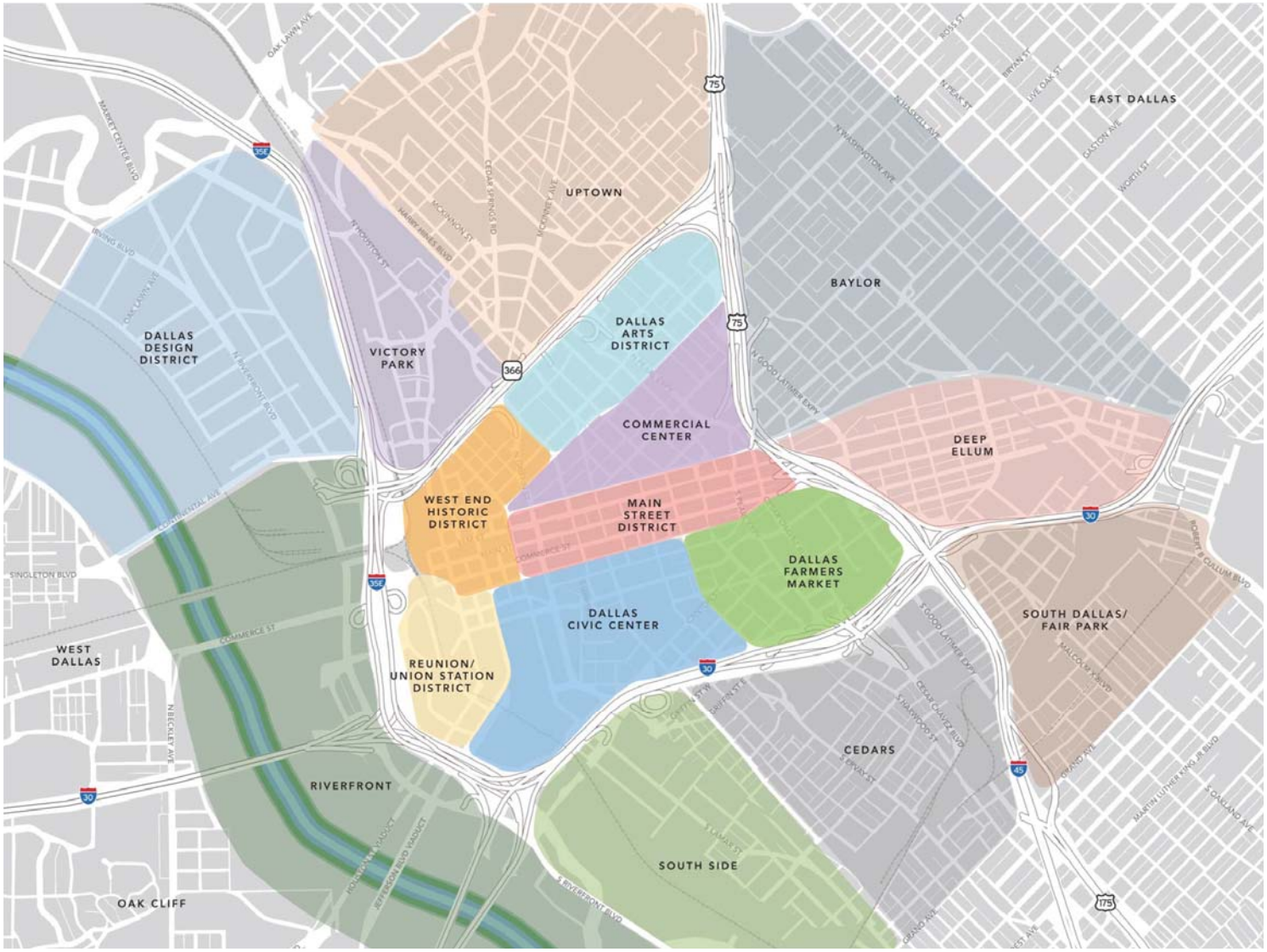
b. That the contract's funds shall be dispersed in scheduled payments based on meeting certain required milestones and timelines for the plan's update, as set forth in the service contract.

c. That the plan's update shall include a strategy for implementation, wherein specific actions are identified to accomplish the plan's goals, such as regulatory changes, strategic public and private investments, public/private financing strategies, etc.

Section 3. That the Chief Financial Officer is hereby authorized to encumber and disburse funds from Fund 0044, Department ECO, Unit W042, Object 3070, Activity DTTI, CT ECOW042A257, Vendor No. VS0000034342, in an amount not to exceed $250,000.

Section 4. That this resolution shall take effect immediately from and after its passage in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so resolved.

Exhibit A


UPTOWN
EAST DALLAS
BAYLOR
DALLAS DESIGN DISTRICT
VICTORY PARK
DALLAS ARTS DISTRICT
COMMERCIAL CENTER
DEEP ELLUM
WEST END HISTORIC DISTRICT
MAIN STREET DISTRICT
DALLAS FARMERS MARKET
DALLAS CIVIC CENTER
SOUTH DALLAS/ FAIR PARK
WEST DALLAS
REUNION/ UNION STATION DISTRICT
CEDARS
RIVERFRONT
SOUTH SIDE
OAK CLIFF

AGENDA ITEM # 45

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 14

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 45 K

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting the renewal of Specific Use Permit No. 1803 for an open-enrollment charter school on property zoned a CA-1(A) Central Area District in an area bounded by McKinney Avenue, Laws Street, Munger Avenue and North Lamar Street
Recommendation of Staff and CPC: Approval for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a revised traffic management plan and conditions
Z145-181(OTH)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z145-181(OTH) **DATE FILED:** February 9, 2015

LOCATION: Bounded by McKinney Avenue, Laws Street, Munger Avenue and North Lamar Street

COUNCIL DISTRICT: 14 **MAPSCO:** 45-K

SIZE OF REQUEST: ± 1.0459 acres **CENSUS TRACT:** 21.00

APPLICANT/OWNER: Ann Stevenson, Uplift Education

REPRESENTATIVE: Brian Nelson

REQUEST: An application for the renewal of Specific Use Permit No. 1803 for an open enrollment charter school on property zoned a CA-1(A) Central Area District.

SUMMARY: The applicant proposes to continue the use of the property as an open-enrollment charter school on the site. There are no changes to the site plan. The site is developed with a multi-story building housing the school. The school has an enrollment of 450 students with 24 classrooms serving Kindergarten through fifth grades. The SUP was originally approved on May 23, 2010 for five years with eligibility for automatic renewals of additional five-year periods. The applicant missed the time frame to obtain an automatic renewal.

STAFF RECOMMENDATION: **Approval** for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a revised traffic management plan and conditions.

CPC RECOMMENDATION: **Approval** for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a revised traffic management plan and conditions.

GUIDING CRITERIA FOR RECOMMENDATION:

The following factors are listed in Chapter 51A of the Dallas Development Code to guide the determination as to whether or not an SUP shall be granted. Staff has listed its findings based upon each component below:

1. *Compatibility with surrounding uses and community facilities* – The existing use blends in with the surrounding uses. Even though staff does not consider this location an ideal location for a school due to the lack of open space or outside playgrounds for the children, the structure itself blends in with the surrounding area.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – The existing open-enrollment school has not negatively impacted the adjacent properties and provides a valuable service to this area of the city.

3. *Not a detriment to the public health, safety, or general welfare* – The existing open-enrollment charter school has not been a detriment to the public health, safety, or general welfare.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – The request to continue the existing use on the property complies with all the zoning regulations and standards.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW
Lamar Street	Local	70 feet
McKinney Avenue	Local	70 feet
Laws Street	Local	36 feet
Munger Avenue	Local	36 feet

Traffic:

The applicant submitted a revised TMP which was revised and approved by the Engineering Section of the Department of Sustainable Development. Exhibit 2 of the TMP indicates the location of an off-duty police officer on at the intersections of Munger Avenue and Laws Street and at the intersection of North Griffin Street and Corbin Street to continue guiding the parents along the designated route. Uplift Education should continue communications with the Dallas World Aquarium and the City of Dallas Street Services Department to establish a circulation route that works for all parties. For such reason, staff is recommending that the TMP be updated on an annual basis.

STAFF ANALYSIS:

Comprehensive Plan:

The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site as being in the Downtown Building Block.

The Downtown Building Block is a centrally located hub that provides high intensity, concentrated regional job and commercial activity supported by high-density housing. A Downtown includes pedestrian-oriented and mixed-use development and offers multiple transportation options. Ground floors of tall buildings feature shops with many windows for visual interest and safety while the streetscape incorporates trees for shade, wide sidewalks and easy-to-use signs for finding points of interest. Civic and open spaces provide an inviting atmosphere for pedestrians as well as a diversity of uses, generating activity throughout the day and evening.

Surrounding Land Use:

	Zoning	Land Use
Site	CA-1(A), SUP No. 1803	Open-enrollment charter school and parking
North	CA-1(A)	Woodall Rodgers Frwy
East	CA-1(A)	Parking lot, Dallas World Aquarium
South	CA-1(A)	Parking, hotel, parking garage
West	CA-1(A)	Offices, event center

Land Use Compatibility:

The surrounding uses include a mix of office, hotel, services uses, parking garages and surface parking areas. The West End entertainment district and the Victory Planned Development District are adjacent to the west and northwest of the property, respectively. SUP No. 1803 was originally approved on May 26, 2010 for a five-year period with eligibility for automatic renewals for additional five-year periods.

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The City Council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the

public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards. The regulations in this chapter have been established in accordance with a comprehensive plan for the purpose of promoting the health, safety, morals, and general welfare of the City.

The existing site plan, proposed traffic management plan and conditions are consistent with the requirements of the Dallas Development Code.

Development Standards:

District	Setbacks		Density	Height	Lot Coverage	Special Standards	Primary Uses
	Front	Side/Rear					
CA-1(A) Central area	0’	0’	20.0 FAR	Any legal height	100%		All but the heaviest industrial uses

Landscaping:

The request does not trigger any landscape changes. Any new development on the property will require landscaping per Article X of the Dallas Development Code.

PROPOSED CONDITIONS
SUP No. 1803
Z145-181(OTH)

1. USE: The only use authorized by this specific use permit is an open-enrollment charter school.

2. SITE PLAN: Use and development of the Property must comply with the attached site plan.

3. TIME LIMIT: This specific use permit expires on (five years from the passage of the ordinance), but is eligible for automatic renewal for additional five-year periods pursuant to Section 51A-4.219 of Chapter 51A of the Dallas City Code, as amended. For automatic renewal to occur, the Property owner must file a complete application for automatic renewal with the director before the expiration of the current period. Failure to timely file a complete application will render this specific use permit ineligible for automatic renewal. (Note: The Code currently provides that applications for automatic renewal must be filed after the 180th but before the 120th day before the expiration of the current specific use permit period. The Property owner is responsible for checking the Code for possible revisions to this provision. The deadline for applications for automatic renewal is strictly enforced.)

4. CLASSROOMS: The maximum number of classrooms is 24~~23~~.

5. HOURS OF OPERATION: The open-enrollment charter school may only operate between 7:30 a.m. and 6:00~~3:30~~ p.m., Monday through Friday.

6. INGRESS/ EGRESS: Ingress and egress must be provided in the location shown on the attached site plan. No other ingress or egress is permitted.

7. OFF-STREET PARKING: Parking must be provided and located as shown on the attached site plan.

8. TRAFFIC MANAGEMENT PLAN:

A. In general. Operation of the open-enrollment charter school must comply with the attached traffic management plan.

B. Queuing. Queuing is only permitted inside the Property. Student drop-off and pick-up are not permitted within city rights-of-way.

C. Traffic study.

i. The Property owner or operator shall prepare a traffic study evaluating the sufficiency of the traffic management plan. The initial traffic study must be submitted to the director by November 1, 2016. After the initial traffic study, the

Property owner or operator shall submit annual updates of the traffic study to the director by November 1 of each ~~even-numbered~~ year.

ii. The traffic study must be in writing, performed by a licensed engineer, based on a minimum of four samples taken on different school days at different drop-off and pick-up times over a two-week period, and must contain an analysis of the following:

a. ingress and egress points;

b. queue lengths;

c. number and location of personnel assisting with loading and unloading of students;

d. drop-off and pick-up locations;

e. drop-off and pick-up hours for each grade level;

f. hours for each grade level; and

g. circulation.

iii. Within 30 days after submission of a traffic study, the director shall determine if the current traffic management plan is sufficient.

a. If the director determines that the current traffic management plan is sufficient, the director shall notify the applicant in writing.

b. If the director determines that the current traffic management plan results in traffic hazards or traffic congestion, the director shall require the Property owner to submit an amended traffic management plan. If the Property owner fails to submit an amended traffic management plan within 30 days, the director shall notify the city plan commission.

D. Amendment process.

i. A traffic management plan may be amended using the minor plan amendment fee and public hearing process in Section 51A-1.105(k)(3).

ii. The city plan commission shall authorize changes in a traffic management plan if the proposed amendments improve queuing or traffic circulation; eliminate traffic hazards; or decrease traffic congestion.

9. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

10. GENERAL REQUIREMENTS: Use of the Property must comply with all federal

and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

CPC Action – November 19, 2015

Z145-181(OTH) Planner: Olga Torres Holyoak

Motion: It was moved to recommend **approval** of the renewal of Specific Use Permit No. 1803 for an open-enrollment charter school for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a revised traffic management plan and conditions on property zoned a CA-1(A) Central Area District in an area bounded by McKinney Avenue, Laws Street, Munger Avenue and North Lamar Street.

Maker: Ridley
Second: Murphy
Result: Carried: 15 to 0

For: 15 - Anglin, Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley*

Against: 0
Absent: 0
Vacancy: 0

*out of the room, shown voting in favor

Notices: Area: 300 Mailed: 24
Replies: For: 3 Against: 5

Speakers: For: Yasmin Bhatia, 4230 Beechwood Ln., Dallas, TX,75220
For (Did not speak): Eric Goodloe, 3807 Cypress Point Cove, Round Rock, TX, 78664
Against: John McCall Jr., 1650 Oak Knoll St., Dallas, TX, 75208

UPDATED TRAFFIC MANAGEMENT PLAN

TRAFFIC MANAGEMENT PLAN REVIEW FOR

UPLIFT LUNA PRIMARY CHARTER SCHOOL

DALLAS, TEXAS

DeShazo Project No. 14186

Prepared for:
PMSI
1822 W. Barker Lane, #81734
Austin, Texas 78708-1734

Prepared by:
DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 South Houston Street, Suite 330
Dallas, Texas 75202
214.748.6740



October 13, 2015

DeShazo Group

DeShazo Group
Traffic. Transportation Planning. Parking. Design.
400 S. Houston Street, Suite 330
Dallas, TX 75202
ph. 214.748.6740
deshazogroup.com

Technical Memorandum

To: *Eric Goodloe* — PMSI

From: *David Nevarez, P.E.* — DeShazo Group, Inc.

Date: October 13, 2015

Re: Traffic Management Plan Review for Uplift Luna Primary Charter School in Dallas, Texas
DeShazo Project Number 14186; ***Z145-181(OTH)***

INTRODUCTION

The services of **DeShazo Group, Inc.** (**DeShazo**) were retained by PMSI on behalf of the Uplift Education to provide a requisite review of the traffic management plan (TMP) for the Uplift Luna Primary Charter School campus located at 2020 N. Lamar Street in Dallas, Texas. The original TMP was completed by DeShazo on March 1, 2013. As a condition of the approval of the project, submittal of a bi-annual review of the TMP was required, which is the purpose of this study. **DeShazo** is an engineering consulting firm based in Dallas, Texas providing licensed engineers skilled in the field of traffic/transportation engineering.

A Traffic Management Plan (TMP) is important to safely achieve an optimum level of traffic flow and circulation during peak traffic periods associated with student drop-off and pick-up. By properly managing the vehicular traffic generated during the critical periods, the safety and efficiency of other modes of travel – including walking – will also inherently improve, and the operational impact on the public street system should also be minimized. The TMP should not be considered a comprehensive set of instructions to ensure adequate safety; however, it should be used as a tool to facilitate a safer and more efficient environment.

This report contains DeShazo's review of the current traffic conditions on and around the campus and the school's efforts to comply with the TMP. As appropriate, recommendations are listed at the conclusion of this report to modify the previous TMP strategies to improve effectiveness and/or identify action items that the school should consider. A concerted effort and full participation by the school administration, staff, students, and parents are encouraged to provide and maintain safe and efficient traffic operations.

[NOTE: In this report the term "parent" refers to any parent, family member, legal guardian, or other individual who is involved in the pick-up or drop-off of one or more students at the school.]

SCHOOL OPERATIONAL CHARACTERISTICS

Table 1 presents a summary of the operational characteristics for the Uplift Luna Primary Charter School assumed in this analysis:

Table 1. Operational Characteristics

	2013 Conditions	2014 Conditions	2015 Conditions
Enrollment (by grade):	K – 4th: 243 students *Total: 243 students*	K – 2nd: 234 students 3rd – 5th: 182 students *Total: 416 students*	K – 2nd: 225 students 3rd – 5th: 225 students *Total: 450 students*
Daily Start/End Schedule: *(all grades)*	Start: 7:55 AM End: 3:40 PM * 1:50 PM on Wednesdays	Start: 7:55 AM End: 3:30 PM * 2:00 PM on Wednesdays	Start: 7:55 AM End: 3:30 PM * 2:00 PM on Wednesdays

NOTE #1: To the highest degree practical, the accounts of "existing conditions" presented in this report were based upon actual on-site observations conducted by DeShazo during typical school day(s) conditions and from personal interviews of school representatives. The analyses and recommendations presented in this report for "future" conditions are based upon evaluations of existing conditions and may be supplemented by DeShazo's professional judgment and experience.

REVIEW OF PREVIOUS TMP STRATEGIES

A copy of the prior TMP traffic circulation plan is attached at the beginning of this report. DeShazo observed traffic characteristics on-site and surrounding the site on October 30, 2014. It was generally noted that traffic was being managed in accordance with the TMP. The following is a list of notable observations:

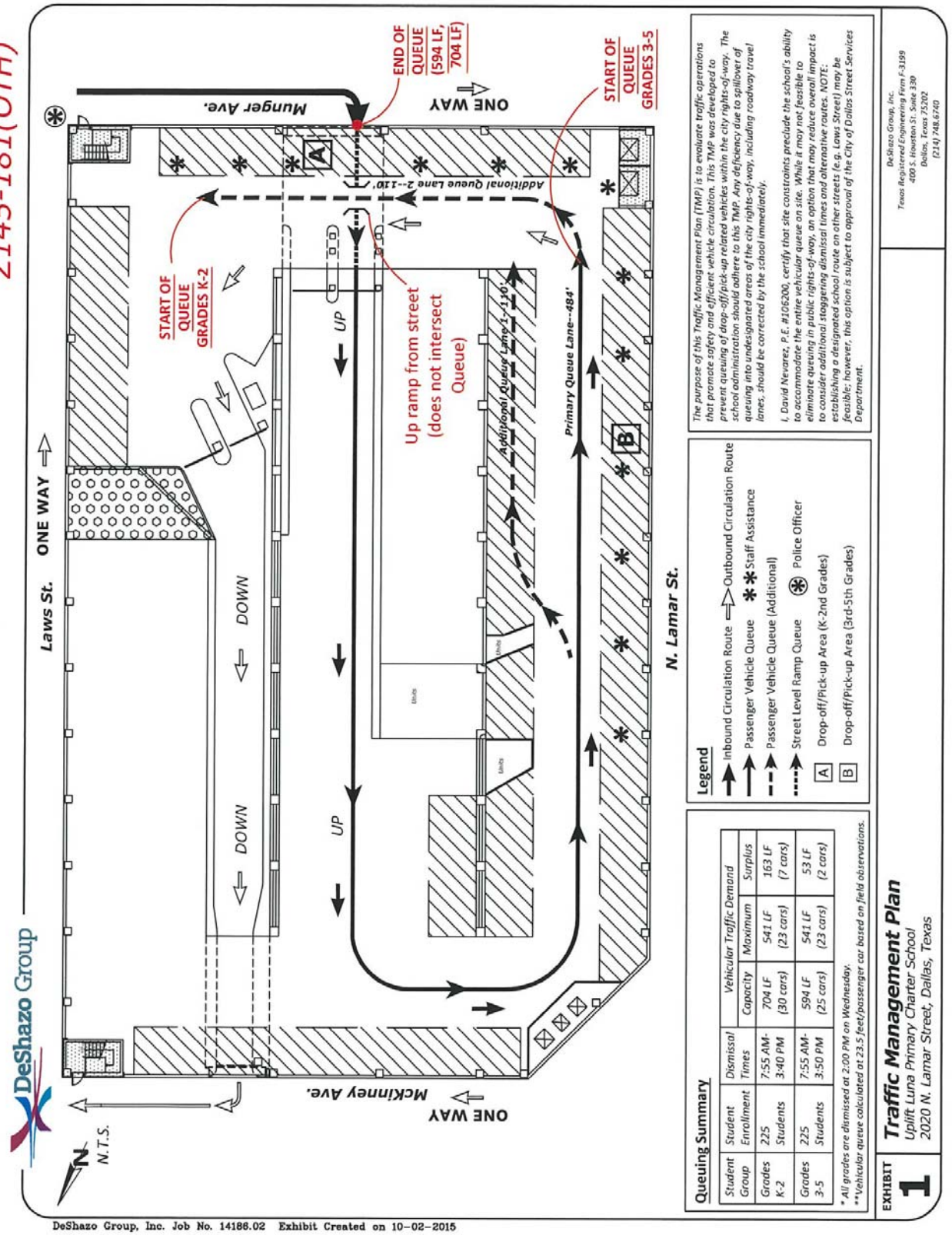
- Off-duty police officers are present at the intersections of Munger Ave. and Laws St. as well as Munger Ave. and N. Griffin St. during the afternoon pick-up period. Police officers direct parents to the site in accordance with the circulation pattern noted in Exhibit 2. Vehicles are not allowed to enter the site until the authorized time for their respective "carline". Vehicles circulate along Munger Ave. and N. Griffin St. and may extend back to Hord St.

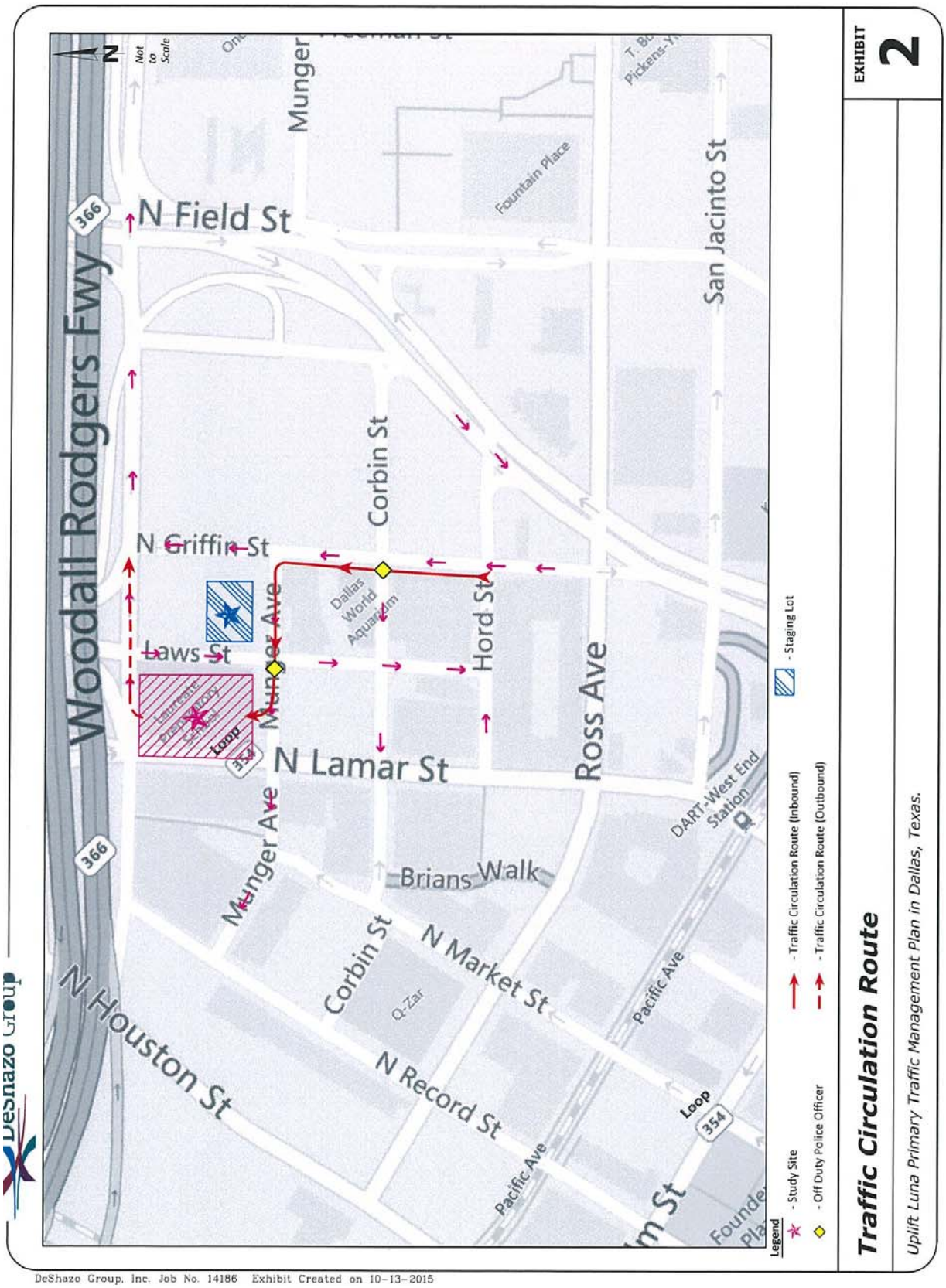
RECOMMENDATIONS

The following recommendations are provided by DeShazo for the management of vehicular traffic generated by the school during peak traffic conditions. Recommendations may include items contained in the original TMP and/or new strategies that are proposed based upon DeShazo's observations:

1. The City's directive to all schools is to avoid queuing of parent vehicles within public right-of-way if at all possible. Site constraints preclude the school's ability to accommodate the entire vehicular queue on site. While it may not feasible to eliminate the circulation route on specific public rights-of-way, an option that may reduce overall impact is to consider additional staggering dismissal times or alternative routes. NOTE: establishing a designated school route on other streets (e.g. Laws Street) may be feasible; however, this option is subject to approval of the City of Dallas]
2. Off-duty police officers should remain to direct parents along the designated route.
3. Following the most recent communications with the City, Uplift Education plans to provide a staging area for early arrivals at the parking lot located at the intersection of Griffin and McKinney with a capacity of approximately 30 vehicles. Off-duty police officers will then give these vehicles priority as they direct vehicles towards the school in order to encourage parents to use the parking lot.
4. Uplift Education should continue their communications with the Dallas World Aquarium and the City of Dallas Street Services Department to establish a circulation route that works for all parties.

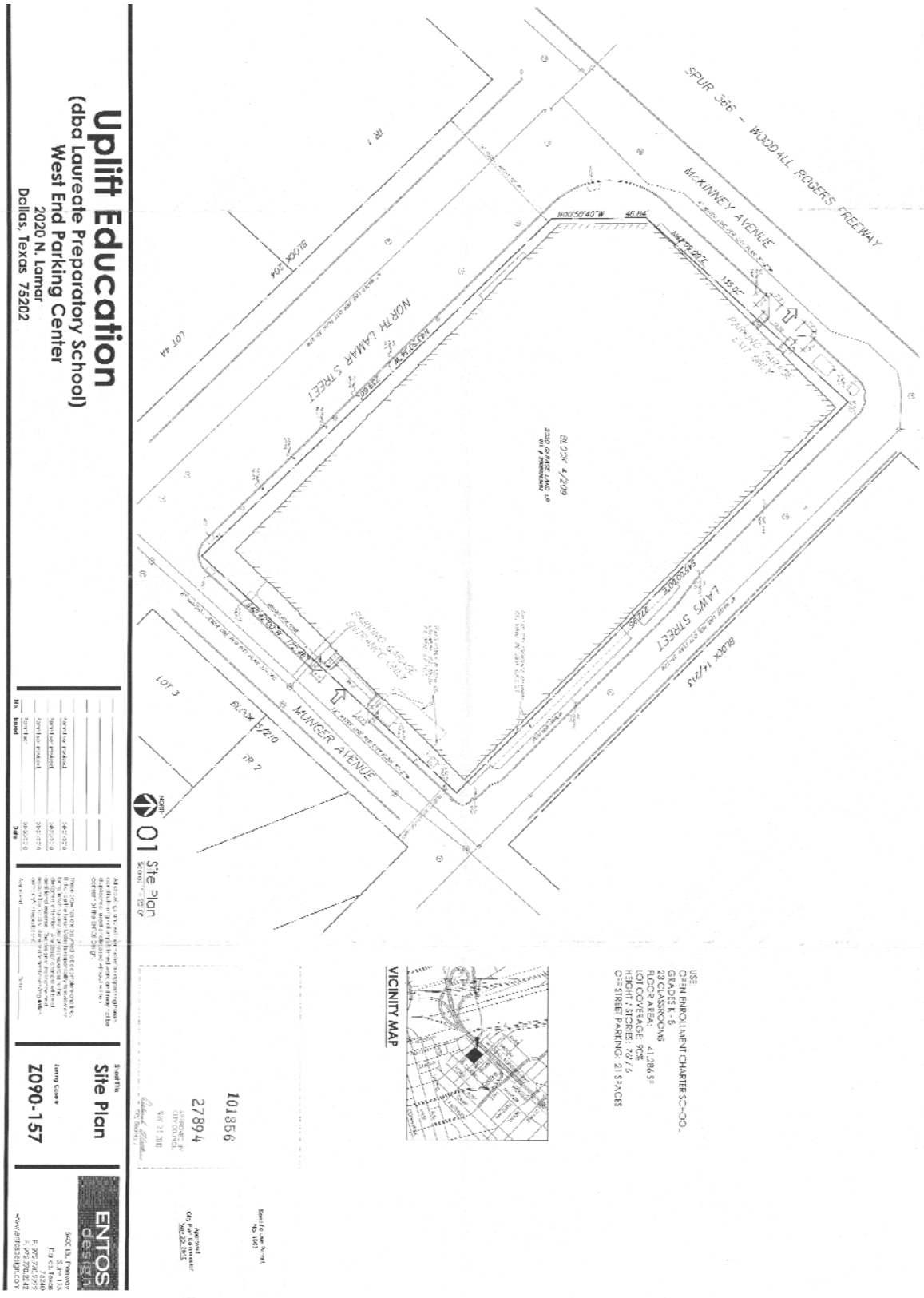
END OF MEMO

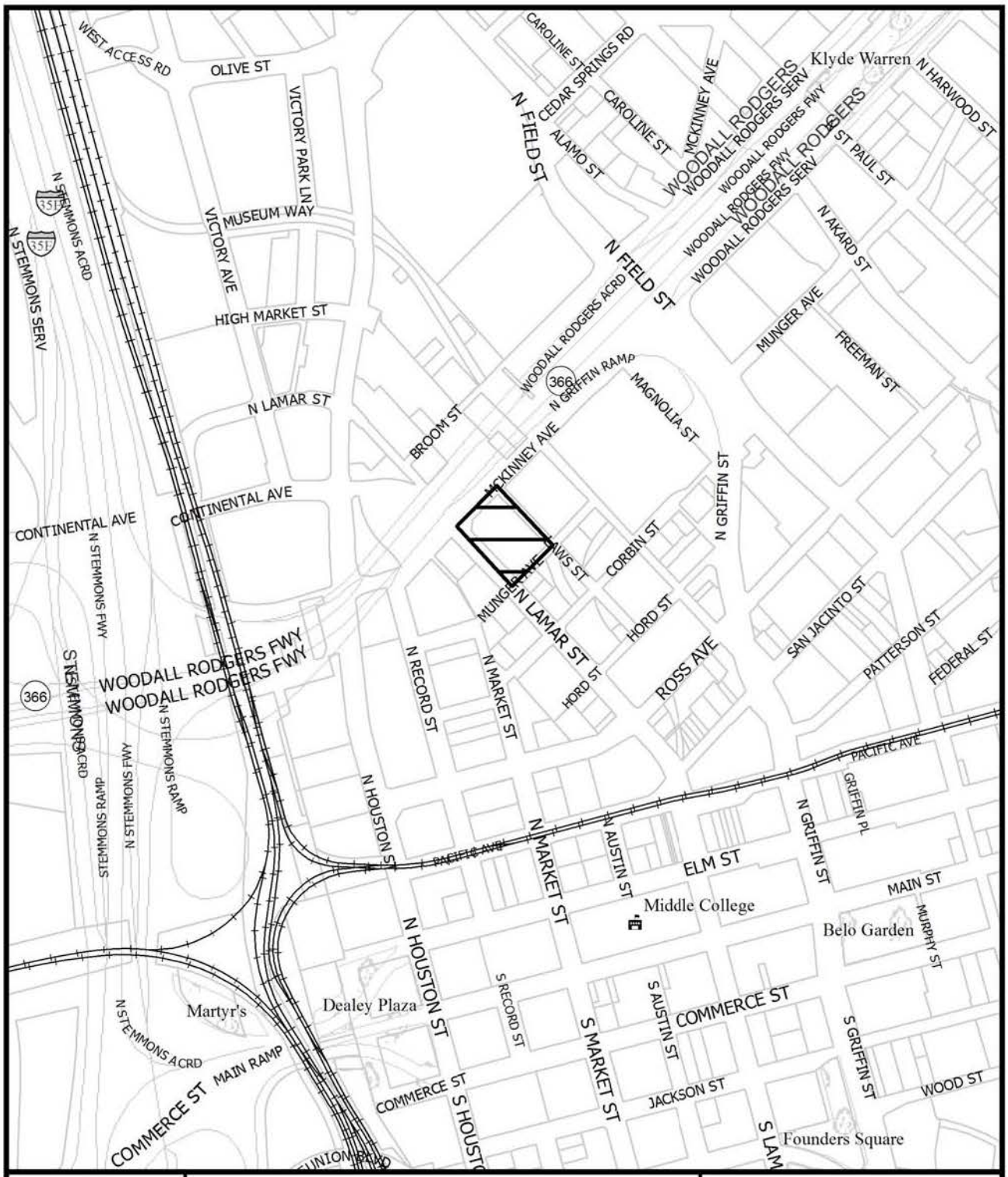

Z145-181(OTH)
DeShazo Group
Laws St.
ONE WAY
Munger Ave.
ONE WAY
END OF QUEUE (594 LF, 704 LF)
START OF QUEUE GRADES 3-5
START OF QUEUE GRADES K-2
Additional Queue Lane 2--110'
Up ramp from street (does not intersect Queue)
UP
DOWN
DOWN
UP
Additional Queue Lane 1--110'
Primary Queue Lane--484'
N. Lamar St.
McKinney Ave.
ONE WAY
N
N.T.S.
Queuing Summary
Student Group
Student Enrollment
Dismissal Times
Vehicular Traffic Demand
Capacity
Maximum
Surplus
Grades K-2
225 Students
7:55 AM-3:40 PM
704 LF (30 cars)
541 LF (23 cars)
163 LF (7 cars)
Grades 3-5
225 Students
7:55 AM-3:50 PM
594 LF (25 cars)
541 LF (23 cars)
53 LF (2 cars)
* All grades are dismissed at 2:00 PM on Wednesday.
** Vehicular queue calculated at 23.5 feet/passenger car based on field observations.
Legend
Inbound Circulation Route
Outbound Circulation Route
Passenger Vehicle Queue
** Staff Assistance
Passenger Vehicle Queue (Additional)
Street Level Ramp Queue
Police Officer
A Drop-off/Pick-up Area (K-2nd Grades)
B Drop-off/Pick-up Area (3rd-5th Grades)
The purpose of this Traffic Management Plan (TMP) is to evaluate traffic operations that promote safety and efficient vehicle circulation. This TMP was developed to prevent queuing of drop-off/pick-up related vehicles within the city rights-of-way. The school administration should adhere to this TMP. Any deficiency due to spillover of queuing into undesignated areas of the city rights-of-way, including roadway travel lanes, should be corrected by the school immediately.
I, David Nevarez, P.E. #105206, certify that site constraints preclude the school's ability to accommodate the entire vehicular queue on site. While it may not feasible to eliminate queuing in public rights-of-way, an option that may reduce overall impact is to consider additional staggering dismissal times and alternative routes. NOTE: establishing a designated school route on other streets (e.g. Laws Street) may be feasible; however, this option is subject to approval of the City of Dallas Street Services Department.
DeShazo Group, Inc.
Texas Registered Engineering Firm F-3199
400 S. Houston St. Suite 330
Dallas, Texas 75202
(214) 748.6740
EXHIBIT 1
Traffic Management Plan
Uplift Luna Primary Charter School
2020 N. Lamar Street, Dallas, Texas
DeShazo Group, Inc. Job No. 14186.02 Exhibit Created on 10-02-2015


EXHIBIT 2
Traffic Circulation Route
Uplift Luna Primary Traffic Management Plan in Dallas, Texas.
DeShazo Group, Inc. Job No. 14186 Exhibit Created on 10-13-2015
Legend
- Study Site
- Off Duty Police Officer
- Traffic Circulation Route (Inbound)
- Traffic Circulation Route (Outbound)
- Staging Lot
N
Not to Scale
Woodall Rodgers Fwy
366
N Field St
Munger
Fountain Place
San Jacinto St
Corbin St
N Griffin St
Laws St
Munger Ave
Dallas World Aquarium
Hord St
Ross Ave
N Lamar St
Loop
354
DART-West End Station
Brians Walk
N Market St
Pacific Ave
N Houston St
N Record St
Q-Zar


DeShazo Group
N
Not to Scale
McKinney Ave
N Griffin St
Staging Lot
(30 reserved spaces)
Laws St
Munger Ave
Lamar St
Legend
- School Site
- Off Duty Police Officer
- Traffic Circulation (Priority Route)
- Traffic Circulation Route (Outbound)
- Staging Lot
- Traffic Circulation Route (Original)
Traffic Circulation Route
Uplift Luna Primary Traffic Management Plan in Dallas, Texas.
EXHIBIT
3
DeShazo Group, Inc. Job No. 14186 Exhibit Created on 10-14-2015

EXISTING SITE PLAN



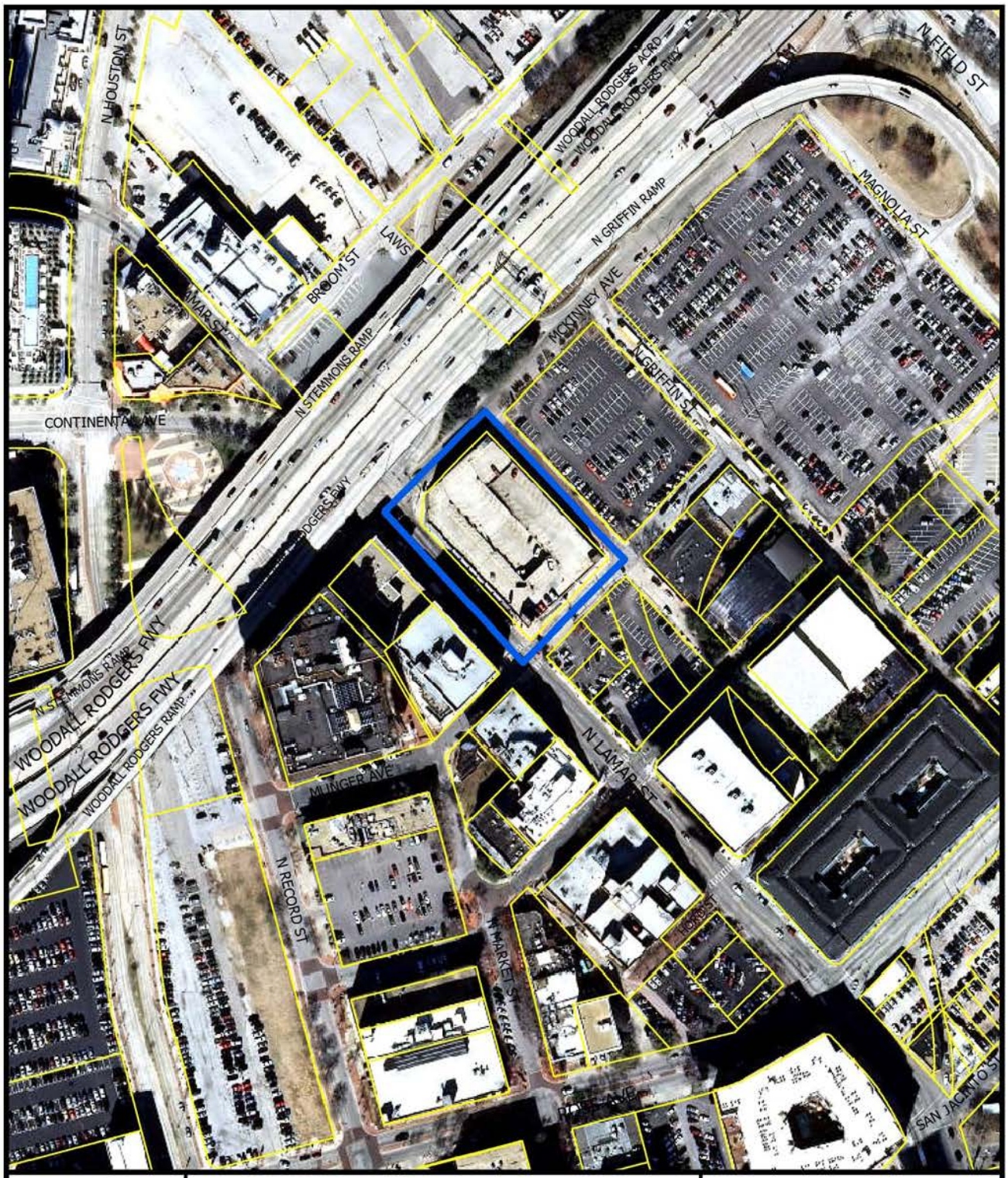


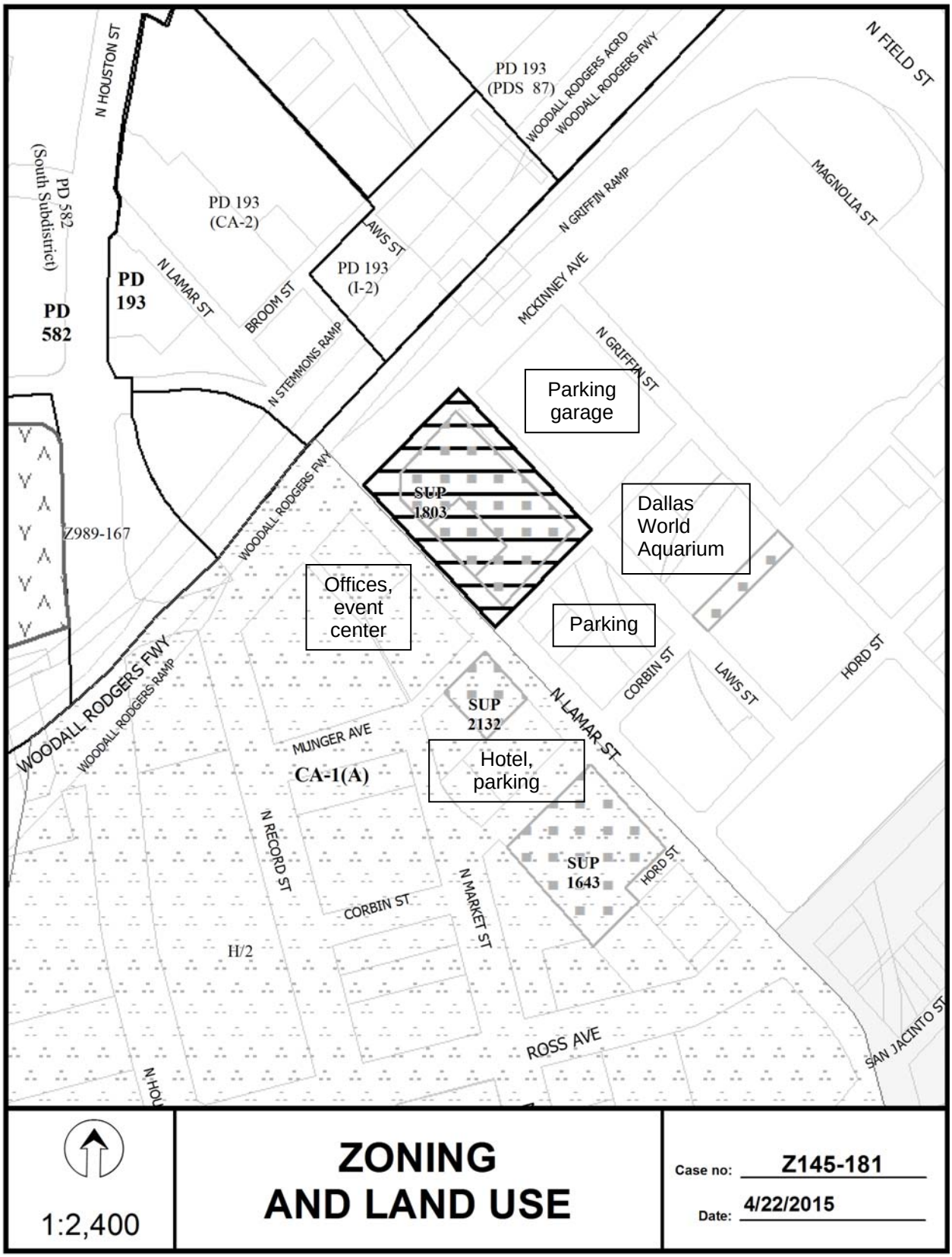
1:6,000

VICINITY MAP

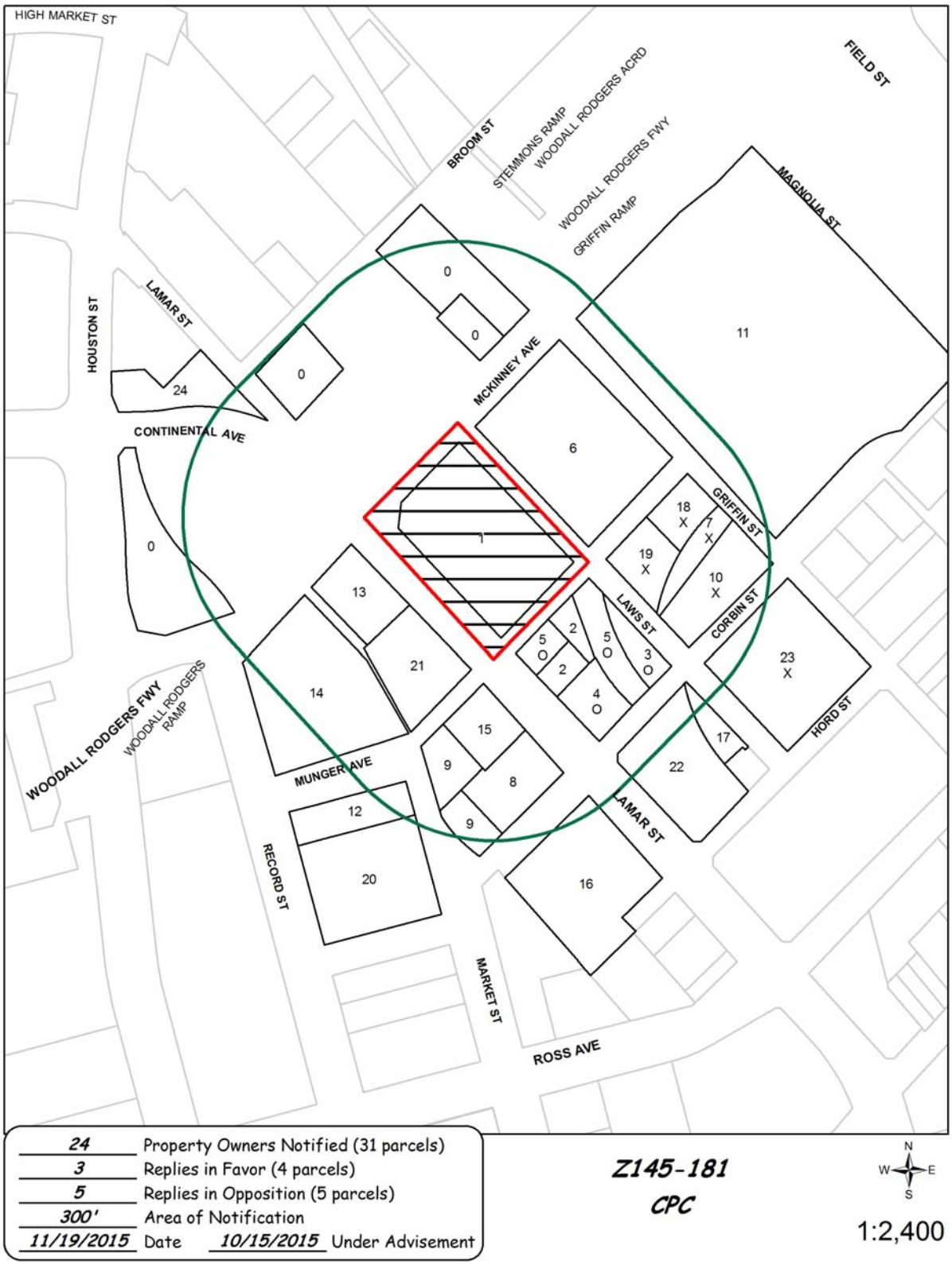
Case no: Z145-181

Date: 4/22/2015


N HOUSTON ST
WOODALL RODGERS FWY
WOODALL RODGERS FWY
N FIELD ST
MAGNOLIA ST
N GRIFFIN RAMP
LAWS
BROOM ST
MAIN ST
N STEMMONS RAMP
MCKINNEY AVE
N GRIFFIN ST
CONTINENTAL AVE
MUNGER AVE
N LAMAR ST
N RECORD ST
N MARKET ST
SAN JACINTO ST
1:2,400
AERIAL MAP
Case no: Z145-181
Date: 4/22/2015


N HOUSTON ST
PD 582
(South Subdistrict)
PD 193
(PDS 87)
WOODALL RODGERS ACRD
WOODALL RODGERS FWY
N FIELD ST
PD 193
(CA-2)
LAWS ST
PD 193
(I-2)
N GRIFFIN RAMP
MAGNOLIA ST
PD 193
N LAMAR ST
BROOM ST
MCKINNEY AVE
PD 582
N STEMMONS RAMP
N GRIFFIN ST
Parking garage
SUP 1803
Dallas World Aquarium
Z989-167
WOODALL RODGERS FWY
Offices, event center
Parking
CORBIN ST
LAWS ST
HORD ST
WOODALL RODGERS FWY
WOODALL RODGERS RAMP
SUP 2132
N LAMAR ST
MUNGER AVE
CA-1(A)
Hotel, parking
N RECORD ST
SUP 1643
HORD ST
CORBIN ST
N MARKET ST
H/2
ROSS AVE
SAN JACINTO ST
1:2,400
ZONING AND LAND USE
Case no: Z145-181
Date: 4/22/2015

CPC RESPONSES



11/18/2015

Reply List of Property Owners

Z145-181

24 Property Owners Notified ***3 Property Owners in Favor*** ***5 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
	1	2020	LAMAR ST	2020 GARAGE LAND LP
	2	1910	LAMAR ST	CITY PARK A LOT LP
O	3	1901	LAWS ST	CHAVEZ ACQUISITIONS LP
O	4	1902	LAMAR ST	CHAVEZ ACQUISITIONS LP
O	5	911	CORBIN ST	CHAVEZ ACQUISITIONS LP
	6	1012	MCKINNEY AVE	CHAVEZ ACQUISITIONS LP &
X	7	1909	GRIFFIN ST	DARYL RICHARDSON GOURMET CATERING INC
	8	1907	LAMAR ST	BRE SELECT HOTELS TX LP
	9	1802	MARKET ST	SOUTHWEST ADVISORY SERVICES LLC
X	10	1909	GRIFFIN ST	RICHARDSON DARYL GOURMET
	11	1100	MCKINNEY AVE	SHRAMAN SOUTH ASIAN
	12	1815	MARKET ST	USRP FUNDING 2001 A LP
	13	2019	LAMAR ST	ARENA PARTNERS LP
	14	603	MUNGER AVE	MARKET STREET DEV LTD
	15	1911	LAMAR ST	WEST END API LTD
	16	1801	LAMAR ST	ARI LANDMARK CENTER LP
	17	1875	LAWS ST	1875 LAWS
X	18	1911	GRIFFIN ST	DARYL RICHARDSON GOURMET CATERING INC
X	19	1000	MUNGER AVE	DARYL RICHARDSON GOURMET CATERING INC
	20	607	CORBIN ST	LAZ LA III TX 1 LP
	21	2001	LAMAR ST	703 MCKINNEY LP
	22	1800	LAMAR ST	UNITED WAY OF
X	23	1801	GRIFFIN ST	RICHARDSON DARYL GOURMET
	24	2201	LAMAR ST	DORBET INC

AGENDA ITEM # 46

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 9

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 36 V

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for R-7.5(A) Single Family District and private school uses on property zoned an R-7.5(A) Single Family District on the northeast corner of Westlake Avenue and Hillside Drive
Recommendation of Staff and CPC: Approval, subject to a development plan, landscape plan, traffic management plan and conditions
Z145-235(AF)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z145-235(AF) **DATE FILED:** March 31, 2015

LOCATION: Northeast corner of Westlake Avenue and Hillside Drive

COUNCIL DISTRICT: 9 **MAPSCO:** 36V

SIZE OF REQUEST: Approx. 5.65 acres **CENSUS TRACT:** 80.00

APPLICANT/OWNER: Roger L. Perry

REPRESENTATIVE: Brian E. Moore, GFF Planning

REQUEST: An application for a Planned Development District for R-7.5(A) Single Family District and private school uses on property zoned an R-7.5(A) Single Family District.

SUMMARY: The applicant's intention is to expand Lakehill Preparatory School and increase the enrollment of students from 423 to 500. The proposed expansion is approximately 17,353 square feet, which would include new classrooms, athletic facilities, and parking. The school was established before changes to the Development Code required Specific Use Permits for public and private schools in residential zoning districts. The expansion necessitates this zoning request. The applicant is requesting modified development standards to permit a maximum height of 60 feet and to decrease the required parking from 202 parking spaces to 159 parking spaces.

CPC RECOMMENDATION: **Approval**, subject to a development plan, landscape plan, traffic management plan and conditions.

STAFF RECOMMENDATION: **Approval**, subject to a development plan, landscape plan, traffic management plan and conditions.

GUIDING CRITERIA FOR STAFF RECOMMENDTION:

Staff recommends approval of the request based upon:

1. *Performance impacts upon surrounding property* – The proposed buildings are compatible in scale with the surrounding area. To mitigate potential impacts, the applicant is proposing increased landscaping on the northeast corner the property to serve as a buffer between the school's parking lot and the residential homes located along Blanch Circle. The southeast corner of the property also reflects an increase in landscaping which would help mitigate any impact on the residential properties located to the south. In addition, the school is increasing pedestrian accessibility by installing sidewalks along the perimeter of the school.

2. *Traffic impact* – A traffic management plan was provided by the applicant to mitigate any traffic impact on the surrounding neighborhood. The TMP specifies locations of parking, staggered hours for accessing and exiting certain portions of the site, and continued traffic direction by off-duty police officers.

3. *Comprehensive Plan or Area Plan Conformance* – The proposed request is in compliance with the *forwardDallas! Comprehensive Plan*. The proposed development is located within the Residential Neighborhood Building Block.

4. *Justification for PD Planned Development District Zoning as opposed to a straight zoning district* – Modifying development standards to increase lot coverage and allowable height along with a decrease in parking requirements are not permitted with a Specific Use Permit. Staff supports a Planned Development District for the use since the use has existed on the site for over 40 years and the additional floor area will not impact its compatibility with the surrounding neighborhood.

Zoning History: There have not been any recent zoning changes requested in the area within the last five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing Dimension
Blanch Circle	Local Street	50'
Westlake Avenue	Local Street	50'
Hillside Drive	Local Street	50'

Traffic:

The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the increase in the number of students will impact the surrounding roadway system. Traffic circulation will be regulated through the traffic management plan included in the conditions.

Comprehensive Plan: The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site as being in a Residential Neighborhood Building Block.

This Building Block represents the life-blood of Dallas, the traditional neighborhood of single-family detached homes. Dallas has many neighborhoods that match this description, including Winnetka Heights, Preston Hollow, Lakewood and Wheatley Place. Single-family dwellings are the dominate land use in these areas. Some shops, restaurants or institutional land uses such as schools and religious centers that serve neighborhood residents may be located at the edges or at key intersections. Neighborhood "pocket parks" provide open space for families. Individual lot size, front yard and side yard setbacks, garage orientation and scale of the home varies from neighborhood to neighborhood. These areas rely primarily on cars for access, although traffic on neighborhood streets is expected to be low. Cutthrough traffic or spill over from commercial areas will be strongly discouraged. While public transit may be available, typically it involves longer walks to bus stops or the need to drive to park-and-ride facilities. Newly developed neighborhoods may provide better pedestrian access to community services through shorter block lengths, narrower streets, sidewalks and greenbelts with hike and bike trails and might also provide improved access to transit service. Public investment will focus on protecting quality of life by providing amenities such as parks, trails, road improvements and strong code enforcement.

Staff has concluded the proposed request is in compliance with the *forwardDallas! Comprehensive Plan*.

STAFF ANALYSIS:

GOAL 2.5 FOSTER A CITY OF GREAT NEIGHBORHOODS

2.5.1.1 Ensure neighborhoods have access to high-quality public amenities and services such as parks, schools and libraries.

GOAL 7.1 PROMOTE VIBRANT AND VIABLE NEIGHBORHOODS

7.1.5.5 Ensure all neighborhoods are served by and accessible to neighborhood commercial areas when appropriate, parks and open space, schools and libraries.

Land Use:

	Zoning	Land Use
Site	R-7.5 (A)	School
North	R-7.5 (A)	Single Family
South	R-7.5 (A)	Single Family
East	R-7.5 (A)	Single Family
West	R-7.5 (A)	Single Family

Land Use Compatibility: The school has operated on the subject site for over forty years with minimal change on the site and the surrounding land use pattern. It is located within a predominately low-density, residential neighborhood at the intersection of three minor arterial streets. Prior to the school, land uses were a church and nursery school.

Development Standards:

Current Development Standards							
	Setbacks						
DISTRICT	Front	Side/Rear	Density	Height	Lot Coverage	Special Standards	Primary Uses
R 7.5 (A)	25'	10/15'	No Maximum Dwelling Unit Density	30'	25%		Single Family, Public or Private Schools, churches

Proposed Development Standards							
	Setbacks						
DISTRICT	Front	Side/Rear	Density	Height	Lot Coverage	Special Standards	Primary Uses
PD	25	10/15	Max Floor Area 90,000 Sq. ft.	60	37%		Single Family & School

Landscaping: In general, the proposed development does adhere to Article X standards. A general public sentiment shared by the community during neighborhood meetings was the intention to maintain the site as "green" as possible with minimal or no changes to the aesthetics of the perimeter. The landscape plan was provided to ensure this was done.

A total of 6 trees equaling 128 caliper inches of protected trees are proposed to be removed from the site. As an alternative, a total of 44 trees equaling a total of 165.5 caliper inches will be installed throughout the site. Additional trees are proposed along Blanche Circle to offer increased screening of the new parking lot at the northeast corner of the site. On the southeastern portion of the site, a three-foot park strip (turf grass) with 3-inch caliper crape myrtles will be planted and spaced 25 feet on center.

Parking: Pursuant to §51A-4.204 of the Dallas Development Code, schools require one and one-half parking spaces for each kindergarten/elementary school classroom along with three and one half parking spaces for every junior high/middle school classrooms and nine and one half spaces for each senior high school classroom. The proposed school is projected to have 12 elementary, 9 middle, and 16 high school classrooms, which would require a total of 202 parking spaces. The applicant is proposing 159 parking spaces. The applicant, as well as staff visited the site during school hours and conducted a visual analysis of the current parking which has 123 parking spaces, in an attempt to determine the demand for parking. An average of 20% vacancy was recorded during the site visits. Because of this lack of demand for parking, the applicant believes that the lack of parking demand will continue with the additions proposed. As an alternative the applicant is proposing to add 36 parking spaces and limit the amount of student parking.

CPC Action – November 19, 2015

Z145-235(AF) Planner: Aldo Fritz

Motion: It was moved to recommend **approval** of a Planned Development District for R-7.5(A) Single Family District and private school uses, subject to a revised development plan, revised landscape plan, traffic management plan and conditions with the following modifications: 1) Revise development plan and landscape plan to reflect no sidewalks on the north side of Westlake Avenue, 2) Cap Upper school maximum enrollment at 175 students, and 3) Require compliance with the residential proximity slope as it applies to all new construction for the project in the Planned Development on property zoned an R-7.5(A) Single Family District on the northeast corner of Westlake Avenue and Hillside Drive.

Maker: Jung
Second: Tarpley
Result: Carried: 15 to 0

For: 15 - Anglin, Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 0
Vacancy: 0

Notices: Area: 500 Mailed: 145
Replies: For: 9 Against: 14

Speakers: For: Roger Perry, 2720 Hillside Dr., Dallas, TX, 75214
Brian Moore, 10125 Trailpine Dr., Dallas, TX, 75208
Joe Goggians, 6526 Westlake Ave., Dallas, TX, 75214
For (Did not speak): Beverly Godbey, 6758 Lakewood Blvd., Dallas, TX, 752
Against: Chris King, 6544 Westlake Ave., Dallas, TX, 75214
Against (Did not speak): Cynthia Fitch, 6414 Blanch Cir., Dallas, TX, 75214
Fran Charbeneau, 6447 Vickery Blvd., Dallas, TX, 7521

List of Partners

Trustees for Lakehill Preparatory School
Marc Armentrout
Bradley Bartholow
Charles Bauer
Charles Burch
Rick Currey
Beverly Godbey
Carolyn Howard
Stephanie Hunt
Christopher J. Janning
Bill Maxwell
Colleen McCall
James Perry
Brad Robinson
Brent Rosenthal
John Seddelmeyer
Irwin Thompson
Matt Trent
Dana Turner
Brent Walker
Jeff Weiser
Sherry Bartholow
Michael Dulan
Ron Gafford
Martha Hulse
Tim Mack
Erle Nye
James Vaughan
Robert Wolf
Roger L. Perry
Tricia McCaleb

Z145-235

Proposed Conditions

ARTICLE ???

PD ???

SEC.51P-???.101. LEGISLATIVE HISTORY.

PD ??? was established by Ordinance No. _____, passed by the Dallas City Council on _____.

SEC.51P-???.102. PROPERTY LOCATION AND SIZE.

PD ??? is established on property generally located along the east line of Hillside Drive, south line of Blanch Circle. The size of PD ??? is approximately 5.65 acres.

SEC.51P-???.103. DEFINITIONS AND INTERPRETATIONS.

(a) Unless otherwise stated, the definitions and interpretations in Chapter 51A apply to this article.

(b) Unless otherwise stated, all references to articles, divisions, or sections in this article are to articles, divisions, or sections in Chapter 51A.

(c) This district is considered to be a nonresidential zoning district.

SEC. 51P-___.104. EXHIBITS.

The following exhibits are incorporated into this article:

(1) Exhibit ___A: development plan.

(2) Exhibit ___B: landscape plan.

(3) Exhibit ___C: traffic management plan.

SEC.51P-???.105. DEVELOPMENT PLAN.

(a) Development and use of the Property must comply with the development plan (Exhibit ___A).

(b) If there is a conflict between the text of this article and the development plan, the text of this article controls.

SEC.51P-???.106. MAIN USES PERMITTED.

(a) The only main uses permitted are those main uses permitted in the R-7.5(A) Single Family District, subject to the same conditions applicable in the R-7.5(A) Single Family District, as set out in Chapter 51A. For example, a use permitted in the R-7.5(A) Single Family District only by specific use permit (SUP) is permitted in this district only by SUP; a use subject to development impact review (DIR) in the R-7.5(A) Single Family District is subject to DIR in this district; etc.

(b) The following additional uses are permitted by right:

-- Open-enrollment charter school.
-- Private school.

SEC.51P-???.107. ACCESSORY USES.

As a general rule, an accessory use is permitted in any district in which the main use is permitted. Some specific accessory uses, however, due to their unique nature, are subject to additional regulations in Section 51A-4.217. For more information regarding accessory uses, consult Section 51A 4.217.

SEC.51P-???.108. YARD, LOT, AND SPACE REGULATIONS.

(Note: The yard, lot, and space regulations in this section must be read together with the yard, lot, and space regulations in Division 51A-4.400. If there is a conflict between this section and Division 51A-4.400, this section controls.)

For a private school, setbacks must comply as provided in this section. For all other uses the yard, lot, and space regulations for the R-7.5(A) Single Family District apply.

(a) Front, side, and rear yard.

(1) Minimum Front yard: 25 feet
(2) Minimum Rear yard: 15 feet
(3) Minimum Side yard: 10 feet.

(b) Floor area. Maximum floor area is 90,000 square feet

(c) Height. Maximum permitted structure height is 60 feet. For all new development, if any portion of a structure is over 26 feet in height, that portion may not be located above a residential proximity slope ratio of 3 to 1. Exception: Except for chimneys, structures listed in Section 51A-4.408(a)(2) may project through the slope to a height not to exceed the

maximum structure height, or 12 feet above the slope, whichever is less. Chimneys may project through the slope to a height 12 feet above the slope and 12 feet above the maximum structure height.

(d) Lot size. No minimum lot size.

(e) Stories. Maximum number of stories above grade is three.

SEC.51P-???.109. OFF-STREET PARKING AND LOADING.

(a) In general. Except as provided in this section, consult the use regulations in Division 51A-4.200 for the specific off-street parking and loading requirements for each use.

(b) Open-enrollment charter school or private school. Student parking is limited to a maximum of 80 spaces in the location shown on the development plan.

SEC.51P-???.110. LANDSCAPING.

(a) Except as provided in this section, landscaping must be provided as shown on the landscape plan (Exhibit ___B. If there is a conflict between the text of this article and the landscape plan, the text of this article controls.

(b) The existing fence and column spacing that follows along the south side Blanch Circle must be extended to the Property's east boundary that aligns with an existing wooden fence.

(c) Plant materials must be maintained in a healthy, growing condition.

SEC.51P-???.111. SIGNS.

Signs must comply with the provisions for non-business zoning districts contained in Article VII.

SEC.51P-???.112. TRAFFIC MANAGEMENT PLAN.

(a) In general. Operation of an open-enrollment charter school or a private school must comply with the traffic management plan (Exhibit ___C).

(b) Queuing. Queuing is only permitted inside the Property. Student drop-off and pick-up are not permitted within city rights-of-way.

(c) Traffic study.

(1) The Property owner or operator shall prepare a traffic study evaluating the sufficiency of the traffic management plan. The initial traffic study must be submitted to the director by (date). After the initial traffic study, the Property owner or operator shall submit updates of the traffic study to the director by June 1st on a bi-annual basis.

(2) The traffic study must be in writing, performed by a licensed engineer, based on a minimum of four samples taken on different school days at different drop-off and pick-up times over a two-week period, and must contain an analysis of the following:

(A) ingress and egress points;

(B) queue lengths;

(C) number and location of personnel assisting with loading and unloading of students;

(D) drop-off and pick-up locations;

(E) drop-off and pick-up hours for each grade level;

(F) hours for each grade level; and

(G) circulation.

(3) The director shall determine if the current traffic management plan is sufficient.

(A) If the director determines that the current traffic management plan is sufficient, the director shall notify the applicant in writing.

(B) If the director determines that the current traffic management plan results in traffic hazards or traffic congestion, the director shall require the Property owner to submit an amended traffic management plan. If the Property owner fails to submit an amended traffic management plan within 30 days, the director shall notify the city plan commission.

(d) Amendment process.

(1) A traffic management plan may be amended using the minor plan amendment fee and public hearing process in Section 51A-1.105(k)(3).

(2) The city plan commission shall authorize changes in a traffic management plan if the proposed amendments improve queuing or traffic circulation; eliminate traffic hazards; or decrease traffic congestion.

SEC.51P-???.113. LIGHTING.

No lighting is permitted on the play fields.

SEC.51P-???.114. ENROLLMENT.

(a) The combined maximum enrollment for the private school is 500.

(b) The maximum enrollment for grades 9 through 12 is 175.

SEC.51P-???.115. ADDITIONAL PROVISIONS.

(a) The Property must be properly maintained in a state of good repair and neat appearance.

(b) Development and use of the Property must comply with federal and state laws and regulations, and with all ordinances, rules, and regulations of the city.

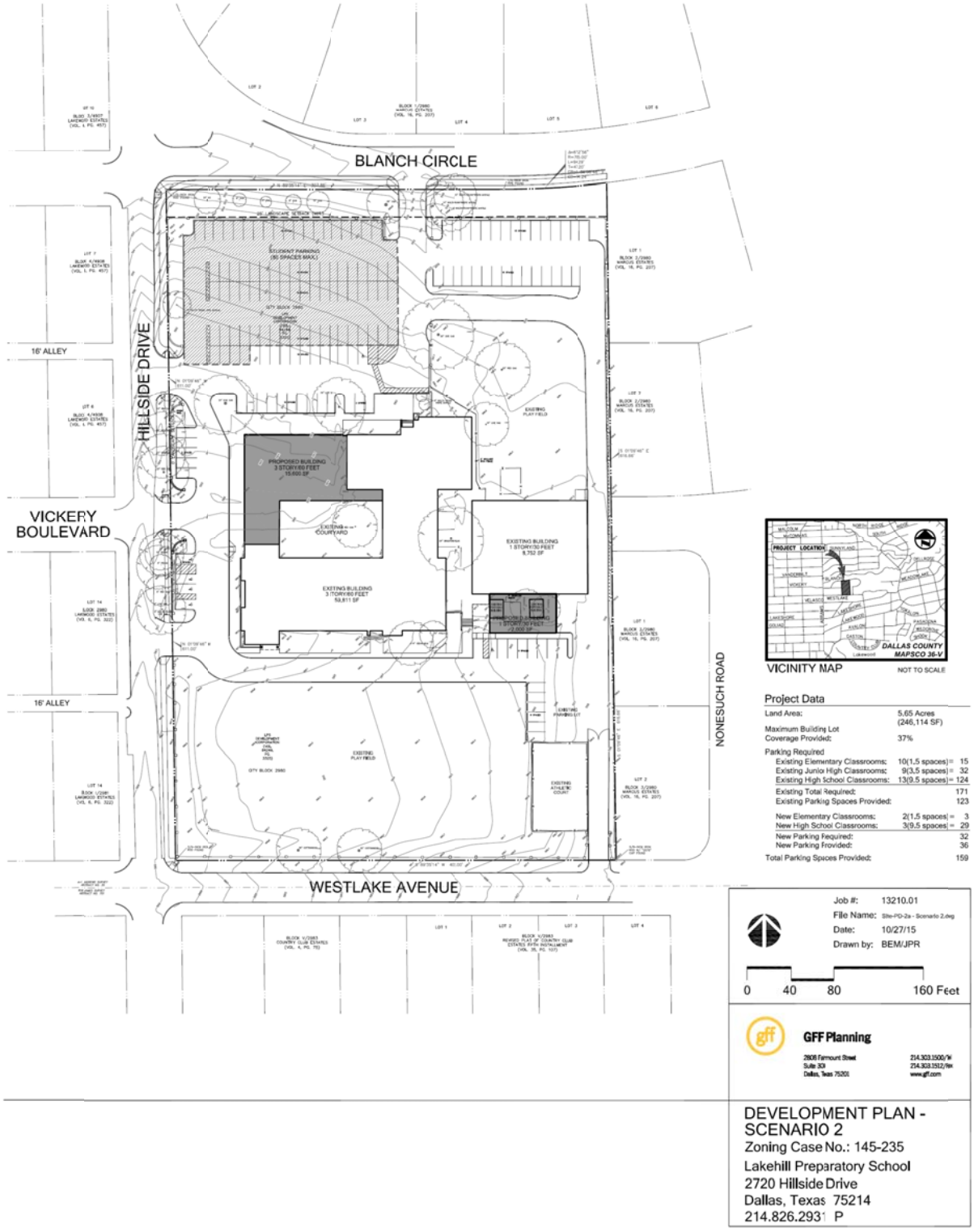
(c) West Lake Avenue shall have no sidewalks.

SEC.51P-???.116. COMPLIANCE WITH CONDITIONS

(a) All paved areas, permanent drives, streets, and drainage structures, if any, must be constructed in accordance with standard city specifications, and completed to the satisfaction of the city.

(b) The building official shall not issue a building permit to authorize work, or a certificate of occupancy to authorize the operation of a use, until there has been full compliance with this article, the Dallas Development Code, the construction codes, and all other ordinances, rules, and regulations of the city.

Proposed Development Plan

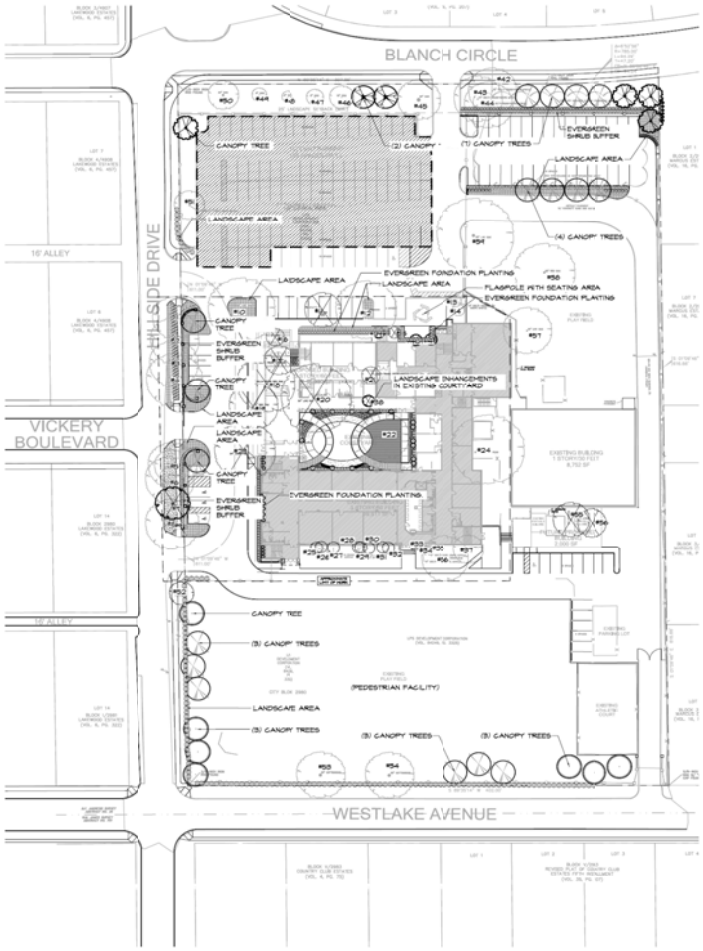


Proposed Landscape Plan

PLANT LIST

QTY.	COMMON NAME	SCIENTIFIC NAME	SIZE / COMMENTS
50	LARGE CANOPY TREES		
	LIVE OAK	*Quercus virginiana*	100 gal., 14'-0" ht., 5'-6" sp., 4" cal. min., match, full
	RED OAK	*Quercus shumardii*	100 gal., 14'-0" ht., 5'-6" sp., 4" cal. min., match, full
	BALD CYPRESS	*Taxodium distichum*	100 gal., 12'-14" ht., 6'-7' sp., 4 1/2"-5" cal. min., match, full
	ALLEE ELM	*Ulmus parvifolia 'Emer II'*	B&B or cont., 13'-14' ht., 5'-6' sp., 4" cal. min., spiticentral leader, match, full
492	SHRUBS/ORNAMENTAL GRASS		
	DWARF BURFORD HOLLY	*Ilex cornuta 'Burfordii Nana'*	7 gal., 36" ht. min., 28"-30" sp., full
	DWARF YAUPON HOLLY	*Ilex vomitoria 'Bordeaux'*	5 gal., 18" ht. x sp., full
	DWARF INDIAN HAWTHORN	*Raphiolepis indica 'Pinkie'*	3 gal., 12"-14" ht. x sp., full
	KNOCK-OUT ROSE	*Rosa 'Knock-out' Red*	3 gal., 12"-18" ht. x sp., full
2,046	GROUNDCOVERS/VINES		
	ASIAN JASMINE	*Trachelospermum asiaticum*	1 gal., heavily rooted, full
611 SF	TURF		
	COMMON BERMUDAGRASS	*Cynodon dactylon*	sod, full

TREE #	TREE SPECIES	CALIPER (INCHES)	INCHES TO MITIGATE	SITE TREE CREDITS		
1	RED OAK	12	0	0	PROTECT	R.O.W.
2	RED OAK	12	0	0	PROTECT	R.O.W.
3	RED OAK	12	0	0	PROTECT	R.O.W.
4	RED OAK	24	0	0	REMOVE	R.O.W.
5	PECAN	10	0	0	PROTECT	R.O.W.
6	PECAN	6	0	0	PROTECT	R.O.W.
7	RED OAK	8	0	0	PROTECT	R.O.W.
8	LIVE OAK	6	0	0	PROTECT	R.O.W.
9	LIVE OAK	6	0	0	PROTECT	R.O.W.
10	LIVE OAK	36	0	18	PROTECT	SCHOOL
11	LIVE OAK	12	12	0	REMOVE	SCHOOL
12	LIVE OAK	24	0	8	PROTECT	SCHOOL
13	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
14	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
15	CRAPE MYRTLE	6	0	0	REMOVE	SCHOOL
16	PINE	6	0	0	REMOVE	SCHOOL
17	LIVE OAK	10	10	0	REMOVE	SCHOOL
18	RED OAK	20	20	0	REMOVE	SCHOOL
19	RED OAK	12	12	0	REMOVE	SCHOOL
20	LIVE OAK	24	24	0	REMOVE	SCHOOL
21	CRAPE MYRTLE	7	0	0	REMOVE	SCHOOL
22	RED OAK	14	0	4	PROTECT	SCHOOL
23	CEDAR ELM	24	24	0	REMOVE	SCHOOL
24	BRADFORD PEAR	24	0	8	PROTECT	SCHOOL
25	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
26	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
27	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
28	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
29	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
30	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
31	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
32	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
33	CRAPE MYRTLE	8	0	2	PROTECT	SCHOOL
34	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
35	CRAPE MYRTLE	6	0	1	PROTECT	SCHOOL
36	CEDAR ELM	14	0	4	PROTECT	SCHOOL
37	HOLLY	10	0	2	PROTECT	SCHOOL
38	CRAPE MYRTLE	6	0	0	REMOVE	SCHOOL
39	CRAPE MYRTLE	6	0	0	REMOVE	SCHOOL
40	HOLLY	6	0	0	REMOVE	SCHOOL
41	HOLLY	6	0	0	REMOVE	SCHOOL
42	CRAPE MYRTLE	12	0	2	PROTECT	SCHOOL
43	CRAPE MYRTLE	14	0	4	PROTECT	SCHOOL
44	CRAPE MYRTLE	10	0	2	PROTECT	SCHOOL
45	LIVE OAK	36	0	18	PROTECT	SCHOOL
46	SWEETGUM	10	0	2	PROTECT	SCHOOL
47	SWEETGUM	8	0	2	PROTECT	SCHOOL
48	SWEETGUM	6	0	1	PROTECT	SCHOOL
49	SWEETGUM	8	0	2	PROTECT	SCHOOL
50	LIVE OAK	24	0	8	PROTECT	SCHOOL
51	CRAPE MYRTLE	14	0	4	PROTECT	SCHOOL
52	PECAN	6	0	1	PROTECT	SCHOOL
53	COTTONWOOD	30	0	10	PROTECT	SCHOOL
54	COTTONWOOD	30	0	10	PROTECT	SCHOOL
55	CYPRESS	14	0	0	REMOVE	SCHOOL
56	CYPRESS	12	12	0	REMOVE	SCHOOL
57	LIVE OAK	16	0	4	PROTECT	SCHOOL
58	RED OAK	22	0	8	PROTECT	SCHOOL
59	LIVE OAK	30	0	10	PROTECT	SCHOOL
	TOTAL		128	146		



LANDSCAPE CHECK LIST

City of Dallas Landscape Ordinance

MANDATORY PROVISIONS

Tree Survey - must include trees 6" caliper and greater on the lot and/or within 50' of construction.

Tree Protection - permanent protective fencing around the drip line of each protected tree to remain. Ref. A1.0.00

Protected Tree Mitigation - Replacement trees must equal in caliper the caliper of protected trees removed. Approved replacement trees to be 3" minim caliper and be of a species on the approved tree list. See below.

Site Trees - Must have one 3" caliper tree per 4,000 square feet of lot area with a minimum of 4 trees. All site trees must be located in the lot. (146,382SF/4000 = 36) Site Trees Req'd (3" cal. min.)
Existing/Site Trees Credits = 36 (Existing) Proposed Trees of 7" cal. min. = 36

Perimeter Landscape Buffer Strip - Must be provided along the entire length of the portion of the perimeter of the lot where a residential adjacency exists and at least ten 10' wide. Must contain buffer plant material as defined in Sec. 51A-10.125(b)(7).

Screening of off-street loading spaces / storage - Must be screened from residential adjacent public streets. Minimum 6' height. See Sec. 51A-4.602(b)(3) for methods of screening and automatic irrigation required for any screening material.

Street Trees - Must have one 3" caliper large tree per 50' of street frontage with a minimum of 2 trees. All street trees must be located within 50' of its projected street curb.
1,455 total ft.
Required Street Trees = 29. (8" cal. min.)
Existing Trees = 20 Proposed Trees = 9

Parking lot Trees - All required parking spaces must be located within 120' of the trunk of a 3" caliper (min.) large canopy tree. Parking lot trees may not be planted closer than 2.5' to the paved portion of the parking lot.

DESIGN STANDARDS

Screening of off-street parking - Screen all parking lots on the building site or artificial lot. Must be voluntary, extend along entire street frontage(excluding driveways and visibility triangles), and at least 3' in height, min. large evergreen shrubs. 3' height, 5 gallon, 3' on center, 6' wide each 4' row solid fence, 3' of soil berm, or a combination with an automatic irrigation system required. Unearthened parking is considered for lot screening purposes of this subsection.
Provided Screen = Evergreen shrubs

Pedestrian facilities - Publicly accessible special pedestrian facilities such as plazas, covered walkways, fountains, lakes, ponds, seating areas and outdoor recreation facilities. These facilities and features must occupy at least 5% of the lot area.
5% of Lot Area = 12,691 SF Area Provided = 58,290 S.F. Existing Play Field

TREE REMOVAL & REPLACEMENT

REMOVAL

24" Cedar Elm	
12" Live Oak	
24" Live Oak	
12" Live Oak	
12" Red Oak	
20" Red Oak	
228 caliper inches of protected trees removed	

REPLACEMENT

228 caliper inches to be replaced on site with 285 trees at 4" cal. and 70 trees at 4.5" cal. (Ref. LL00)

and

63 caliper inches shall be mitigated for/or met by complying with one or more of the following requirements:

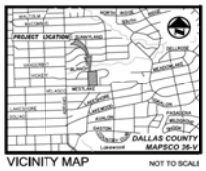
1. Donate the replacement trees to the City Park and Recreation Department 9 the Park and Recreation Director agrees to accept the trees.

2. Plant the replacement trees on other property in the City that is within one mile of the tree removal property as long as the responsible party obtains th written approval of the building official by providing a site plan that shows the location of the trees on the alternative property, or obtains a written agreement with the owner o the alternative property that the replacement trees will be planted and the responsible party to assume mutual responsibility for the replacement trees.

3. Make a payment into a special city account known as the Reforestation Fund for the following amount: 145@ per caliper inch for a total of $7425

GENERAL NOTES

1. VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING. REFER TO CIVIL.
2. ALL PLANT MATERIAL SHALL BE MAINTAINED BY AN AUTOMATIC IRRIGATION SYSTEM.
3. PROVIDE TREE PROTECTION & ROOT PRUNING PRIOR TO DEMOLITION.



VICINITY MAP NOT TO SCALE

Job #: 13210.01
File Name: Landscape Plan
Date: 10/27/15
Drawn by: LCH/CML

0 40 80 160 Feet

GFF Planning
2808 Fairmount Street
Suite 300
Dallas, Texas 75201
214.303.2500/Tel
214.303.0522/Fax
www.gff.com

LANDSCAPE
RW Ploning / Newman, Jackson, Bieberstein, Inc.
12770 Coit Road, Suite 210
Dallas, TX 75251
972.2312033/Tel

LANDSCAPE PLAN - SCENARIO 2
Zoning Case No.: 145-235
Lakehill Preparatory School
2720 Hillside Drive
Dallas, Texas 75214
214.826.2931 P

Proposed Traffic Management Plan

Traffic Management Plan and Queuing Analysis
Lakehill Preparatory School Z145-235
2720 Hillside Drive, Dallas, TX
December 1, 2015

Introduction:

The Lakehill Preparatory School is located on the northeast corner of Hillside Drive and Westlake Avenue. The school has been in operation on the current site since 1971. The school currently has 423 students in grades K through 12. The school is proposing to add two expansions to the existing buildings on campus, which will modify circulation through the main parking and loading area. The school is also proposing to expand the student body to 500 students.

The following table shows the distribution of students for the 2014-2015 school year, and for the proposed maximum of 500 students:

Grade	2014/2015 Students	Maximum Students	Start Time	Dismissal Time
Kindergarten	26	31	8:15 AM	3:00 PM
1st Grade	37	34		
2nd Grade	32	34		
3rd Grade	34	34		
4th Grade	30	35		
Lower School Subtotal	**159**	**168**		
5th Grade	36	36	8:00 AM	3:30 PM
6th Grade	34	37		
7th Grade	38	41		
8th Grade	41	43		
Middle School Subtotal	**149**	**157**		
9th Grade	30	43	8:00 AM	3:30 PM
10th Grade	33	44		
11th Grade	30	44		
12th Grade	22	44		
Upper School Subtotal	**115**	**175**		
Lakehill Total	**423**	**500**		

Existing Campus Circulation and Observations:

The current campus has two loading areas. The Main Loading Area is on the northwest corner of the building, in the main parking lot. It has two paths, entered from either the northern or middle driveways on Hillside Drive. The middle driveway is opposite Vickery Boulevard, and its path leads through the courtyard and then out either to Blanch Circle or Hillside Drive. The northern driveway path leads across the north side of the building and then out to Blanch Circle. Combined queuing positions number approximately 22 in both parts of the Main Loading Area. The Gym Loading Area is north of the gymnasium, accessed via the fire lane from Westlake Avenue, and then exiting out to Blanch Circle.

School drop-off and pick-up conditions were observed on February 10 and 12, 2015. The school days were reported to be typical in all respects. Additional observations were made with neighborhood members, City commissioners, and City staff in May 2015.

Parents are instructed in the drop-off and pick-up procedures with handouts with text and exhibits for each grade level.

For the morning drop-off time period, all students are dropped off in the Main Loading Area adjacent to the parking lot. Middle and Upper School students arrive for the 8:00 AM start, and Lower School for the 8:15 start. Vehicles enter from Hillside Drive, deposit students in the loading area, and then exit to Blanch Circle or Hillside Drive. Vehicles are directed to exits by the security officer who manages the campus circulation. Drop-off flow is smooth but the multiple entry paths can lead to friction between vehicles. The maximum observed queue was approximately 22 vehicles, split equally between the two paths through the Main Loading Area. Entering and exiting vehicles had a short-lived negative effect on Hillside Drive when vehicles could not be immediately received into the campus. There were only brief delays to through vehicles. Radar speed readings during the May observation showed most vehicles travelling between 20 and 25 MPH on Hillside Drive at Vickery Boulevard. No vehicle was observed at over 29 MPH. Perceived speed along Hillside Drive is higher due to the narrowness of the roadway.

For the afternoon pick-up time period, the Lower School students are dismissed at 3:00 PM using the Gym Loading Area. Drivers respected the school's instruction to enter only from westbound Westlake Avenue. Maximum queue was observed to be 23 vehicles at the 3:00 PM time when dismissals began. With vehicles only being queued to the north edge of the gym building prior to the dismissal and 16 vehicles able to be queued on the campus, this meant 7 vehicles were queued on westbound Westlake Avenue. Since the queue was confined to one direction, and the Westlake Avenue traffic volume is minimal, this queuing in the public street did not present a significant negative impact to the traffic conditions. Non-school vehicles travelling in either direction could still proceed. The pick-up operation uses the standard modern procedure of placards in vehicles, and a traffic administrator matching vehicles with students at multiple loading positions. The Lower School queue was out of the street by 3:10 PM and the loading operation was essentially done by 3:15 PM. After picking up students, the vehicles could easily exit to Blanch Circle.

The Middle and Upper Schools performed the pick-up operations in the two parts of the Main Loading Area. The Middle School vehicles enter at the north driveway to Hillside Drive and pass across the north side of the building, then exit to Blanch Circle. The Upper School vehicles enter at the middle driveway opposite Vickery Boulevard and travel through the courtyard area, then are directed to exit either to Blanch Circle or Hillside Drive by the security officer. Maximum observed queue was approximately 18 vehicles just after the 3:30 PM

dismissal, and the main pick-up rush was completed by 3:42. Some vehicles briefly queued along Hillside Drive, causing minor delay to through traffic.

Proposed Campus Circulation:

The expansion of the campus buildings will remove the courtyard portion of the Main Loading Area, leaving only one drop-off or pick-up path. A new east-west connection will be constructed south of the school building, allowing internal access between the eastern driveway and the main loading area. In addition to providing additional queue space within the campus, the east-west connection allows entering vehicles to be more balanced between Hillside Drive and Westlake Avenue and still reach the Main Loading Area.

The circulation for the Main Loading Area will be to enter at the southern driveway on Hillside Drive, travel north along the western edge of the building, then turn east to the loading area. Entry to the campus will be from northbound Hillside Drive only. A second circulation path will be to enter from Westlake Avenue, travel west on the new east-west connector, and then join the northbound path. Exit will be to Blanch Circle. The northbound leg of this path is doublestacked for additional queuing positions within the campus.

The two paths to Main Loading area provide a total of 1,020' of queuing distance, which accommodates 51 vehicles. This queue is made up of the main lane from Hillside Drive to the loading area (480'), the northbound doublestacked lane (200'), and the east-west connector (340'). This queuing distance does not include the 160' between the east-west connector and Westlake Avenue, which would also be available in the PM pick-up time period. The 1,020' of available queuing is a 130% increase in available queuing from the current 440', a change from 22 positions to 51. Besides the additional queuing distance within the site, the Main Loading Area should operate more efficiently since there is only one path in the loading vicinity, removing decision points and the crossing conflict where the current paths intersect.

The Gym Loading Area will operate as it does currently, with the loading area extended northwards to expand the number of vehicles able to queue on the site up to 25. Entry from Westlake Avenue can be from either direction.

Student drivers and faculty parking on campus will enter from the northern driveway on Hillside Drive. Student drivers will exit back to Hillside Drive at the same point, while faculty exiting from the new northeast parking lot will join the exit path to Blanch Circle. The parking entry/exit to Hillside Drive is separated from the loading area traffic flow by cones.

One traffic officer will be positioned at the Westlake Avenue entry, and another will be positioned along Hillside Drive during the drop-off and pick-up periods. The Westlake Avenue officer will control the entry and ensure that Westlake Avenue through traffic is not impeded by entering maneuvers. The Hillside Drive officer will control drop-off/pick-up entries at the southern driveway and parking entry/exit at the northern driveway. Both officers will act assertively to reduce the impact on the public street traffic by the school traffic maneuvers.

Proposed TMP Operation:

The proposed TMP for the expanded campus uses the same start and end times as the current operation, and modifies the circulation as noted above. For 8:00 AM arrival, Upper School student drop-offs enter from Westlake Avenue, travel through the longer circulation path, and are dropped off in the Main Loading Area. At the same time, Middle School student drop-offs enter from Westlake Avenue, split from the Upper School path to continue north, and are dropped off at the Gym Loading Area. For 8:15 AM arrival, Lower School drop-offs enter from northbound Hillside Drive, travel north within the campus, and are dropped off in the Main Loading Area.

The Lower School dismissal is accommodated at the Gym Loading Area at 3:00 PM. Vehicles arriving prior to dismissal should be queued up to the north edge of the loading area, to maximize the usable queue within the site. Vehicles queue and then arrive at the Gym Loading Area, where they are matched with students by the traffic administrator, aided by placards in each vehicle. Students are assisted into the vehicle at each loading station by the staff. Vehicles then exit to Blanch Circle.

The Middle School and Upper School dismissal occurs at 3:30 PM using the Main Loading Area. Upper School vehicles enter from Westlake Avenue and queue across the east-west connector. Middle School vehicles enter from northbound Hillside Drive. Vehicles arriving prior to dismissal can queue within the path shown on the TMP. Vehicles queue and then arrive at the Main Loading Area, where they are matched with students by the traffic administrator. Vehicles then exit to Blanch Circle.

Queuing Analysis:

Based on observations of queuing at other public and private schools in the DFW area, KHA uses a design standard for projecting pick-up queue demands at schools. In the normal KHA design standard, the expected maximum queue in vehicles is equal to 20% of the largest number of students dismissed at one time, or 1 vehicle per 5 students. Students using buses or walking/biking are deducted from the student number since they do not attract personal vehicles to the campus. This method accounts for the differences in how schools divide up the pick-up time period, as some dismiss all students in one group and therefore have higher vehicle demands in a short time period, while some spread out the dismissals over two or more groups. The projected queue formula can be stated as:

(Students dismissed in time period – Students using other modes) * Vehicles/Student = Number of vehicles in queue

The observations of the existing conditions showed that Lakehill generates fewer queued vehicles than the typical school campus. The maximum queue for the Lower School was 23 vehicles when dismissing 159 students, for a rate of 1 vehicle per 7 students. The maximum queue for the Middle and Upper School was 18 vehicles when dismissing 264 students (including student drivers), for a rate of 1 vehicle per 14+ students. For a conservative analysis, the Middle and Upper School future queues will be calculated with a rate of 1 vehicle per 10 students.

The peak queue for the Gym Loading Area will occur at 3:00 PM with the Lower School dismissal of 168 students. 168 students being dismissed translates to a queue of 24 vehicles, or 480' of queuing distance. The Gym Loading Area now has 500' of queuing distance available, so the maximum queue should be accommodated without extending onto Westlake Avenue.

The peak queue for the Main Loading Area will occur at 3:30 PM with the Middle School and Upper School dismissals of 332 students. After deductions for student drivers, this translates to a maximum queue of 24

vehicles between the two groups, or 480' of queuing distance. This queue can be comfortably be accommodated within the 1,020' of queuing distance available. For the specific groups, the 16 vehicles in the maximum Middle School queue can be accommodated within the 480' of main lane queue between Hillside Drive and the Main Loading Area, before consideration of the doublestacked queue lane. The 10 vehicles in the maximum Upper School queue can be accommodated within the east-west connector's 340' of available queue, or within the doublestacked queue lane. With 30 minutes between dismissals for the Lower School and the Middle/Upper Schools, there is no overlap of the exiting paths to Blanch Circle.

The following table shows the dismissal groups for each loading area, and resulting queuing conditions.

Pick-Up Queuing Summary - Main Loading Area

Group Grades Dismissed	Dismissal Time	Students Dismissed	Bus / Bike / Walk	Student Drivers	Parent Pickup	Maximum Queue	Available Queue	Surplus (Deficiency)
Middle School 5, 6, 7, 8	3:30 PM	157	0	0	157	16 Vehicles 320'	24 Vehicles 480'	8 Vehicles 160'
Upper School 9, 10, 11, 12	3:30 PM	175	0	80	95	10 Vehicles 200'	17 Vehicles 340'	7 Vehicles 140'

Middle/Upper School Queue Demand = 1 per 10 students based on observations.
Doublestacked area (200', 10 Vehicles) available for use by either group in addition to the above available queue.

Pick-Up Queuing Summary - Gym Loading Area

Group Grades Dismissed	Dismissal Time	Students Dismissed	Bus / Bike / Walk	Student Drivers	Parent Pickup	Maximum Queue	Available Queue	Surplus (Deficiency)
Lower School K, 1, 2, 3, 4	3:00 PM	168	0	0	168	24 Vehicles 480'	25 Vehicles 500'	1 Vehicle 20'

Lower School Queue Demand = 1 per 7 students based on observations.

Sidewalk on Westlake Avenue:

Two site plans are still in consideration to address the issue of providing a sidewalk on the north side of Westlake Avenue between Hillside Drive and the southeast boundary of the site. The south side of Westlake Avenue currently has a sidewalk. The new sidewalk on the north side of Westlake Avenue would be the code minimum 3' sidewalk, and would take up much of the current landscaped area between the curb and the property line.

The school will be constructing new sidewalks on the north and west sides of the site, along Blanch Circle and Hillside Drive. No sidewalks currently exist on those blocks.

The City would normally require a sidewalk along the north side of Westlake Avenue as well. However, the residents adjacent to the site have indicated that a sidewalk is not preferable on the north side of Westlake Avenue.

From a transportation perspective, a sidewalk on the north side of Westlake Avenue would add something to the overall pedestrian connectivity options in the vicinity. However, due to the specific context of the area, the additional sidewalk is not a significant improvement to connectivity or safety. The narrowness of the feasible sidewalk is a negative, as well as the fact that it would end abruptly at the southeast corner of the site.

Sidewalks are somewhat rare in the Lakewood area, and this is touted as a positive by some neighborhood residents. While some pedestrians may feel threatened by having to share space with vehicles on the paved

spaces, the lack of sidewalks can also keep vehicle speeds down by having mixed traffic in the street, and contributes to the unique Lakewood atmosphere that has developed over many decades.

Having a sidewalk does largely address the vulnerable feeling of some pedestrians, giving them a dedicated path separate from vehicles. The change to connectivity and safety is very significant when adding a sidewalk to a link that does not have one. This could be considered to be a positive change in most cases, even if it somewhat subjectively detracts from the traditional Lakewood atmosphere in this vicinity. Given appropriate crossing opportunities, the difference to connectivity and safety is much smaller when adding a second sidewalk on the other side of a street from an existing sidewalk.

Therefore, it can be concluded that the addition of sidewalks to Blanch Circle and Hillside Drive by the school is a positive change, and will provide options to pedestrians that were previously unavailable on those blocks. However, the addition of a sidewalk to the north side of Westlake Avenue, parallel to the existing sidewalk on the south side of the street, does not provide a significant improvement to conditions in that block that would overcome the opposition from the adjacent residents. The existing sidewalk already provides a meaningful and appropriate pedestrian accommodation along Westlake Avenue. There should not be a requirement for a second sidewalk if the neighborhood is in opposition.

Summary:

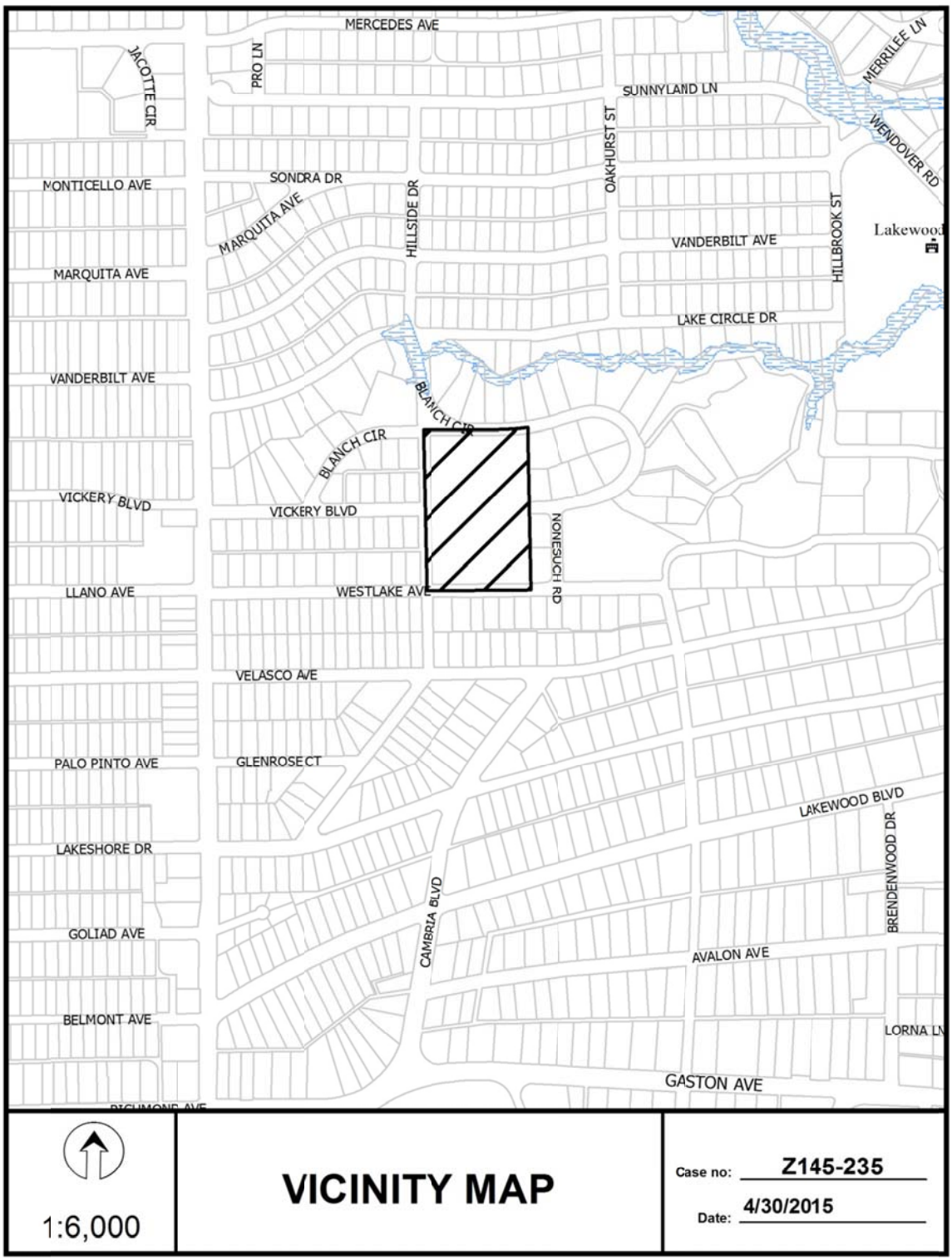
This TMP defines the drop-off and pick-up procedures for Lakehill Preparatory School once the site is modified in accordance with the proposed plan. The proposed master plan and this TMP provide a significant improvement in on-site queue storage over the existing operations. The TMP vehicle routes provide an available queue distance within the site that is greater than the projected maximum expected queue for the school's operations. With the TMP operating as shown, the school traffic should not need to queue vehicles in the ROW of any City street. The property owner/school administrator is responsible for the administration of the TMP and minimizing the impact of the vehicle queue on the City streets. Only uniformed police officers should be allowed to direct and control traffic operating within the public right-of-way.

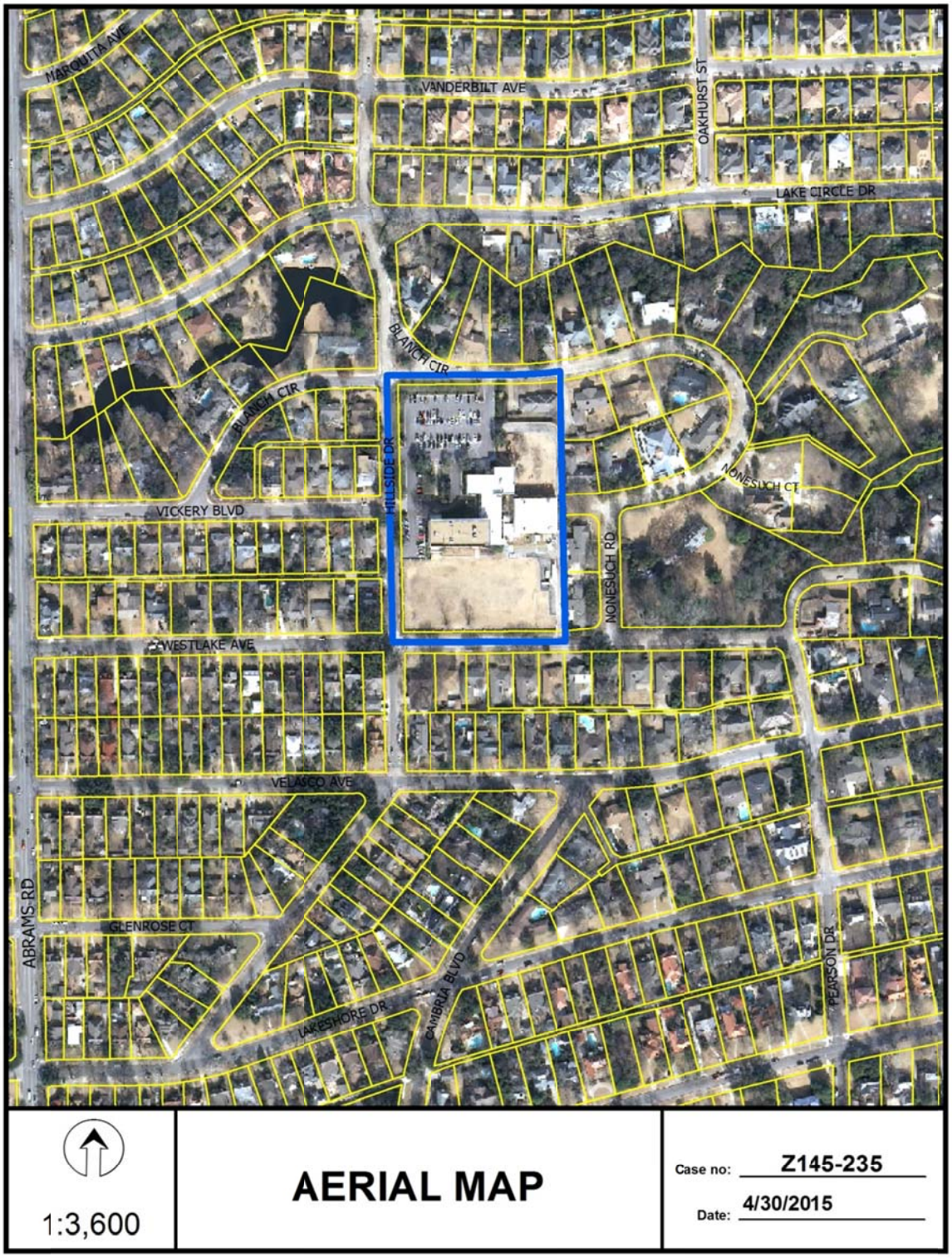
Based on the vehicle queuing analysis conducted and the resulting Traffic Management Plan, I, Scot A. Johnson, P.E. #92615, certify that the results indicate that no queuing of vehicles dropping off or picking up students at Lakehill will extend onto City of Dallas rights-of-way as a result of internal queuing constraints.

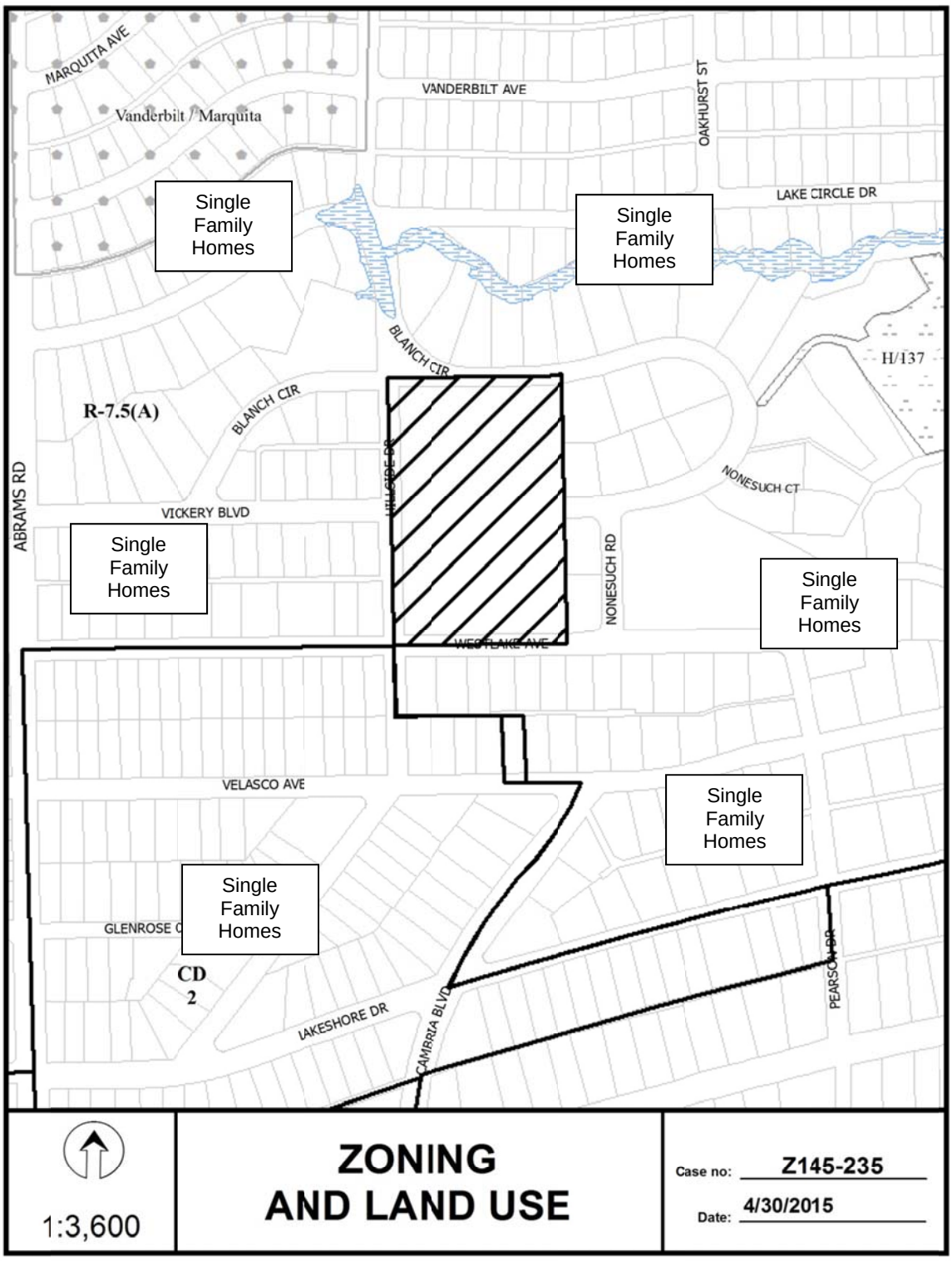
No queuing is allowed in City of Dallas ROW. In order to ensure that all queuing of vehicles is completely accommodated on school property, Lakehill administrative officials should implement the proposed Traffic Management Plan, monitor the operation on a continuing basis, and if any vehicle queuing should begin to occur on public right-of-way, take the necessary action to mitigate it.

Prepared by:
Kimley-Horn and Associates, Inc.
Scot A. Johnson, P.E., PTOE
12750 Merit Drive, Suite 1000
Dallas, TX 75251
(972) 770-1300

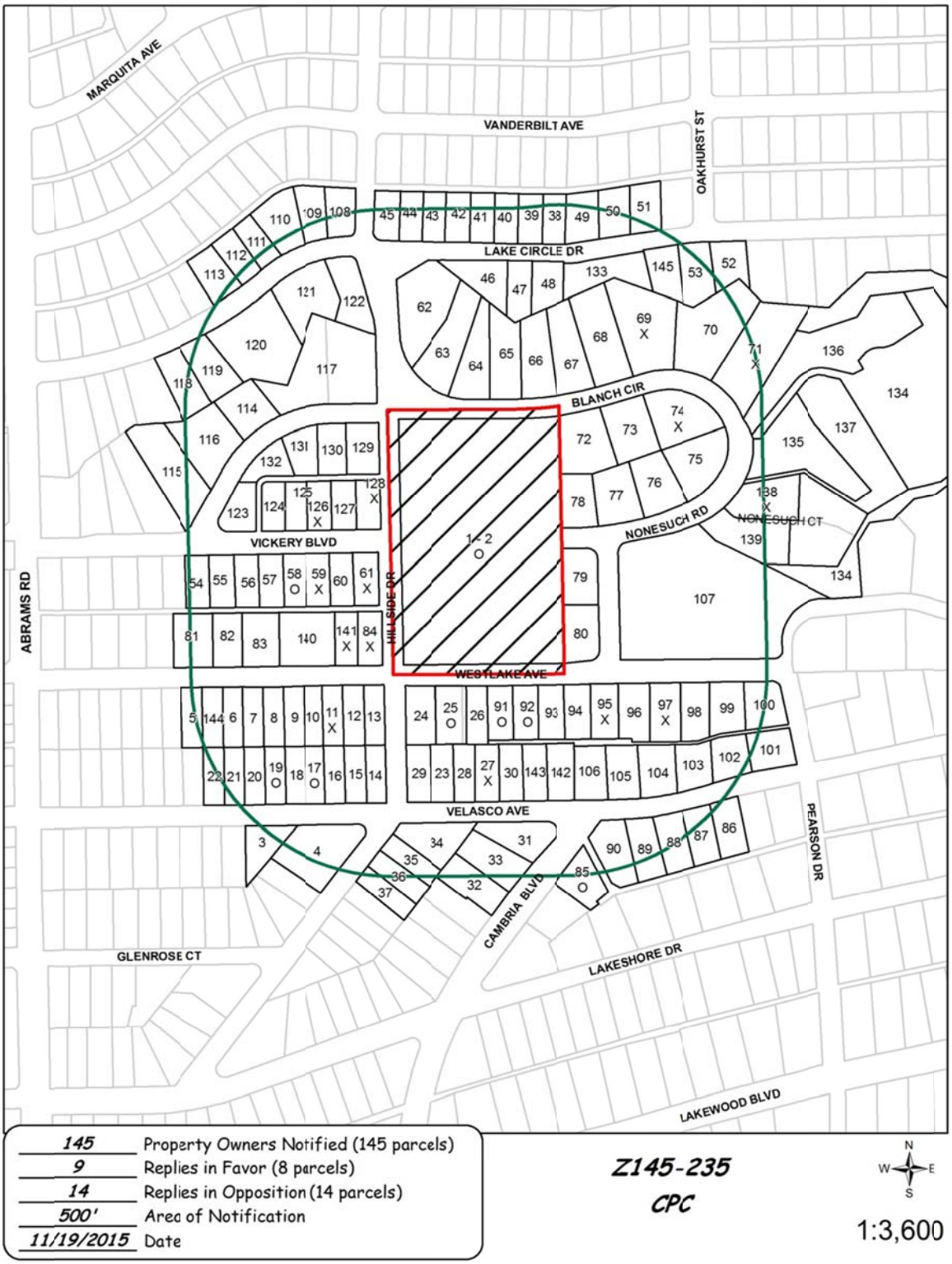



MERCEDES AVE
JACOTTE CIR
PRO LN
SUNNYLAND LN
MERRILEE LN
WENDOVER RD
OAKHURST ST
MONTICELLO AVE
SONDRA DR
MARQUITA AVE
HILLSIDE DR
HILLBROOK ST
Lakewood
VANDERBILT AVE
MARQUITA AVE
LAKE CIRCLE DR
VANDERBILT AVE
BLANCH CIR
BLANCH CIR
VICKERY BLVD
VICKERY BLVD
NONESUCH RD
LLANO AVE
WESTLAKE AVE
VELASCO AVE
PALO PINTO AVE
GLENROSE CT
LAKEWOOD BLVD
BRENDENWOOD DR
LAKESHORE DR
CAMBRIA BLVD
GOLIAD AVE
AVALON AVE
BELMONT AVE
LORNA LN
GASTON AVE
1:6,000
VICINITY MAP
Case no: Z145-235
Date: 4/30/2015


MARQUITA AVE
VANDERBILT AVE
OAKHURST ST
LAKE CIRCLE DR
BLANCH CIR
BLANCH CIR
HILLSIDE DR
NONESUCH CT
VICKERY BLVD
NONESUCH RD
WESTLAKE AVE
VELASCO AVE
ABRAMS RD
GLENROSE CT
LAKESHORE DR
CAMBRIA BLVD
PEARSON DR
1:3,600
AERIAL MAP
Case no: Z145-235
Date: 4/30/2015


MARQUITA AVE
Vanderbilt / Marquita
VANDERBILT AVE
OAKHURST ST
LAKE CIRCLE DR
Single Family Homes
Single Family Homes
BLANCH CIR
H/137
R-7.5(A)
BLANCH CIR
HILLSIDE DR
NONESUCH CT
ABRAMS RD
VICKERY BLVD
Single Family Homes
NONESUCH RD
Single Family Homes
WESTLAKE AVE
VELASCO AVE
Single Family Homes
Single Family Homes
GLENROSE
CD 2
LAKESHORE DR
CAMBRIA BLVD
PEARSON DR
1:3,600
ZONING AND LAND USE
Case no: Z145-235
Date: 4/30/2015

CPC Responses



11/18/2015

Reply List of Property Owners

Z145-235

145 Property Owners Notified 9 Property Owners in Favor 14 Property Owners Opposed

Reply	*Label #*	*Address*		*Owner*
O	1	2720	HILLSIDE DR	LPS DEVELOPMENT CORPORATION
O	2	6530	BLANCH CIR	LAKEHILL PREPATORY SCHOOL
	3	6442	VELASCO AVE	WRIGHT PAUL &
	4	2525	HILLSIDE DR	COWSERT JAMES K & MONICA
	5	6430	WESTLAKE AVE	COHEN SAMUEL MAX & LAUREN T
	6	6438	WESTLAKE AVE	BROWN WILLIAM B III & KATHERINE M
	7	6442	WESTLAKE AVE	RHODES JACK W
	8	6446	WESTLAKE AVE	PAGE JOHN R & REBECCA M
	9	6450	WESTLAKE AVE	HARRINGTON NANCY N
	10	6454	WESTLAKE AVE	HAYNES KATHERINE DARRELINE &
X	11	6458	WESTLAKE AVE	HOWARD BYRON &
	12	6462	WESTLAKE AVE	RAINS KYLE
	13	6466	WESTLAKE AVE	GASCH BETTY H &
	14	6467	VELASCO AVE	BLACK MARY MARTHA
	15	6463	VELASCO AVE	THEVENET CHRISTOPHER B
	16	6459	VELASCO AVE	ELLOWITZ MICHELLE
O	17	6455	VELASCO AVE	MORAN PATRICK T & HARRIET M
	18	6451	VELASCO AVE	HEED CHERYL K
O	19	6447	VELASCO AVE	SUN YIYANG & MEGAN
	20	6443	VELASCO AVE	DUNBAR MICHELLE & FRED A DUNBAR
	21	6439	VELASCO AVE	LASS GEORGE E &
	22	6435	VELASCO AVE	DENSON MICHAEL BROCK
	23	6507	VELASCO AVE	GRAMS HAROLD E ET AL
	24	6500	WESTLAKE AVE	MCMILLAN WESLEY SHANE &
O	25	6508	WESTLAKE AVE	NARDONE STEPHEN PAUL &
	26	6514	WESTLAKE AVE	KEY JOHN MICHAEL

11/18/2015

Reply	*Label #*	*Address*		*Owner*
X	27	6515	VELASCO AVE	SWANFELDT ANDREW H &
	28	6511	VELASCO AVE	HAMILTON KYLE R &
	29	6501	VELASCO AVE	MCCLANAHAN MARK
	30	6519	VELASCO AVE	CHASE ELIZABETH RAE FENDER &
	31	2535	CAMBRIA BLVD	BIGGS JOHN CARTER &
	32	2519	CAMBRIA BLVD	YOXALL THOMAS G &
	33	2527	CAMBRIA BLVD	LAMBERT ROBERT J &
	34	2530	HILLSIDE DR	MAST DAYTON A
	35	2526	HILLSIDE DR	RAMIREZ EMMA
	36	2522	HILLSIDE DR	CALLENDER JOHN
	37	2518	HILLSIDE DR	COLLINS VICTORIA HUNT
	38	6537	LAKE CIRCLE DR	MCKERCHER DAVD &
	39	6531	LAKE CIRCLE DR	LOZANO RAUL A &
	40	6527	LAKE CIRCLE DR	Taxpayer at
	41	6523	LAKE CIRCLE DR	SINGLETON VIRGINIA
	42	6517	LAKE CIRCLE DR	ASCENZO JOHN R &
	43	6511	LAKE CIRCLE DR	LAMB LOIS ANN
	44	6507	LAKE CIRCLE DR	CORNETT MILDRED E TRUST
	45	6503	LAKE CIRCLE DR	SYLVEST EDWIN E
	46	6524	LAKE CIRCLE DR	MOEBEL PATRICK & KATE
	47	6528	LAKE CIRCLE DR	WILLIAMSON JACKIE L
	48	6536	LAKE CIRCLE DR	TEOTIA SUMEET S
	49	6541	LAKE CIRCLE DR	WHITE PATRICK R & JAIME
	50	6547	LAKE CIRCLE DR	MESSERSMITH KATY
	51	6553	LAKE CIRCLE DR	HEATH PAUL E &
	52	6602	LAKE CIRCLE DR	CARR JUDITH A &
	53	6566	LAKE CIRCLE DR	EVANS CAMERON C & EMILY WISE
	54	6426	VICKERY BLVD	PARKMAN RUSSELL S
	55	6430	VICKERY BLVD	PARKER MARY CAROLINE
	56	6434	VICKERY BLVD	JACOBS VALERIE
	57	6438	VICKERY BLVD	ROBERTS DAVID TRUETT &

11/18/2015

Reply	*Label #*	*Address*		*Owner*
O	58	6442	VICKERY BLVD	HUTCHESON TEARLACH D
X	59	6446	VICKERY BLVD	JONES THURMAN L JR
	60	6450	VICKERY BLVD	LEAMING MARILYN
X	61	6454	VICKERY BLVD	POWELL WINIFRED C ET VIR
	62	6501	BLANCH CIR	SANDERS DOUGLAS ALLEN &
	63	6507	BLANCH CIR	HARRIS SARA A &
	64	6511	BLANCH CIR	MELENDI STEPHEN A &
	65	6517	BLANCH CIR	ALBERTS ROBERT P JR &
	66	6523	BLANCH CIR	PORTERLYNNEA MARIE &
	67	6531	BLANCH CIR	DALES JUNE M
	68	6539	BLANCH CIR	LAMY JACQUES & ODILE
X	69	6545	BLANCH CIR	RESNICK JEFFREY B &
	70	6555	BLANCH CIR	JACKSON SALLY COPASS
X	71	6563	BLANCH CIR	GARRETT HOWARD ETAL
	72	6538	BLANCH CIR	MCMAHON MARK C & KELLEY T
	73	6546	BLANCH CIR	EGGLESTON ERIC S & ALEJANDRA M BARBOSA
X	74	6550	BLANCH CIR	WEIR DANIEL RAY & MARTHA JANE WICKER
	75	3	NONESUCH RD	TETER JACK &
	76	5	NONESUCH RD	MCDOWELL JOHN H JR
	77	7	NONESUCH RD	COOK WILLIAM E &
	78	9	NONESUCH RD	DONAGHE E BRUCE & SHARON
	79	11	NONESUCH RD	DOWDY DANIEL A & BROOKE M
	80	15	NONESUCH RD	HAYNES SHIRLEY D TR
	81	6431	WESTLAKE AVE	CARTER JENNINGS BOND & ERIN OBOYLE
	82	6439	WESTLAKE AVE	CAHALAN SHANNON P &
	83	6441	WESTLAKE AVE	SINNOTT ROBERT M &
X	84	6467	WESTLAKE AVE	ROBERTSON EDWARD T & ANGELA L
O	85	2532	CAMBRIA BLVD	CLARK BRUCE & DORCY
	86	6628	VELASCO AVE	SECKER BETTY
	87	6622	VELASCO AVE	VANDOLEN JULIE G &
	88	6616	VELASCO AVE	SELLERS LOUISE W

Reply	*Label #*	*Address*		*Owner*
	89	6610	VELASCO AVE	TANKERSLEY RUSSELL K
	90	6604	VELASCO AVE	STOREY CRAIG DEE & ERIN BETH
O	91	6520	WESTLAKE AVE	LANESE MICHAEL M
O	92	6526	WESTLAKE AVE	GOGGANS JOE D &
	93	6532	WESTLAKE AVE	CANNON REAGAN & JASON
	94	6540	WESTLAKE AVE	HUTCHESON NOEL JR & SUSAN
X	95	6544	WESTLAKE AVE	KING CHRISTOPHER K & ANN D
	96	6606	WESTLAKE AVE	WHITE JERRY F
X	97	6612	WESTLAKE AVE	BINTZ DAVID W
	98	6618	WESTLAKE AVE	PARROTT CORY
	99	6624	WESTLAKE AVE	JOHNSON ERIC W
	100	6630	WESTLAKE AVE	KRISCHKE ELIZABETH ANN
	101	6643	VELASCO AVE	BATALSKY JOEL WILLIAM &
	102	6635	VELASCO AVE	DUNSON MICHAEL L & CYNTHIA R
	103	6627	VELASCO AVE	THOMAS WILLIAM M & JAY STALLINGS
	104	6619	VELASCO AVE	DAILY BRANDON & MERRILL
	105	6611	VELASCO AVE	BRUNDAGE JAMES & JANINA
	106	6603	VELASCO AVE	SEITER CHARLES J JR
	107	4	NONESUCH RD	KIRCHHOFER JOHN D &
	108	6465	LAKE CIRCLE DR	CALAWAY SCOTT L
	109	6461	LAKE CIRCLE DR	SEAL DENNIS J & BEVERLY J
	110	6455	LAKE CIRCLE DR	GANTT MATTHEW B & SARAH S
	111	6451	LAKE CIRCLE DR	YENNE THOMAS R & DEBRA F
	112	6445	LAKE CIRCLE DR	BORUFF DARREN &
	113	6443	LAKE CIRCLE DR	KINNEY KATHLEEN
	114	6415	BLANCH CIR	CHAPMAN CHERYL B
	115	6403	BLANCH CIR	SHILLING VINCENT &
	116	6409	BLANCH CIR	ASPINALL DAVID E
	117	6425	BLANCH CIR	ZIDELL JEREMY
	118	6428	LAKE CIRCLE DR	GALBREATH GLADYS A
	119	6434	LAKE CIRCLE DR	LITNER DAVID L & GIADA CARDOLETTI

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	120	6440	LAKE CIRCLE DR	PHILLIPS CHRISTOPHER &
	121	6454	LAKE CIRCLE DR	PESTONJEE SHIRIN FALI
	122	6466	LAKE CIRCLE DR	KINGSTON DONALD W &
	123	6427	VICKERY BLVD	WOODFIELD PAUL C
	124	6431	VICKERY BLVD	JOHNSTON ROBERT H III & ROBIN L
	125	6435	VICKERY BLVD	NAIM ROSANN T
X	126	6439	VICKERY BLVD	LABARBA STEPHANIE
	127	6443	VICKERY BLVD	SHELLENBERGER CHARLES G
X	128	6447	VICKERY BLVD	CHARBENEAU PETER
	129	6414	BLANCH CIR	FITCH CYNTHIA S
	130	6410	BLANCH CIR	DEBARD MAHLON PENNER
	131	6406	BLANCH CIR	GEISER SHAWN M &
	132	6402	BLANCH CIR	HARDY JOHN M
	133	6552	LAKE CIRCLE DR	MEHDIBEGI HAMID & CATHERINE
	134	10	NONESUCH RD	LOVVORN MARK E &
	135	6	NONESUCH RD	TUCKER THOMAS & SARAH
	136	12	NONESUCH RD	CREE RICHARD E & ANNE W
	137	8	NONESUCH RD	LAIRD WILLIAM P II &
X	138	6602	NONESUCH CT	SOCHIA DAVID
	139	6601	NONESUCH CT	MCGILVRAY ANNE
	140	6451	WESTLAKE AVE	GOLDMAN MARC & SUSAN
X	141	6459	WESTLAKE AVE	WILSON STEVEN
	142	6535	VELASCO AVE	BARNETT STACIE K
	143	6527	VELASCO AVE	NAGLER THOMAS A
	144	6432	WESTLAKE AVE	BARRETTO R SCOTT
	145	6560	LAKE CIRCLE DR	STEPHENSON MICHAEL &

AGENDA ITEM # 47

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 3

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 64 V

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an open-enrollment charter school on property zoned an RR Regional Retail District, north of West Camp Wisdom Road and west of Interstate 35E Freeway

Recommendation of Staff and CPC: Approval for a five-year period with eligibility for automatic renewals for additional ten-year periods, subject to a site plan, traffic management plan and conditions

Z145-269(AF)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z145-269(AF) **DATE FILED:** May 27, 2015

LOCATION: North of West Camp Wisdom Road and west of Interstate 35E Freeway

COUNCIL DISTRICT: 3 **MAPSCO:** 64V

SIZE OF REQUEST: Approx. 17.97 acres **CENSUS TRACT:** 111.03

APPLICANT: Uplift Education

REPRESENTATIVE: Brian Nelson, HKS Architects

OWNER: Ravic Investment Co**.**

REQUEST: An application for a Specific Use Permit for an Open-enrollment charter school on property zoned an RR Regional Retail District.

SUMMARY: It is the applicant's intention to build a 169,000-square-foot Open-enrollment charter school with 66 total classrooms. These classrooms would encompass 24 elementary classrooms, 30 middle school classrooms, and 12 high school classrooms.

CPC RECOMMENDATION: **Approval** for a five-year period with eligibility for automatic renewals for additional ten-year periods, subject to a site plan, traffic management plan and conditions.

STAFF RECOMMENDATION: **Approval** for a five-year period with eligibility for automatic renewals for additional ten-year periods, subject to a site plan, traffic management plan and conditions.

GUIDING CRITERIA FOR STAFF RECOMMENDTION:

Staff recommends approval of the request based upon:

1. *Compatibility with surrounding uses and community facilities* – The proposed buildings and use are compatible in scale with the surrounding area. The school will have a maximum height of 36 feet except where it is restricted by residential proximity slope standards. The site's residential adjacency will dictate added development standards that serve to mitigate any potential negative impacts. These standards include an increased side and rear setback of 20 feet, residential proximity slope restrictions with a 1 to 3 slope angle of projection restricting higher portions of the building farther away from the perimeter, and added screening and visual intrusion provisions.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – The proposed open-enrollment charter school will provide a valuable service to this area of the city.

3. *Not a detriment to the public health, safety, or general welfare* – The proposed use will not be a detriment to the public health, safety, or general welfare. Infrastructure/street improvements around the site to further minimize the impact on the surrounding neighborhood.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – Based on information depicted on the site plan, the request will comply with all applicable zoning regulations and standards. No variances or exceptions are proposed. All proposed improvements will require compliance with the building code and require final inspection compliance with the site plan.

Zoning History: There have not been any recent zoning changes requested in the area within the last five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing Dimension
West Camp Wisdom	Major Arterial	100'
US Highway 35	Freeway	Variable

Traffic:

The Engineering Section of the Department of Sustainable Development and Construction has reviewed the requested amendment and determined that it will significantly impact the current state of the surrounding roadway system. Traffic circulation will be regulated through the traffic management plan included in the conditions. The Engineering Section has recommended street/infrastructure improvements to mitigate the impact on the surrounding neighborhood. These recommendations include new driveways southbound IH 35 E frontage road and Camp Wisdom Road, median modification for the eastbound left turn into the school campus, and right turn deceleration lanes for the approaches to two proposed driveways. It should be noted that any other development on this property would likely have triggered roadway improvements at permitting, as well.

Comprehensive Plan: The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site as being in a Residential Neighborhood Building Block.

This Building Block represents the life-blood of Dallas, the traditional neighborhood of single-family detached homes. Dallas has many neighborhoods that match this description, including Winnetka Heights, Preston Hollow, Lakewood and Wheatley Place. Single-family dwellings are the dominate land use in these areas. Some shops, restaurants or institutional land uses such as schools and religious centers that serve neighborhood residents may be located at the edges or at key intersections. Neighborhood "pocket parks" provide open space for families. Individual lot size, front yard and side yard setbacks, garage orientation and scale of the home varies from neighborhood to neighborhood. These areas rely primarily on cars for access, although traffic on neighborhood streets is expected to be low. Cutthrough traffic or spill over from commercial areas will be strongly discouraged. While public transit may be available, typically it involves longer walks to bus stops or the need to drive to park-and-ride facilities. Newly developed neighborhoods may provide better pedestrian access to community services through shorter block lengths, narrower streets, sidewalks and greenbelts with hike and bike trails and might also provide improved access to transit service. Public investment will focus on protecting quality of life by providing amenities such as parks, trails, road improvements and strong code enforcement.

STAFF ANALYSIS:

Land Use:

	Zoning	Land Use
Site	RR	Vacant/Undeveloped
North	R-7.5 (A)	Single Family
South	R-7.5 (A)	Single Family
East	RR	Restaurant with Drive-Thru
West	R-7.5 (A)	Single Family

Land Use Compatibility: The site is located within a predominately low density residential neighborhood on the northwest of the intersection of West Camp Wisdom Road and I35E. A variety of more intense uses are located at each intersection. Because the site is adjacent to or directly across an alley from a single family residential district, additional code regulations are triggered. These limitations dictate an increased side and rear setback of 20 feet, residential proximity slope restrictions with a 1 to 3 slope angle of projection restricting higher portions of the building farther away from the perimeter, and added screening and visual intrusion provisions.

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The city council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards. The regulations in this chapter have been established in accordance with a comprehensive plan for the purpose of promoting the health, safety, morals, and general welfare of the city.

The applicant's request conforms with the applicable zoning regulations and standards and is consistent with the intent of the Dallas Development Code. Therefore, staff recommends approval subject to a site plan and conditions.

Development Standards:

Current Development Standards							
	Setbacks						
DISTRICT	Front	Side/Rear	Density	Height	Lot Coverage	Special Standards	Primary Uses
RR Regional Retail	15'	20' adjacent to residential OTHER: No Min.	1.5 FAR overall 0.5 office	70' 5 stories	80%	Proximity Slope Visual Intrusion	Retail & personal service, office

Proposed Development Standards for Open-enrollment charter school							
	Setbacks						
DISTRICT	Front	Side/Rear	Density	Height	Lot Coverage	Special Standards	Primary Uses
RR Regional Retail	15'	20' adjacent to residential OTHER: No Min.	0.21 FAR	36' 2 Stories	14%	Proximity Slope Visual Intrusion	School

Landscaping: The request will trigger any landscape changes. All development on the property will require landscaping per Article X of the Dallas Development Code.

Parking: Pursuant to §51A-4.204 of the Dallas Development Code, schools require one and one-half parking spaces for each kindergarten/elementary school classroom along with three and one half parking spaces for every junior high/middle school classrooms and nine and one half spaces for each senior high school classroom. The proposed school is projected to have 24 elementary, 30 middle, and 12 high school classrooms, which would require a total of 255 parking spaces. The applicant is proposing 300 parking spaces.

CPC Action – November 19, 2015

Z145-269(AF) Planner: Aldo Fritz

Motion: It was moved to recommend **approval** of a Specific Use Permit for an Open-enrollment charter school for a five-year period with eligibility for automatic renewals for additional ten-year periods, subject to a revised site plan (36 feet maximum height), traffic management plan and conditions on property zoned an RR Regional Retail District, north of West Camp Wisdom Road and west of Interstate 35E Freeway.

Maker: Houston
Second: Anglin
Result: Carried: 15 to 0

For: 15 - Anglin, Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 0
Vacancy: 0

Notices: Area: 400 Mailed: 145
Replies: For: 10 Against: 6

Speakers: For: Eric Goodloe, 3807 Cypress Point Cove, Round Rock, T
Yasmin Bhatia, 4230 Beechwood Ln., Dallas, TX, 7522(
Bessie Record, 726 Edgemont Ave., Dallas, TX, 75216
Tiffany Serrano, 735 Owensons Dr., Dallas, TX, 75224
Patricia Durham, 735 Owensons Dr., Dallas, TX, 75224
Brian Nelson, 3206 Waldrop Dr., Dallas, TX, 75229
Against: None

List of Partners

Raymond D. Nasher Irrevocable Management Trust, Bank of America, N.A., Trustee, Dallas, TX
Emily L. Hexter Irrevocable Trust, Louis J. Hexter, II, Trustee, Mill Valley, CA
Louis J. Hexter, II, Mill Valley, CA
Victoria Hexter, Lake Oswego, OR
Holly Hexter, Washington, DC

Tony Dona*
Chairman of the Board
Partner, Thackeray Partners

Melissa McNeil*
Vice Chair
Community Volunteer

W. Carey Carter*
Retired Partner, Deloitte & Touche

Angie Dickson
Community Volunteer

Angela Farley
Vice President of Public Policy and Education,
Dallas Regional Chamber of Commerce

Ossa Fisher
Senior Vice President, Strategy & Analytics
Match.com

Daniel Flaherty
President, Gemmy Industries

Michael Giles
President, Right Management

Mary Ellen Weber
Managing Director, Stellar Strageies, LLC

Gilbert Prado
Dallas Independent School District

Randall Ray*
Partner, Munck Wilson & Mandala LLP

Josh Terry*
Managing Director, Highland Capital

Donell Wiggins*
Community Volunteer

Srikanth Srinivas
SVP Solution Innovation, Medecision

Dustin Marshall *
CEO, Hazels Hot Shot

Marnie Wildenthal
Community Volunteer

Richard Frapart
CFO, Mount Kellett Capital Management

John Beckert
Operating Partner, Highland Partners

Kay Allen
Certified Financial Planner, Aspen Wealth Management

Abigail Williams
Community Volunteer

Alan LeBlanc
Vice President of Sales and Marketing, RAM Surgical Supplies

Ardo Fuentes
Financial Advisor, Merrill Lynch & Co.

Catherine Estrada
Community Volunteer

Kevin Bryant
Chief Counsel, Crow Holdings

Ryan Moss
Partner, Perella Weinberg Partners

Cristina Barbosa
Community Volunteer

Dawn Mann
Founding Principal, Break of Day Design

Proposed Conditions

1. USE: The only use authorized by this specific use permit is an open-enrollment charter school.

2. SITE PLAN: Use and development of the Property must comply with the attached site plan.

3. TIME LIMIT: This specific use permit expires on (five years), but is eligible for automatic renewal for additional ten-year periods pursuant to Section 51A-4.219 of Chapter 51A of the Dallas City Code, as amended. For automatic renewal to occur, the Property owner must file a complete application for automatic renewal with the director before the expiration of the current period. Failure to timely file a complete application will render this specific use permit ineligible for automatic renewal. (Note: The Code currently provides that applications for automatic renewal must be filed after the 180th but before the 120th day before the expiration of the current specific use permit period. The Property owner is responsible for checking the Code for possible revisions to this provision. The deadline for applications for automatic renewal is strictly enforced.)

4. CLASSROOMS: The maximum number of classrooms is 66.
   a. 24 Elementary classrooms
   b. 30 middle school (MS) classrooms
   c. 12 high school (HS) classrooms

5. PLAYING FIELDS: Use of the playing fields as shown on the site plan is prohibited between the hours of 8:00 p.m. and 6:00 a.m.

6. TRAFFIC MANAGEMENT PLAN:

(a) In general. Operation of the open-enrollment charter school must comply with the attached traffic management plan.

(b) Queuing. Queuing is only permitted inside the Property. Student drop-off and pick-up are not permitted within city rights-of-way.

(c) Traffic study.

(1) The Property owner or operator shall prepare a traffic study evaluating the sufficiency of the traffic management plan. The initial traffic study must be submitted to the Director by November 1, 2016. After the initial traffic study, the Property owner or operator shall submit annual updates of the traffic study to the Director by November 1st of each even-numbered year.

(2) The traffic study must be in writing, performed by a licensed engineer, based on a minimum of four samples taken on different school days at different drop-off and pick-up times over a two-week period, and must contain an analysis of the following:

(A) ingress and egress points;

(B) queue lengths;

(C) number and location of personnel assisting with loading and unloading of students;

(D) drop-off and pick-up locations;

(E) drop-off and pick-up hours for each grade level;

(F) hours for each grade level; and

(G) circulation.

(3) Within 30 days after submission of a traffic study, the Director shall determine if the current traffic management plan is sufficient.

(A) If the Director determines that the current traffic management plan is sufficient, the director shall notify the applicant in writing.

(B) If the Director determines that the current traffic management plan results in traffic hazards or traffic congestion, the Director shall require the Property owner to submit an amended traffic management plan. If the Property owner fails to submit an amended traffic management plan within 30 days, the Director shall notify the city plan commission.

(d) Amendment process.

(1) A traffic management plan may be amended using minor plan amendment fee and public hearing process in Section 51A-1.105(k)(3) of Chapter 51A of the Dallas City Code.

(2) The city plan commission shall authorize changes in a traffic management plan if the proposed amendments improve queuing or traffic circulation; eliminate traffic hazards; or decrease traffic congestion.

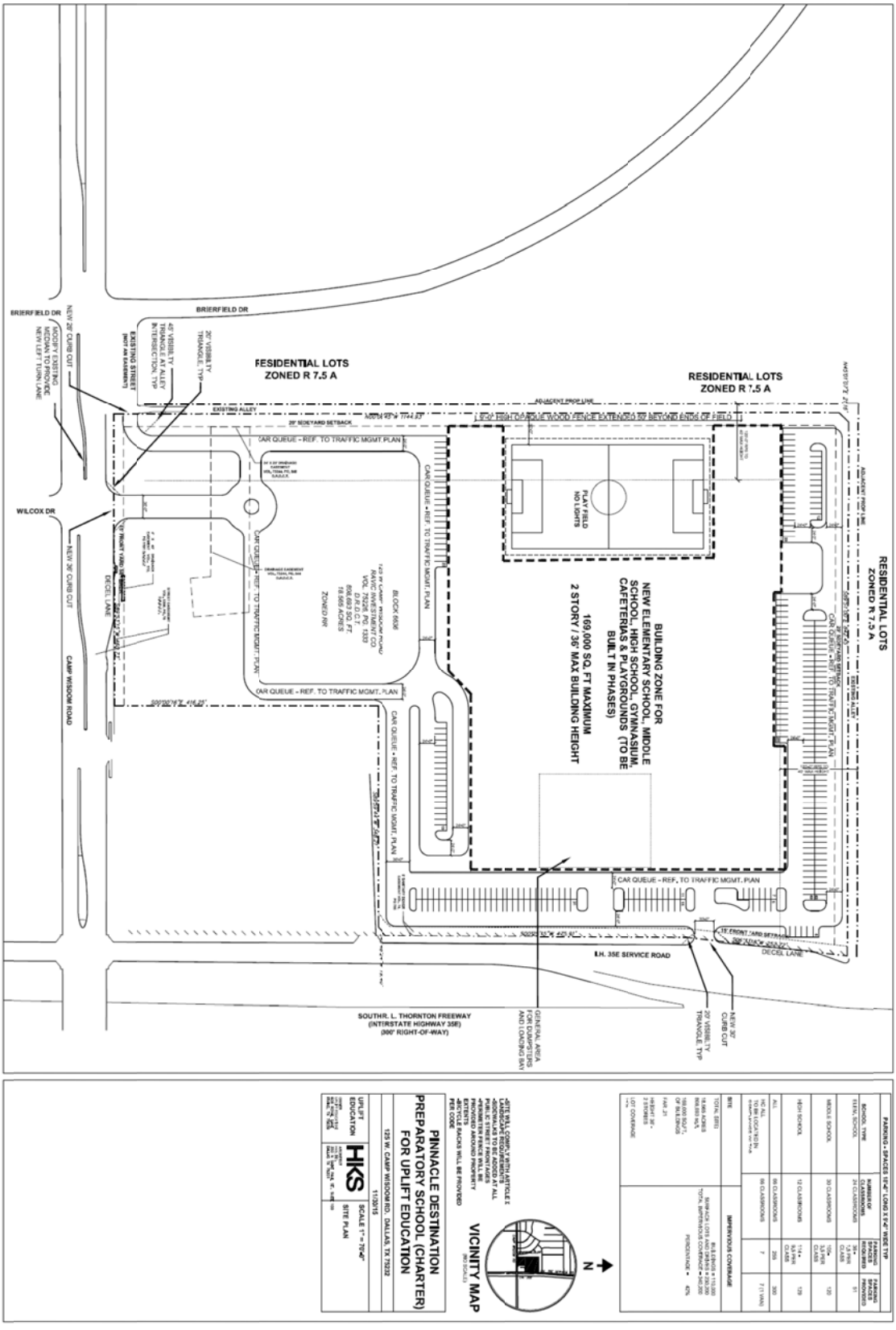
7. PARKING: Parking must be located as shown on the attached site plan.

8. LANDSCAPING: Landscaping must be provided and maintained in accordance with Article X of the Dallas Development Code, as amended.

9. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

10. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

Proposed Site Plan



Proposed Traffic Management Plan

Traffic Management Plan

Uplift Pinnacle Preparatory
Z145-269-AF
Dallas, Texas

August 20, 2015

STATE OF TEXAS
ELIZABETH C. CROWE
70869
LICENSED
PROFESSIONAL ENGINEER

Walter P. Moore and Associates, Inc.
TBPE Firm Registration No. 1856

Prepared for
Uplift Education

Prepared by
WALTER P MOORE

Walter P. Moore and Associates, Inc.
1845 Woodall Rodgers Freeway, Suite 1650
Dallas, Texas 75201
214-740-6200

August 2015

CONTENTS

INTRODUCTION 1
QUEUING ANALYSIS 1
TRAFFIC MANAGEMENT PLAN 3
Family Identification Numbers 3
Ingress & Egress 3
Drop-off/Pick-up Locations 3
Circulation 4
Release Time 4
Administrative Officials 4
Summary 5

LIST OF EXHIBITS

EXHIBIT 1: Traffic Management Plan

LIST OF TABLES

TABLE 1: Calculated Queuing Space for Uplift Pinnacle Preparatory – Full Build Enrollment

INTRODUCTION

Uplift Education is proposing to initiate the operations for a charter school at the northwest corner of IH 35E and Camp Wisdom Road in Dallas, Texas. The proposed school site is bounded by IH 35E Southbound Frontage Road (SBFR) on the east, Camp Wisdom on the south, single-family homes that front Brierfield Drive on the west and the alley that serves homes that front Cherry Point Drive on the north. During the Full Build enrollment year of the school, the school proposes to accommodate 600 students in the Elementary School and 1,176 students in the Secondary School. Uplift Education acquired the services of Walter P Moore (WPM) to address traffic and queuing concerns of the City of Dallas and provide a Traffic Management Plan for the proposed site.

QUEUING ANALYSIS

The queuing data collected at existing Uplift Education school campuses was evaluated. From the data available, overall averages of approximately 1 vehicle for every 6.8 elementary students and 1 vehicle for every 7.5 secondary school students were calculated for peak queuing conditions.

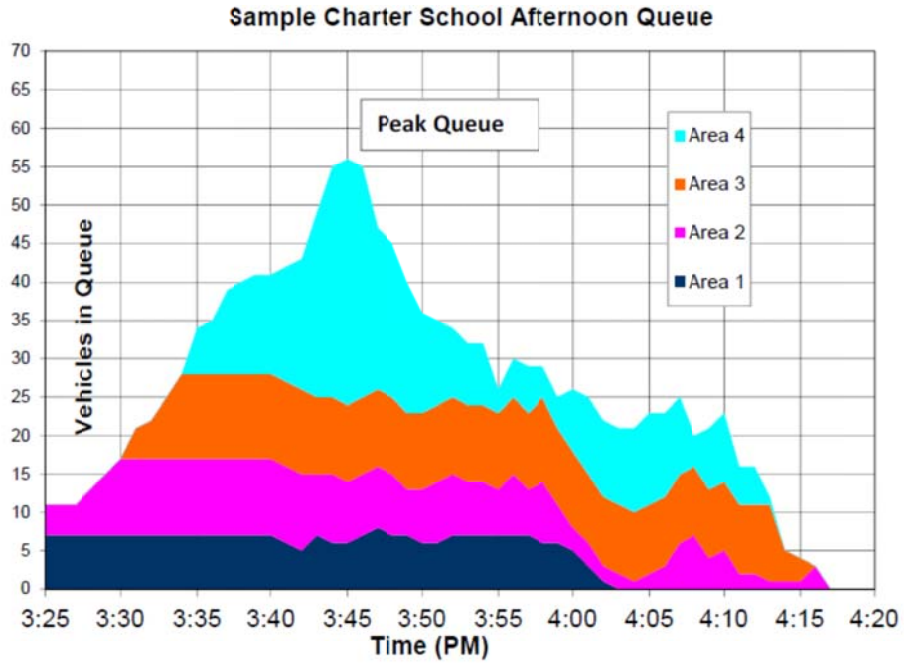
Utilizing these peak queuing ratios as planning guidelines for Full Build enrollment of the school, the calculated linear feet of queuing space for the school was developed as provided in **TABLE 1**. The provided queuing space is also shown in **TABLE 1**.

TABLE 1: Calculated Queuing Space for Uplift Pinnacle Preparatory – Full Build Enrollment

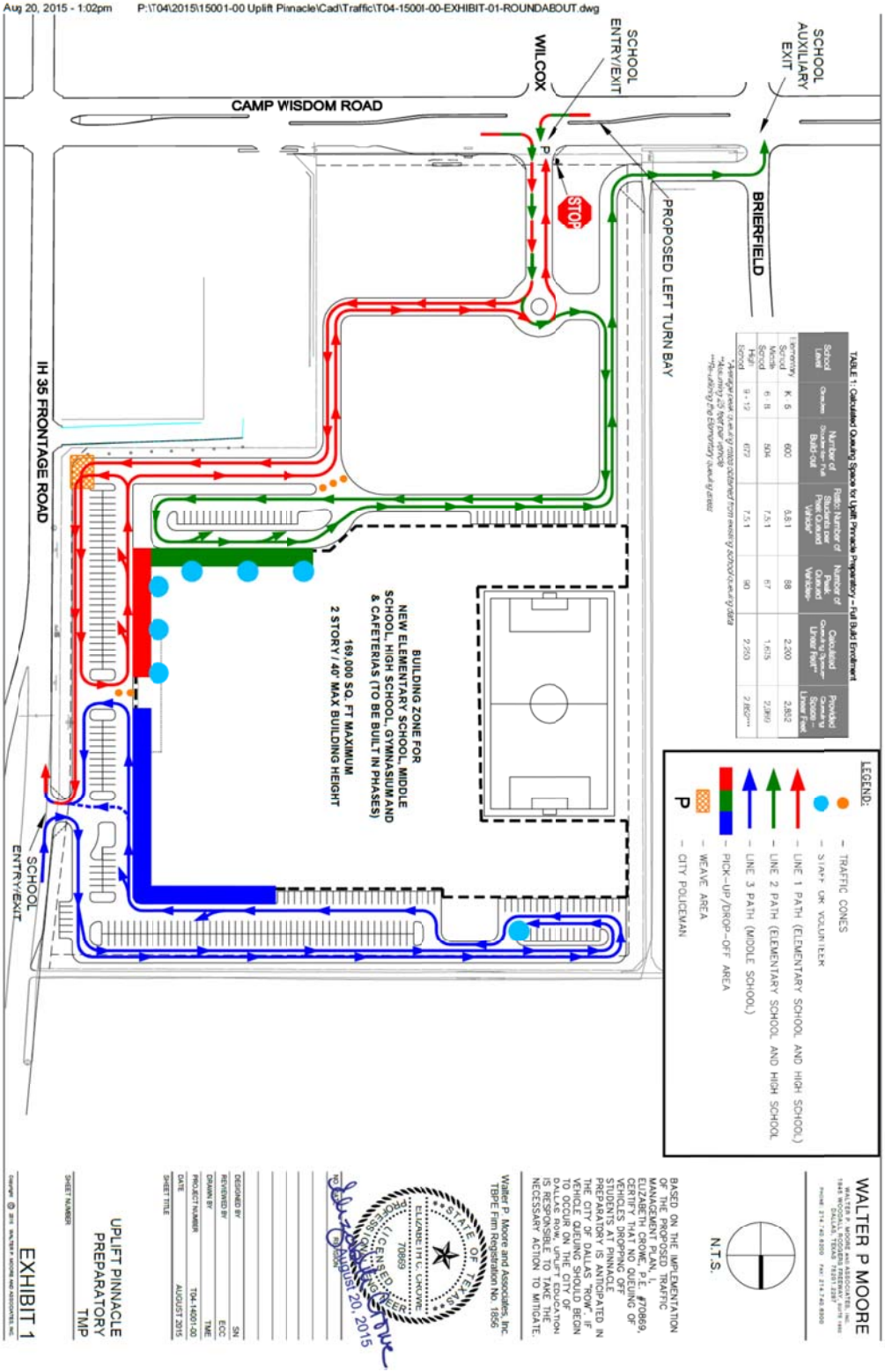
School Level	Grades	Number of Students- Full Build-out	Ratio: Number of Students per Peak Queued Vehicle*	Number of Peak Queued Vehicles-	Calculated Queuing Space- Linear Feet**	Provided Queuing Space – Linear Feet
Elementary School	K - 5	600	6.8:1	88	2,200	2,852
Middle School	6 - 8	504	7.5:1	67	1,675	2,969
High School	9 - 12	672	7.5:1	90	2,250	2,852***

**Average peak queuing rates obtained from existing school queuing data*
***Assuming 25 feet per vehicle*
****Re-utilizing the Elementary queuing areas*

The following figure illustrates a typical accumulation of queued vehicles leading up to the dismissal time and after the students have been released. As the figure indicates, the duration of the "Peak Queue" during the PM peak typically lasts for a minute or two before quickly diminishing. The Areas 1 through 4 represent the different queuing areas inside the school (curb lines, parking lots, etc.). This particular school campus has two dismissal times as is indicated by the peak at 3:45 PM as well as just after 4:05 PM.



The on-site queuing space for the Pinnacle Preparatory campus illustrated in **EXHIBIT 1** measures 1,580 linear feet for the red pick-up area, 1,272 linear feet for the green pick-up area and 2,969 linear feet for the blue pick-up area for a total single-use length of 5,821 linear feet. During the initiation of the school operations, it is recommended to monitor the drop off and pick up operations and make adjustments to the procedures as necessary. The site plan is anticipated to sufficiently serve the Full Build enrollment plan of the school campus with implementation of the Traffic Management Plan as further described.


Aug 20, 2015 - 1:02pm P:\T04\2015\15001-00 Uplift Pinnacle\Cad\Traffic\T04-1500I-00-EXHIBIT-01-ROUNDABOUT.dwg
SCHOOL AUXILIARY EXIT
SCHOOL ENTRY/EXIT
WILCOX
CAMP WISDOM ROAD
BRIERFIELD
STOP
PROPOSED LEFT TURN BAY
IH 35 FRONTAGE ROAD
SCHOOL ENTRY/EXIT
BUILDING ZONE FOR NEW ELEMENTARY SCHOOL, MIDDLE SCHOOL, HIGH SCHOOL, GYMNASIUM AND & CAFETERIAS (TO BE BUILT IN PHASES)
169,000 SQ. FT MAXIMUM
2 STORY / 40' MAX BUILDING HEIGHT
TABLE 1: Calculated Queuing Space for Uplift Pinnacle Preparatory – Full Build Enrollment
School Level
Grades
Number of Students in Full Build-Out
Ratio: Number of Students per Queued Vehicle*
Number of Peak Queued Vehicles
Calculated Queuing Space in Linear Feet**
Provided Queuing Space in Linear Feet
Elementary School
K - 5
600
5.5:1
88
2,200
2,852
Middle School
6 - 8
504
7.5:1
67
1,675
2,280
High School
9 - 12
677
7.5:1
90
2,250
2,852***
*Average peak queuing ratio achieved from existing school queuing data
**Calculating for Elementary queuing areas
LEGEND:
- TRAFFIC CONES
- STOP OR YOUR TEEK
- LINE 1 PATH (ELEMENTARY SCHOOL AND HIGH SCHOOL)
- LINE 2 PATH (ELEMENTARY SCHOOL AND HIGH SCHOOL
- LINE 3 PATH (MIDDLE SCHOOL)
- PICK-UP/DROP-OFF AREA
- WEAVE AREA
P - CITY POLICEMAN
N.T.S.
BASED ON THE IMPLEMENTATION OF THE PROPOSED TRAFFIC MANAGEMENT PLAN, I, ELIZABETH CROWE, P.E. #70869, CERTIFY THAT NO QUEUING OF VEHICLES DROPPING OFF STUDENTS AT PINNACLE PREPARATORY IS ANTICIPATED IN THE CITY OF DALLAS ROW IN THE CITY OF DALLAS SHOULD BEGIN TO OCCUR ON THE CITY OF DALLAS ROW, UPLIFT EDUCATION IS RESPONSIBLE TO TAKE THE NECESSARY ACTION TO MITIGATE.
Walter P. Moore and Associates, Inc
TBPE Firm Registration No. 1856
STATE OF TEXAS
ELIZABETH L. CROWE
70869
LICENSED PROFESSIONAL ENGINEER
August 20, 2015
WALTER P MOORE
DESIGNED BY SN
REVIEWED BY ECC
DRAWN BY TME
PROJECT NUMBER T04-1500I-00
DATE AUGUST 2015
SHEET TITLE
UPLIFT PINNACLE PREPARATORY TMP
SHEET NUMBER
EXHIBIT 1

TRAFFIC MANAGEMENT PLAN

The Traffic Management Plan was designed to create a vehicular circulation route for parents to drop-off and pick-up their children during the critical morning and afternoon times associated with the beginning and dismissal of school. It is designed to maintain all queued vehicles within the school property during both the AM and PM peak periods and not impede the flow of traffic on adjacent streets. Elements of the proposed traffic management plan are provided.

Family Identification Numbers

It is recommended to provide a carpool identification card for each elementary school family. The parents should be instructed to have the identification card visible for the administrator collecting this information to relay the specific parent's arrival information to the staff to alert the elementary students.

Ingress & Egress

Three driveways will provide access to the site as illustrated in **EXHIBIT 1**. The driveway along IH 35 SBFR on the northeast side of the school will primarily provide entry and exit access to the Secondary School carline. The driveway on the southern end of the campus at Camp Wisdom Road will primarily serve entry and ext for the Elementary School carline. Modification to the existing median opening will be necessary for the eastbound left turn movement from Camp Wisdom Road.

The driveway that runs parallel to Camp Wisdom Road along Brierfield Drive on the south side of the proposed school site will provice auxiliary access from the Elementary School carline. As the school population grows, it is recommended to utilize the Elementary School access for a portion of the Secondary School, potentially the High School.

Drop-off/Pick-up Locations

As depicted in **EXHIBIT 1**, there are three proposed student Drop-off/Pick-up locations provided on the school campus. Two areas are located on the east side of the school buildings parallel to the IH 35 frontage road and one is located on the south side of the elementary building parallel to Camp Wisdom Road. As illustrated in **EXHIBIT 1**, the Elementary School carline is proposed to utilize the two areas on the south side of the campus. The Middle School is proposed to utilize the area on the north side of the campus. The High School operations would initially operate at the loading area on the north side of the campus and may adjust to the south side of the campus as necessary to

respond to the changing needs and loading/queuing demands of the campus as the enrollment increases.

Circulation

Vehicles for the Elementary School drop-off/pickups will enter the south side driveway from Camp Wisdom Road with either a left turn or a right turn into the school campus. After entering the school site, the motorists will follow either the red path or the green path as illustrated in **EXHIBIT 1**. Motorists in the red line will proceed to the red pick-up area and either exit the site via the school drive to Camp Wisdom Road or from the driveway along IH 35 SBFR. As the need and/or demand warrants, the Elementary Schod also has the opportunity to utilize the green path as indicated on **EXHIBIT 1** with motorists exiting to Brierfield Drive. Depending on the number of students living in the neighborhood with access to Brierfield Drive, this auxiliary access point may be utilized for entry to the school site.

The vehicles for Secondary School drop-off/pickup operations will enter the site through the north side driveway along IH 35 SBFR with a southbound right-turn. The motorist carline will proceed counterclockwise around the parking lots north of the Secondary School building, as shown in **EXHIBIT 1**. There is potential for double stacking of the carline during the Full Build enrollment of the school.

Since it is assumed that the Elementary School pickup operations and Secondary School pickup operations will be staggered by at least a period of 20 minutes, it is recommended that a portion of the Secondary School (potentially the High School) utilize the Elementary School queuing space and circulation plan.

Release Time

Other Uplift Education campuses typically stagger the release times between the Elementary School (grades Kindergarten through fifth grade) at 3:30 PM and the Upper School (Grades 6 -12) at 4:00 PM. It is assumed that the Elementary School pickup operations and Secondary School pickup operations will be staggered similarly by a minimum of 20 minutes.

Administrative Officials

School staff and/or volunteers will be necessary to assist with both morning drop-off and afternoon pick-up operations at the Elementary School.

Each school campus has unique carpool operation conditions with its number of staff, students and parents. Monitoring of the proposed Traffic Management Plan should be performed at the onset of the school's opening to ensure that it is operating efficiently. As this campus will be a new location, the school should be prepared to provide additional staff at the onset of the school's opening and adjust based on the demand both in the morning and in the afternoon. With full enrollment, it is proposed that a number of staff or volunteers assist during the afternoon pick-up operations. There are six potential staff or volunteer locations indicated for the Elementary School loading areas located at on **EXHIBIT 1**. One potential staff member or volunteer is also illustrated on **EXHIBIT 1** at the location where two queuing lines would merge into one line.

An additional administrator can be utilized near the Elementary entry to alert the staff at the pick-up areas of the names of students that are to be picked-up so that they are queued up and ready to load into the vehicles. Police assistance should be anticipated to be needed at the stop-controlled exit to Camp Wisdom Road across from Wilcox Drive.

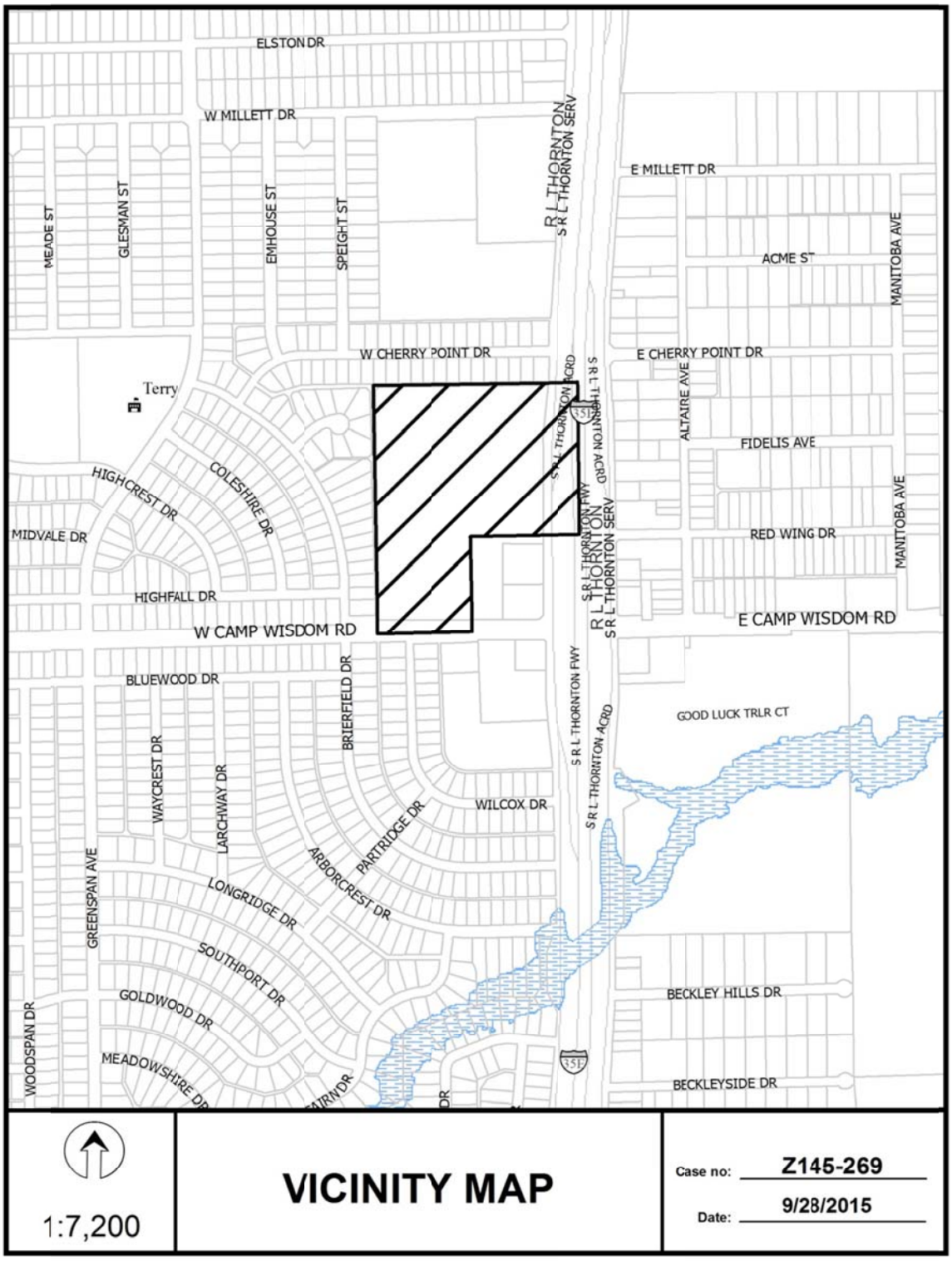
Summary

EXHIBIT 1 illustrates the Traffic Management Plan for Uplift Pinnacle Preparatory. New driveways are requested along southbound IH 35 E frontage road and Camp Wisdom Road. Median modification for the eastbound left turn into the school campus from Camp Wisdom Road is also requested. The City of Dallas has also requested right turn deceleration lanes for the approaches to the two proposed driveways as reflected on **EXHIBIT 1**.

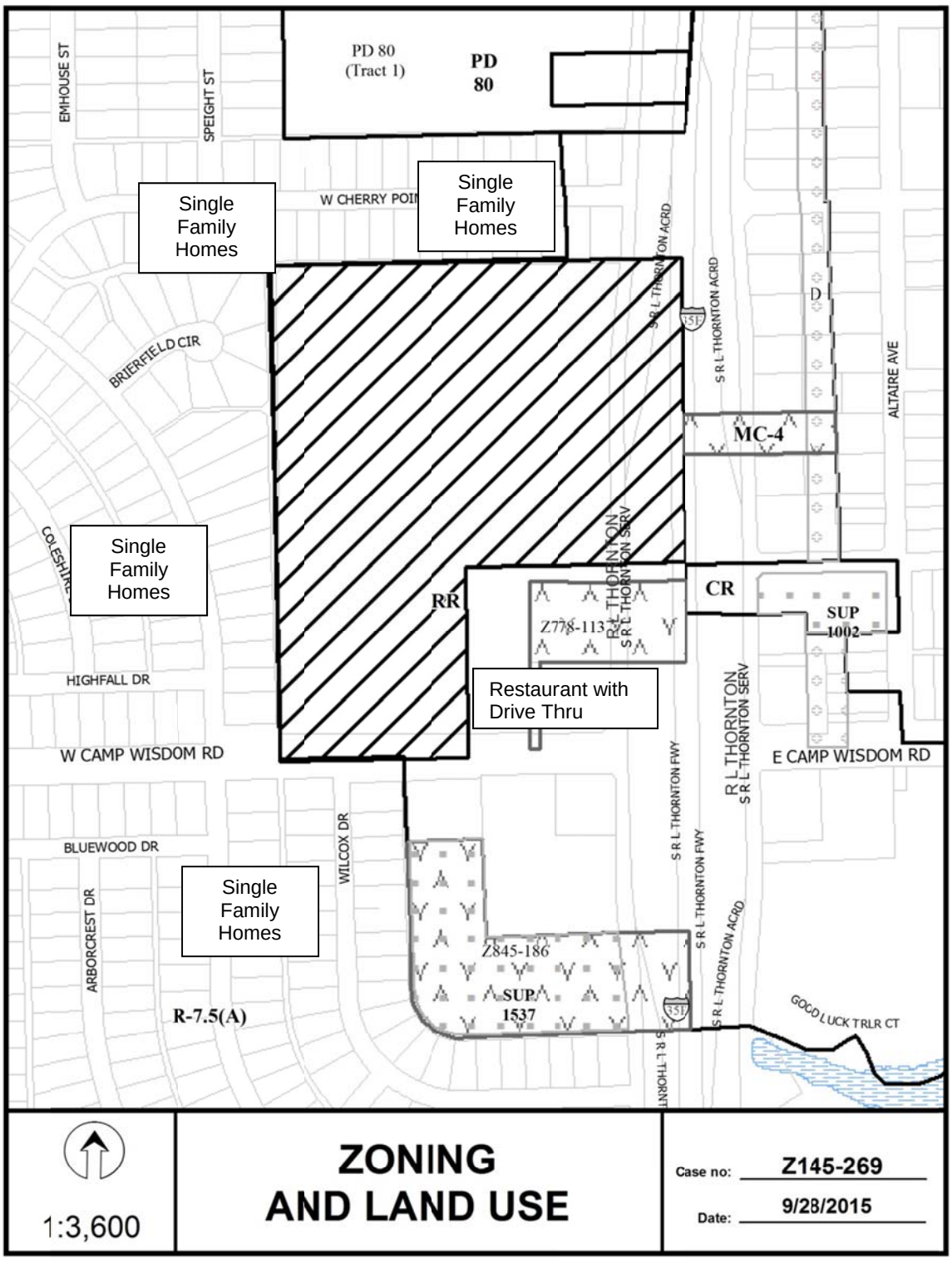
During the initiation of the school operations, it is recommended to monitor the drop off and pick up operations and make adjustments to the procedures as necessary. It is the responsibility of the Uplift Pinnacle Preparatory administrators to implement the plan. Based on the information provided by the school representatives and best planning practices, the provided circulation and queuing plan should be sufficient to accommodate the peak vehicular queue on site. No queuing will be allowed on the street right-of-way and administrators are responsible for immediately implementing any correction deemed necessary by City staff to correct any spill of queuing in the City of Dallas Right of Way. Strategies to minimize peak queuing conditions on school campuses include:

- Provide several opportunities for the parents, students and staff to learn any new carpool circulation plan; meetings, e-mails, posting on the school website, etc.,
- Instruct parents not to arrive at the school too early,

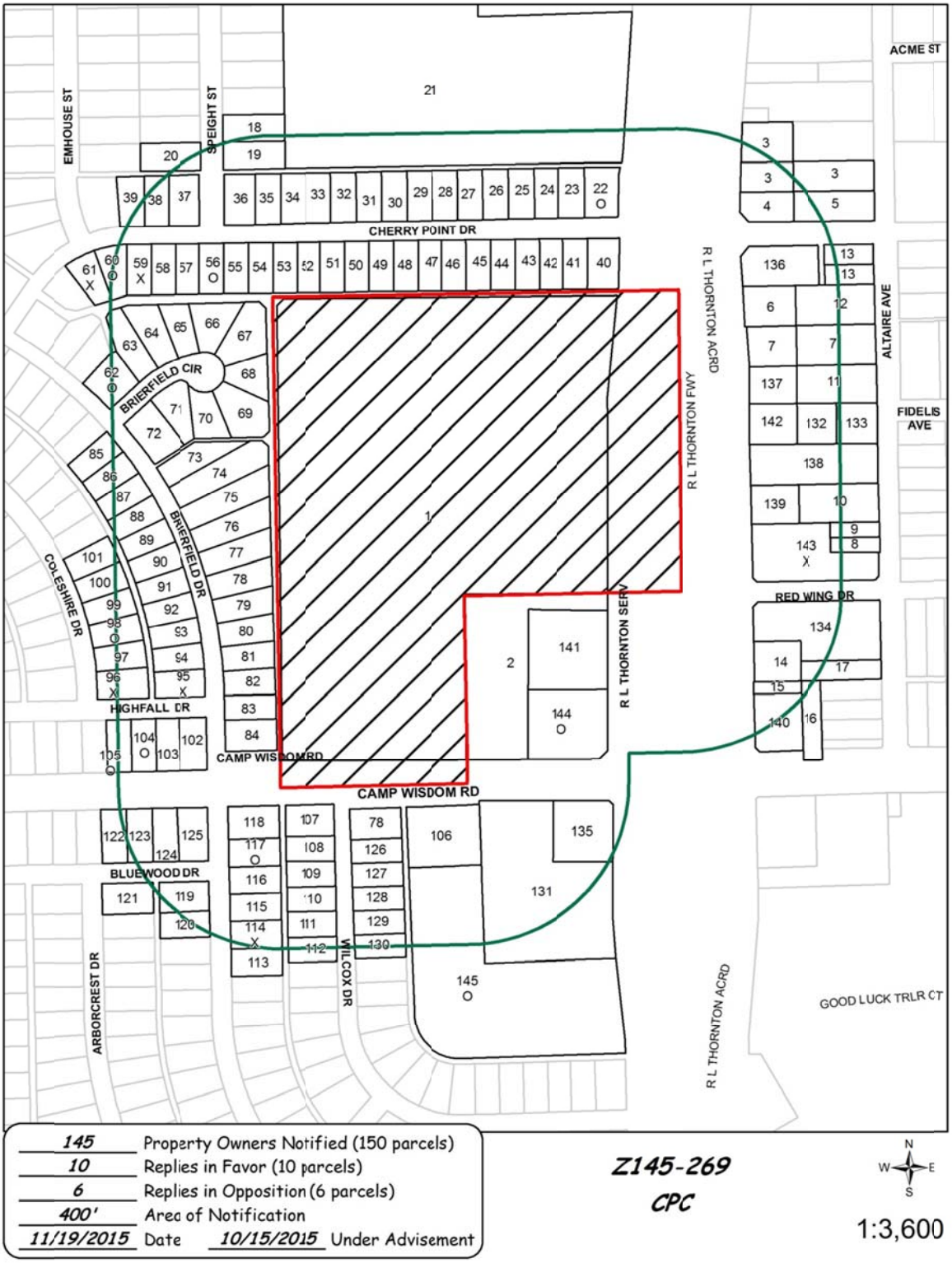
- Encourage carpooling among families,
- Have parents visibly display their family name or carpool number for easy identification,
- Encourage the parents to queue up closely to the vehicle in front of them,
- Provide additional staff members to assist with unloading/loading the Elementary School students, and/or
- Stagger release times for different grade levels.


ELSTON DR
W MILLETT DR
E MILLETT DR
MEADE ST
GLESMAN ST
EMHOUSE ST
SPEIGHT ST
R L THORNTON SERV
S R L THORNTON ACRD
ACME ST
MANITOBA AVE
W CHERRY POINT DR
E CHERRY POINT DR
Terry
ALTAIRE AVE
FIDELIS AVE
HIGHCREST DR
COLESHIRE DR
MIDVALE DR
HIGHFALL DR
S R L THORNTON FWY
RED WING DR
W CAMP WISDOM RD
E CAMP WISDOM RD
BLUEWOOD DR
BRIERFIELD DR
GOOD LUCK TRLR CT
WAYCREST DR
LARCHWAY DR
WILCOX DR
PARTRIDGE DR
ARBORCREST DR
GREENSPAN AVE
LONGRIDGE DR
SOUTHPORT DR
GOLDWOOD DR
BECKLEY HILLS DR
WOODSPAN DR
MEADOWSHIRE DR
BECKLEYSIDE DR
1:7,200
VICINITY MAP
Case no: Z145-269
Date: 9/28/2015


EMHOUSE ST
SPEIGHT ST
W CHERRY POINT DR
E CHERRY POINT DR
S R L THORNTON ACRD
BRIERFIELD CIR
COLESHIRE DR
HIGHFALL DR
W CAMP WISDOM RD
W CAMP WISDOM RD
R L THORNTON
S R L THORNTON SERV
R L THORNTON
S R L THORNTON SERV
RED WING DR
ALTAIRE AVE
E CAMP WISDOM RD
BLUEWOOD DR
WILCOX DR
ARBOR CREST DR
S R L THORNTON FWY
S R L THORNTON FWY
S R L THORNTON
GOOD LUCK TRLR CT
1:3,600
AERIAL MAP
Case no: Z145-269
Date: 9/28/2015


PD 80
(Tract 1)
PD 80
Single Family Homes
Single Family Homes
Single Family Homes
Single Family Homes
Restaurant with Drive Thru
MC-4
CR
RR
SUP 1002
Z778-113
Z845-186
SUP 1537
R-7.5(A)
EMHOUSE ST
SPEIGHT ST
W CHERRY POINT
BRIERFIELD CIR
COLESHIRE
HIGHFALL DR
W CAMP WISDOM RD
E CAMP WISDOM RD
BLUEWOOD DR
ARBORCREST DR
WILCOX DR
S R L THORNTON ACRD
S R L THORNTON FWY
R L THORNTON S R L THORNTON SERV
ALTAIRE AVE
GOOD LUCK TRLR CT
1:3,600
ZONING AND LAND USE
Case no: Z145-269
Date: 9/28/2015

CPC Responses



11/18/2015

Reply List of Property Owners

Z145-269

145 Property Owners Notified 10 Property Owners in Favor 6 Property Owners Opposed

Reply	*Label #*	*Address*		*Owner*
	1	125	CAMP WISDOM RD	RAVIC INV CO
	2	125	CAMP WISDOM RD	MCDONALDS CORP 042 0425
	3	6718	R L THORNTON FWY	TRUE VINE OF HOLINESS
	4	6734	R L THORNTON FWY	TRUE VINE OF HOLINESS MISSIONARY BAPTIST
	5	6735	ALTAIRE AVE	TRUE VINE BAPTIST CHURCH
	6	6810	R L THORNTON FWY	MAGEE A INV INC
	7	6822	R L THORNTON FWY	DELEON THOMAS
	8	6929	ALTAIRE AVE	DAVIS FAMILY LIVING TRUST
	9	6925	ALTAIRE AVE	DUNCAN MRS MARGIE
	10	6923	ALTAIRE AVE	JORDAN WILLIE L
	11	6831	ALTAIRE AVE	VELASQUEZ TOBIAS &
	12	6815	ALTAIRE AVE	VELASQUEZ TOBIAS ETUX
	13	6807	ALTAIRE AVE	MAGEE A INV INC
	14	7010	R L THORNTON FWY	HOWARD MARSHALL &
	15	7014	R L THORNTON FWY	SPEED ED REVOCABLE LIV TR
	16	117	CAMP WISDOM RD	BOSCHERT DANIEL S KAREN S REV LIVING TRUST &
	17	7015	ALTAIRE AVE	BOSCHERT DANIEL S & KAREN S REV LIVING TRUST
	18	6632	SPEIGHT ST	LONGORIA ROBERTO &
	19	6636	SPEIGHT ST	MORIN SAN JUANA DIAZ
	20	6637	SPEIGHT ST	GORDON CLAY
	21	6601	R L THORNTON FWY	INSPIRING BODY OF CHRIST
O	22	105	CHERRY POINT DR	CALDWELL VICKI
	23	109	CHERRY POINT DR	RAMOS ALEX TOLY &
	24	115	CHERRY POINT DR	PEREZ MARGARITA
	25	119	CHERRY POINT DR	ERWIN DOROTHY EST OF
	26	125	CHERRY POINT DR	READY MORTGAGE CORP

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	27	129	CHERRY POINT DR	FALLS TERRANCE ANINE &
	28	135	CHERRY POINT DR	MATHIS WILLIE F
	29	139	CHERRY POINT DR	PFEIL RICHARD A
	30	205	CHERRY POINT DR	HERNANDEZ JOSE LUIS
	31	209	CHERRY POINT DR	WOODS LORENE
	32	215	CHERRY POINT DR	CORTEZ ARMANDO
	33	219	CHERRY POINT DR	JONES AMOS D
	34	223	CHERRY POINT DR	MENDEZ JOSE D
	35	227	CHERRY POINT DR	HOLLINS DANIEL SR
	36	235	CHERRY POINT DR	FINN SR LARRY LEROY
	37	305	CHERRY POINT DR	DENNIS DEBORAH
	38	311	CHERRY POINT DR	PAULIN SALVADOR & MA JEROMNIMA
	39	317	CHERRY POINT DR	CHILDERS ROY L
	40	106	CHERRY POINT DR	BRIONES GREGORIO T
	41	110	CHERRY POINT DR	DUARTE TERESO
	42	116	CHERRY POINT DR	WORTHAM MISHA L &
	43	120	CHERRY POINT DR	SKINNER CHARLES RAY
	44	126	CHERRY POINT DR	HOUSTON VERNON LLC
	45	130	CHERRY POINT DR	BLOSSER MARK & DEBORAH
	46	136	CHERRY POINT DR	BLOSSER MARK
	47	140	CHERRY POINT DR	COLEMAN MICHAL DEWYAN
	48	204	CHERRY POINT DR	IBARRA ROSA M &
	49	208	CHERRY POINT DR	PFEIL DICK
	50	214	CHERRY POINT DR	KING CHARLENE
	51	218	CHERRY POINT DR	COLEMAN JAMES
	52	224	CHERRY POINT DR	GREEN MARIE R
	53	228	CHERRY POINT DR	LEWIS ANDREA
	54	234	CHERRY POINT DR	STEEN ISAAC A & RHONDA
	55	238	CHERRY POINT DR	OLIVE PIT LLC
O	56	244	CHERRY POINT DR	COLEMAN ROMMIE
	57	304	CHERRY POINT DR	GUILLEN ANTONIO &

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	58	310	CHERRY POINT DR	MARTINEZ MARIA L & NICANOR HERNANDEZ
X	59	316	CHERRY POINT DR	MARTIN ALFRED H
O	60	320	CHERRY POINT DR	PRICE NOMOREE
X	61	326	CHERRY POINT DR	WILSON JERRY D
O	62	6822	BRIERFIELD DR	LAGARD BRENDA S
	63	6828	BRIERFIELD CIR	MARTINEZ LUIS E & CARMELA
	64	6832	BRIERFIELD CIR	BANKS JAMES & THELMA
	65	6836	BRIERFIELD CIR	BANKS JAMES & THELMA
	66	6840	BRIERFIELD CIR	JJB III INVESTMENTS INC
	67	6844	BRIERFIELD CIR	CLARK RANDY
	68	6848	BRIERFIELD CIR	LONDON RODERICK L MAR
	69	6852	BRIERFIELD CIR	PEREZ MIGUEL
	70	6856	BRIERFIELD CIR	SANTIBANEZ RENE & CONSTANCIA
	71	6860	BRIERFIELD CIR	PAULIN ADRIAN
	72	6864	BRIERFIELD CIR	LEWIS ROBERT B JR
	73	6914	BRIERFIELD DR	DUARTE MARTIN &
	74	6920	BRIERFIELD DR	PFEIL RICHARD A & ALANA P
	75	6924	BRIERFIELD DR	PFEIL RICHARD ALAN
	76	6930	BRIERFIELD DR	HERNANDEZ JOSE &
	77	6934	BRIERFIELD DR	BROOKS FRANCES B
	78	6940	BRIERFIELD DR	CLARK FREEMAN CO LLC
	79	7004	BRIERFIELD DR	WILLIAMS LEWILBURNE &
	80	7010	BRIERFIELD DR	AUSTIN BILLY
	81	7014	BRIERFIELD DR	ANGLEFORGE PROPERTIES LLC
	82	7020	BRIERFIELD DR	BROWN EMMETT D JR ETAL
	83	7024	BRIERFIELD DR	DAWKINS HANTOYO
	84	7030	BRIERFIELD DR	ANDREWS RUBY EST
	85	6903	BRIERFIELD DR	CONTRERAS KENNEDY A
	86	6909	BRIERFIELD DR	DANIELS H PAUL
	87	6915	BRIERFIELD DR	BUSBY WANDA
	88	6919	BRIERFIELD DR	CURRY MELVIN L

Reply	*Label #*	*Address*		*Owner*
	89	6923	BRIERFIELD DR	ORTEGA LEOPOLDO & MARIA LOURDES
	90	6929	BRIERFIELD DR	ESCUADRA JAVIER T.
	91	6933	BRIERFIELD DR	VILLAFRANCO ANA &
	92	7005	BRIERFIELD DR	KELLEY OSCAR JR
	93	7011	BRIERFIELD DR	UNGER DONALD G & RHONDA S
	94	7015	BRIERFIELD DR	OAK CLIFF RENTALS & RESTORATION PROJECTS LLC
X	95	7019	BRIERFIELD DR	BATTS SHARON
X	96	7028	COLESHIRE DR	HARPER JERRY D
	97	7022	COLESHIRE DR	POSADA FRANCISCO J &
O	98	7018	COLESHIRE DR	ALLISON BRIAN
	99	7012	COLESHIRE DR	TAYLOR AMOS JR &
	100	7008	COLESHIRE DR	YOUNG ROBERT
	101	7002	COLESHIRE DR	MITCHELL LOUIS H &
	102	406	HIGHFALL DR	HILL LEWIS L
	103	410	HIGHFALL DR	JEFFERSON WILLIE L ESTATE
O	104	416	HIGHFALL DR	BROWN H L
O	105	420	HIGHFALL DR	ALLEN DOROTHY
	106	110	CAMP WISDOM RD	HINDI AMGAD HAMID
	107	7105	WILCOX DR	WRIGHT LEWIS W &
	108	7111	WILCOX DR	WHISNANT J CLIFTON
	109	7115	WILCOX DR	VILLEGAS JESUS
	110	7121	WILCOX DR	JOHNSON ROYDELL
	111	7125	WILCOX DR	FIELDS BETTYE J
	112	7131	WILCOX DR	ROSENBOROUGH MICHAEL
	113	7130	BRIERFIELD DR	IRVIN WALTER L
X	114	7126	BRIERFIELD DR	MCCLENDON BERTHA L
	115	7120	BRIERFIELD DR	SCARBER FRED
	116	7116	BRIERFIELD DR	BUTLER TIMMIE D &
O	117	7110	BRIERFIELD DR	ESSLINGER INVESTMENTS IV LLC
	118	7106	BRIERFIELD DR	VILLAREAL RENE
	119	7119	BRIERFIELD DR	GARDNER WILLIAM & LUCY

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	120	7125	BRIERFIELD DR	FONTENOT ROOSEVELT JR &
	121	7104	ARBORCREST DR	HILL TERESA A
	122	421	BLUEWOOD DR	WAKEFIELD WALKER &
	123	417	BLUEWOOD DR	VALIENTE DANIELA
	124	411	BLUEWOOD DR	BROWN KENNARDS C &
	125	405	BLUEWOOD DR	ESPINOZA ROBERTO M &
	126	7110	WILCOX DR	PALMER GLADYS M
	127	7114	WILCOX DR	HAL LOUISE
	128	7120	WILCOX DR	TIMOTHY PROPERTIES LLC
	129	7124	WILCOX DR	MAIZE VIDA
	130	7130	WILCOX DR	CONNER WILLIAM C
	131	220	CAMP WISDOM RD	GOKUL GROUP CORPORATION
	132	6906	R L THORNTON FWY	VELASQUEZ TOBIAS & ABELINA
	133	6907	ALTAIRE AVE	VELASQUEZ TOBIAS &ABELINA
	134	7006	R L THORNTON FWY	RAM LAXMAN INC
	135	7107	R L THORNTON FWY	RL THORNTON FUEL CNT LP
	136	6802	R L THORNTON FWY	MAGEE A INV INC
	137	6830	R L THORNTON FWY	VELASQUEZ TOBIAS &
	138	6910	R L THORNTON FWY	ROSTON CHARLOTTE N NAULLS &
	139	6918	R L THORNTON FWY	JORDAN WILLIE L
	140	7026	R L THORNTON FWY	BOSCHERT DANIEL S & KAREN SPEED BOSCHERT T
	141	7015	R L THORNTON FWY	AMERCO REAL ESTATE CO
	142	6906	R L THORNTON FWY	VELASQUEZ TOBIAS & ABELINA
X	143	6928	R L THORNTON FWY	DAVIS WM B & CONSTANCE TR
O	144	7027	R L THORNTON FWY	GHALA PETROLEUM INC
O	145	7227	R L THORNTON FWY	I 35 WAREHOUSE ASSOC LTD

AGENDA ITEM # 48

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 45 E

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting an amendment to Planned Development Subdistrict No. 96 within Planned Development District No. 193, the Oak Lawn Special Purpose District, on the west line of Harry Hines Boulevard and the east line of the Houston Street Extension
Recommendation of Staff and CPC: Approval, subject to revised conditions
Z145-306(RB)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z145-306(RB) **DATE FILED:** July 24, 2015

LOCATION: West line of Harry Hines Boulevard and the east line of the Houston Street Extension

COUNCIL DISTRICT: 2 **MAPSCO:** 45 E

SIZE OF REQUEST: Approx. 4.995 Acres **CENSUS TRACT:** 19.00

APPLICANT/OWNER: ASA Apartments, LP

REPRESENTATIVE: Rob Baldwin

REQUEST: An application for an amendment to Planned Development Subdistrict No. 96 within Planned Development District No. 193, the Oak Lawn Special Purpose District.

SUMMARY: The applicant is proposing to provide for standards to locate a utility structure along the east façade and revised sign regulations. Specific attached signage along with one detached sign will provide for an effective area greater than permitted by existing sign regulations. Due to the site's topography, the development rises above the adjacent roadway network. As such, the attached enhanced signage will provide for required visibility normally associated with sign regulations while not impacting adjacent uses.

CPC RECOMMENDATION: **Approval**, subject to revised conditions.

STAFF RECOMMENDATION: **Approval**, subject to revised conditions.

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends approval based upon:

1. *Performance impacts upon surrounding property* – The proposed revisions, certain sign additions and criteria for locating electric generator infrastructure will not impact the adjacent high-density mixed use developments.

2. *Traffic impact* – The applicant's request will not revise any existing entitlements nor existing construction efforts on the property.

3. *Comprehensive Plan or Area Plan Conformance* – The request complies with the Urban Mixed-Use Building Block as well as the Objectives of the Oak Lawn Plan.

Zoning History: Other than noted above, there has been no recent zoning activity in the immediate area relevant to the request.

Thoroughfare	Existing & Proposed ROW
Harry Hines Boulevard	Principal Arterial/Existing Couplet; 85' ROW
Houston Street	Minor Arterial/Existing Couplet; 80' ROW

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the requested amendment and determined it will not impact the surrounding street system.

STAFF ANALYSIS

Area Plans:

The Oak Lawn Special Purpose District and the Oak Lawn Plan include the following objectives:

(1) To achieve buildings more urban in form.
(2) To promote and protect an attractive street level pedestrian environment with continuous street frontage activities in retail areas.
(3) To encourage the placement of off-street parking underground or within buildings similar in appearance to non-parking buildings.

(4) To promote development appropriate to the character of nearby neighborhood uses by imposing standards sensitive to scale and adjacency issues.
(5) To use existing zoned development densities as a base from which to plan, while providing bonuses to encourage residential development in commercial areas.
(6) To discourage variances or zoning changes which would erode the quantity or quality of single-family neighborhoods, or would fail to adhere to the standards for multiple-family neighborhoods and commercial areas.
(7) To promote landscape/streetscape quality and appearance.

The site is currently under construction to provide for multiple family dwellings and a small component of retail uses (see Existing Development Plan). As such, the above referenced Objectives are not being impacted by the applicant's request.

Comprehensive Plan: The request site is located in an area considered Urban Mixed-Use. The Urban Mixed-Use Building Block incorporates a vibrant mix of residential and employment uses at a lower density than the Downtown Building Block. These areas are typically near Downtown, along the Trinity River or near major transit centers. Examples include Uptown, the City Place/West Village area, Stemmons Design District, Cedars and Deep Ellum. Urban Mixed-Use Building Blocks provide residents with a vibrant blend of opportunities to live, work, shop and play within a closely defined area. Buildings range from high-rise residential or mid-rise commercial towers to townhomes and small corner shops. Good access to transit is a critical element. Similar to Downtown, the Urban Mixed-Use Building Blocks offer employment and housing options and are important economic growth areas for businesses. People on foot or bike can enjoy interesting storefronts at ground level with benches, public art, on-street parking and wide sidewalks, creating an appealing streetscape. Large parking areas and other auto-oriented land uses are typically located at the edges.

LAND USE ELEMENT

GOAL 1.2 Promote desired development.

Policy 1.2.1 Use Vision Building Blocks as a general guide for desired development patterns.

Land Use Compatibility: On January 9, 2013, the City Council adopted PDS No. 96 for development of a mixed use development comprised of 375 multiple family dwelling units, retail (6,000 sf), and accessory uses to the residential component of the development. The site is currently developing according to the attached development plan. The site wraps (as well as incorporates, design-wise) a billboard that is outside

the PDS property boundary.

At this time, the applicant has requested certain amendments to the sign regulations. Specifically, specific attached signage along with one detached sign will provide for an effective area greater than permitted by existing sign regulations.

The site possesses significant topography, rising approximately 40 feet from its intersection with Houston Street/Harry Hines Boulevard to the Katy Trail site frontage, with a highpoint in the middle of the site, approximately 50 feet above the Houston Street elevation, as measured midpoint along the street's frontage. As such, the site is somewhat isolated yet is surrounded by high-density mixed use projects. Examples of this includes Harwood International's 'Walk to Life' mixed use area that is situated to the east and generally spans along both sides of the Harwood Street frontage from Jack Street southeasterly to Olive Street. The Victory Planned Development District (PDD No. 582) is situated on approximately to the south/southwest on approximately 87 acres and is partially developed within the southern half of its boundary with a mix of uses inclusive of American Airlines Arena. The DART Victory Station (served by the Orange and Green Lines) is situated along the IH 35 frontage and interconnects with the balance of the DART system and the Trinity Rail Express (TRE) service line at DART's Union Station platform. It should be noted that acceptable walking distances to mass transit are approximately one-quarter mile (1,320 feet); the distance from the site's southernmost point along Houston Street to the Victory Station, measured diagonally, is approximately 1,900 feet and approximately 2,900 feet measured along existing right-of-way alignments.

During the initial zoning process creating the subdistrict, the applicant worked with staff to require certain design criteria as well as a commitment to publicly accessible open space being provided, thus ensuring this development becomes part of the ground level activity generated by the Katy Trail, future connection to the Trinity Strand Trail (see attached masterplan) and their interconnectivity with adjacent high-density mixed use developments. The development plan and ordinance provide for this commitment, with no revisions proposed at this time.

Regarding signage, due to the site's topography, the development rises above the adjacent roadway network. As such, the attached enhanced signage will provide for required visibility normally associated with sign rights for a mixed use development while not impacting adjacent uses.

As a result of this analysis, staff supports the requested amendment to PDS No. 96, subject to the revised conditions attached to this material.

Signs: As noted above, the site is located on an elevated parcel at the intersection of two thoroughfares and significantly separated from adjacent developments, either horizontally or vertically. When the PDS was subsequently amended, the applicant maintained comfort with the existing non-business sign provisions.

As the development has now taken up a more prominent presence in the area, predominately due to the topography of the property and its interaction with the Katy Trail and Trinity Strand Trail, the retail component and required publicly accessible open space area commands signage greater than that permitted by existing signage provisions. Additionally, existing sign provisions limit effective area of both attached (limit of two signs per building, each on a separate façade, maximum of 40 sf of effective area, increasing as the sign moves up the building) and detached (restricted setbacks, one sign per 600 feet of frontage, maximum of 50 sf of effective area/< 25' height).

The applicant has worked with staff to ensure the vision of embracing the human element that exists due to the trail connections and mixed use development within PDD 582 possesses signage that is more appropriate to identify this area. With regard to attached signage, the development is very linear with 360 degree exposure, thus additional signage is warranted.

In summary, staff supports the attached sign enhancements and has determined they will not detract from the site's unique visibility nor will the signs impact adjacent development.

Landscaping: PDS No. 96 generally requires compliance with PDD No. 193's landscape requirements, subject to specific revisions that were adopted with the recently adopted revision to the PDS (January 9, 2013). Additionally, there is a Houston Street Tree Plan that was created, in part, due to the existing topography (at the time) and a difficulty to create a streetscape; the applicant's request does not affect this plan.

Environmental: As noted in this material, the site enjoys significant topography that the applicant has indicated plans on showcasing within the development of the property.

As a result, PDS No. 96 requires a slope stability analysis, of which has been submitted and accepted by the Engineering Section of the Department of Sustainable Development and Construction.

CPC ACTION

On October 15, 2015, the City Plan Commission held this item under advisement.

November 5, 2015

Motion: It was moved to recommend **approval** of an amendment to Planned Development Subdistrict No. 96, subject to revised conditions 1) Under Attached signage – Limit to 8 attached signs within Planned Development District No. 193, the Oak Lawn Special Purpose District, on the west line of Harry Hines Boulevard and the east line of the Houston Street Extension.

Maker: Ridley
Second: Anantasomboon
Result: Carried: 13 to 0

For: 13 - Anglin, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Housewright, Schultz, Peadon, Murphy*, Ridley, Tarpley*

Against: 0
Absent: 2 - Emmons, Jung
Vacancy: 0

*out of the room, shown voting in favor

Notices: Area: 500 Mailed: 17
Replies: For: 0 Against: 0

Speakers: None

List of Officers

ASA Apartments Limited Partnership

DCH 104 Skyline, LP, General Partner

Maple Multi-Family Development, LLC

Anne L. Raymond, Manager

Kenneth J. Valach, Vice President

Mathew D. Schildt, Vice President

Matt Enzler, Vice President

Megan T. Smith, Vice President

Scott D. David, Vice President

Stephen Bancroft, Vice President

Timothy Hogan, Vice President

Behringer Harvard Skyline Project GP, LLC, General Partner

Behringer Harvard Skyline Investors LP

E. Alan Patton, Chaiman

Sami S. Abbasi, Member

Roger D. Bowler, Member

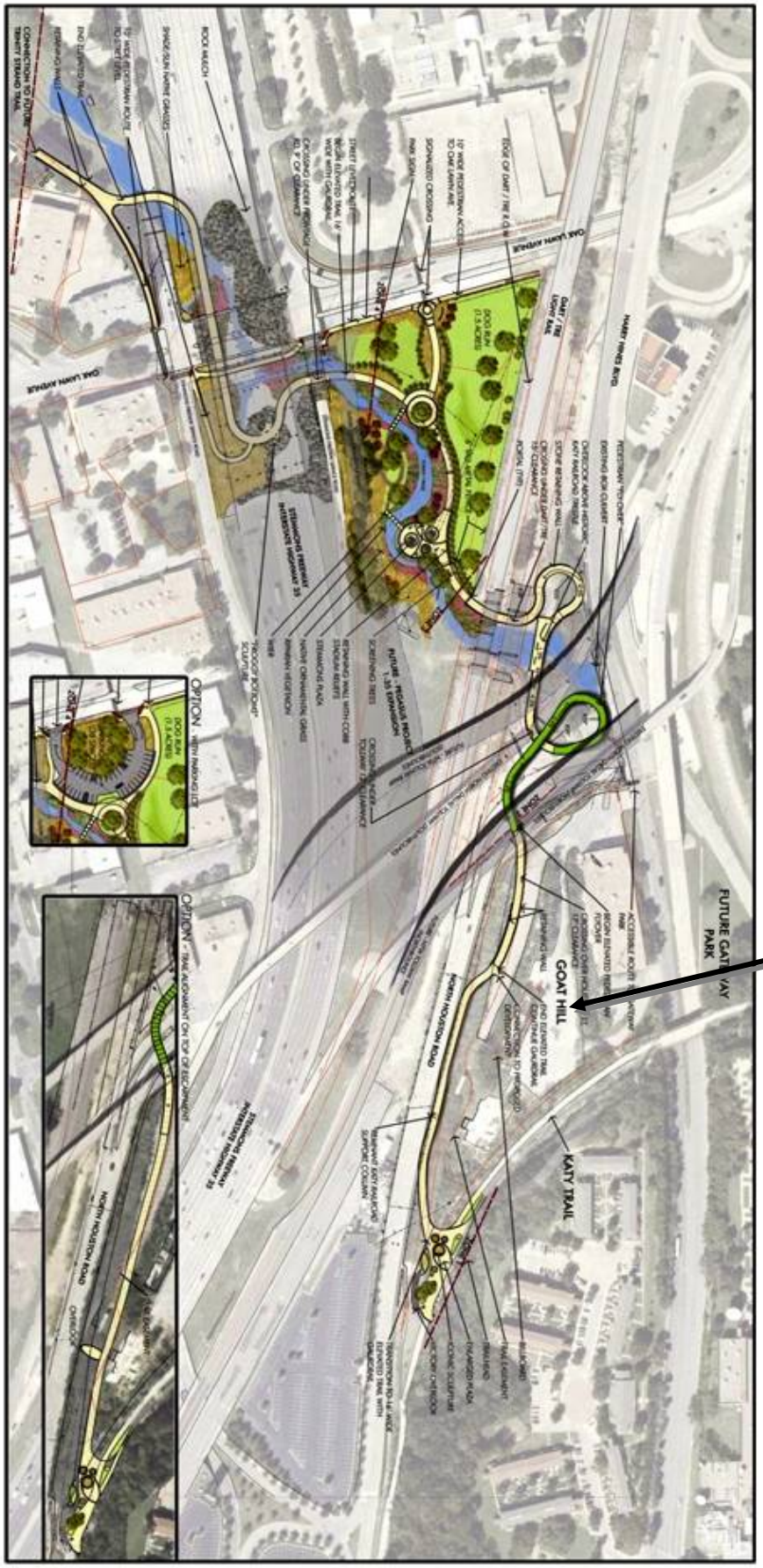
David D. Fitch, Member

Jonathan L. Kempner, Member

Mark T. Alfieri, Member

Murray J. McCabe, Member

Rober S. Aisner, Member


Trinity Strand Trail/Katy Trail Master Plan
Site
FUTURE GATEWAY PARK
GOAT HILL
KATY TRAIL
NORTH HOUSTON ROAD
OAK LAWN AVENUE
HARRY HINES BLVD
OPTION
OPTION

Proposed Conditions

Division S-96. PD Subdistrict 96.

SEC. S-96.101. LEGISLATIVE HISTORY.

PD Subdistrict 96 was established by Ordinance No. 28878, passed by the Dallas City Council on January 9, 2013.

SEC. S-96.102. PROPERTY LOCATION AND SIZE.

PD Subdistrict 96 is established on property generally bounded by Harry Hines Boulevard, the Dallas North Tollway, Houston Street, and the Katy Trail. The size of PD Subdistrict 96 is 4.995 acres. (Ord. 28878)

SEC. S-96.103. DEFINITIONS AND INTERPRETATIONS.

(a) Unless otherwise stated, the definitions and interpretations in Chapter 51 and Part I of this article apply to this division. If there is a conflict, this division controls. If there is a conflict between Chapter 51 and Part I of this article, Part I of this article controls.

(b) In this division:

(1) HIGHLY REFLECTIVE GLASS means glass with exterior visible reflectance percentages in excess of 27 percent. Visible reflectance is the percentage of available visible light energy reflected away from the exterior surface of the glass.

(2) SUBDISTRICT means a subdistrict of PD 193.

(c) Unless otherwise stated, all references to articles, divisions, or sections in this division are to articles, divisions, or sections in Chapter 51.

(d) This subdistrict is considered to be a nonresidential zoning district.

SEC. S-96.104. EXHIBITS.

The following exhibits are incorporated into this division:

(1) Exhibit S-96A: conceptual plan.

(2) Exhibit S-96B: Houston Street tree plan.

SEC. S-96.105. CONCEPTUAL PLAN.

Development and use of the Property must comply with the conceptual plan (Exhibit S-96A). If there is a conflict between the text of this division and the conceptual plan, the text of this division controls.

SEC. S-96.106. DEVELOPMENT PLAN.

A development plan must be approved by the city plan commission before the issuance of any building permit to authorize work in this subdistrict. If there is a conflict between the text of this division and the development plan, the text of this division controls.

SEC. S-96.107. MAIN USES PERMITTED.

(a) Except as provided in this section, the only main uses permitted in this subdistrict are those main uses permitted in the I-2 Industrial Subdistrict, subject to the same conditions applicable in the I-2 Industrial Subdistrict, as set out in Part I of this article. For example, a use permitted in the I-2 Industrial Subdistrict only by specific use permit (SUP) is permitted in this subdistrict only by SUP; a use subject to development impact review (DIR) in the I-2 Industrial Subdistrict is subject to DIR in this subdistrict; etc.

(b) The following additional uses are permitted in this subdistrict:

-- Multiple-family.
-- Community center (private). *[Only as a limited use within a multiple-family use.]*

SEC. S-96.108. ACCESSORY USES.

(a) As a general rule, an accessory use is permitted in any subdistrict in which the main use is permitted. Some specific accessory uses, however, due to their unique nature, are subject to additional regulations in Section 51P-193.108. For more information regarding accessory uses, consult Section 51P-193.108.

(b) The following accessory uses are prohibited:

-- Amateur communications tower.
-- Open storage.
-- Private stable.

SEC. S-96.109. YARD, LOT, AND SPACE REGULATIONS.

(Note: The yard, lot, and space regulations in this section must be read together with the yard, lot, and space regulations in Part I of this article. If there is a conflict between this section and Part I of this article, this section controls.)

(a) In general. Except as provided in this section, the yard, lot, and space regulations for the I-2 Industrial Subdistrict apply.

(b) Multiple-family uses.

(1) Front yard. Minimum front yard is 10 feet. Balconies may extend up to five feet into the required front yard setback.

(2) Side and rear yard. Minimum side and rear yards are 10 feet. Balconies may extend up to five feet into the required side or rear yard setback, provided that any balcony projecting towards the Katy Trail must have a clear height of at least 25 feet above the Katy Trail.

(3) Density. Maximum number of dwelling units is 388.

(4) Height. Except as provided in this paragraph, maximum structure height for occupied floor area is 150 feet.

(A) Elevator penthouses, mechanical equipment, or a clerestory may project a maximum of 12 feet above occupied floor area.

(B) A parapet wall, limited to a height of four feet, may project above the maximum structure height for occupied floor area.

(5) Lot coverage. Maximum lot coverage is 80 percent. Aboveground parking structures are included in lot coverage calculations; surface parking lots and underground parking structures are not.

(6) Stories. Except as provided in this paragraph, maximum number of stories is 12. Maximum number of stories for an aboveground parking garage is three.

SEC. S-96.110. OFF-STREET PARKING AND LOADING.

(a) In general. Except as provided in this section, consult Part I of this article for the specific off-street parking and loading requirements for each use.

(b) Multiple-family uses.

(1) In general. Parking and loading must be provided in accordance with Part I of this article.

(2) Leasing office. A minimum of four off-street parking spaces must be provided for the exclusive use of the leasing office between the hours of 8:00 a.m. and 6:00 p.m., Monday through Sunday.

(3) Community center (private). No off-street parking is required for the first 2,000 square feet of floor area. For floor area over 2,000 square feet, one space is required for each 1,000 square feet of floor area, with no less than one space being provided.

(c) Parking structures.

(1) All permanent parking structures must be located either underground or be concealed by a facade that is similar in appearance to the facade of either the main building it serves or the closest main building.

(2) Aboveground parking structures must be constructed so as to screen vehicle headlights from shining on adjacent property to the east and shining into the airspace above the Katy Trail by a minimum forty-two-inch high wall.

(3) Openings in a parking structure facade must not exceed 55 percent of the total garage facade area.

(d) Valet parking. Use of the right-of-way for valet parking is subject to a central valet plan if required by Chapter 43 of the Dallas City Code.

SEC. S-96.111. SIDEWALKS.

(a) In general. Except as provided in this section, sidewalks must be provided in accordance with Part I of this article.

(b) Houston Street. Existing sidewalks along Houston Street must be maintained and located as shown on the conceptual plan.

(c) Variance. The Board of Adjustment may not grant a variance to the sidewalk requirements in this subsection.

(d) Waiver. Sidewalk waivers are not permitted.

SEC. S-96.112. TRAIL IMPROVEMENTS.

For the Trinity Strand Trail located as shown on the conceptual plan, a minimum unobstructed trail width of 12 feet must be provided.

SEC. S-96.113. STABILITY SLOPE ANALYSIS.

Prior to the issuance of a building permit, a stability slope analysis, as part of the engineering plans, must be submitted to the Engineering Section of the Department of Sustainable Development and Construction to confirm that a minimum safety factor of 1.5 is achieved for any overturning along the slip surface of the structure.

SEC. S-96.114. ENVIRONMENTAL PERFORMANCE STANDARDS.

See Article VI.

SEC. S-96.115. LANDSCAPING.

(a) In general. Except as provided in this section, landscaping and screening must be provided in accordance with Part I of this article.

(b) Tree preservation. Protected trees must be preserved in accordance with Article X. The protective fencing and tree mitigation requirements apply to all uses. No grading may occur and no building permit may be issued to authorize work on the Property until required protective fencing is inspected and approved by the building official.

(c) Parkway trees.

(1) Except as provided in this subsection, parkway trees must have a minimum height of 12 feet and a minimum caliper of three-and-one-half inches measured at a point 12 inches above the root ball at the time of installation.

(2) If the building official determines that a tree with a minimum height of 12 feet will interfere with utilities, a parkway tree may be a small tree and may have a minimum height of six feet and a minimum caliper of two inches measured at a point 12 inches above the root ball at the time of installation.

(3) Except as provided in this paragraph, landscaping along Houston Street must comply with the Houston Street tree plan (Exhibit S-96B). In order to maintain the integrity of the existing slopes and areas of dense vegetation, any removal of vegetation in the areas shown on the Houston Street Tree Plan must be approved by the building official.

(d) Loading screening. Off-street loading spaces abutting a street must be screened by a minimum three-foot-wide planting area with minimum three-foot-tall evergreen shrubs spaced a minimum three feet on center.

(e) Emergency generator screening.

(1) Solid screening must be provided on all sides, excluding an area to access the emergency generator, utilizing one or a combination of both of the following:

(i) Solid fencing a minimum of six feet in height.

(ii) Evergreen plant materials, a minimum of six feet in height at time of planting and capable of obtaining a solid appearance within three years of planting.

(2) The emergency generator is not required to be shown on a development plan if it is less than six feet in height.

(f) Maintenance. Plant materials must be maintained in a healthy, growing condition.

SEC. S-96.116. URBAN DESIGN REQUIREMENTS FOR MULTIPLE-FAMILY USES.

(a) Building facades longer than 80 feet must incorporate at least three of the following:

(1) Changes in building materials, color, and texture that contrast with the rest of the facade.

(2) Building articulation with projections, recesses, parapets, cornices, and varying roof height.

(3) Distinction between the building's base (street and lower levels), middle (core mid-section), and top (upper level) by use of architectural elements, materials, details, or changes in wall plane.

(4) Deep inset windows.

(5) Stepped-back floor plates at upper levels to diminish overall scale.

(6) Architectural elements that protrude from the face of the building, such as balconies, decks, overhangs, sunshades, and terraces, that are integrated into the building's architecture.

(b) A minimum of 1,000 square feet of publicly accessible, high quality usable open space must be provided as noted on the conceptual plan and must contain a minimum of four of the following:

(1) Benches, and/or built-in seatwalls to accommodate a minimum of 16 people.

(2) A minimum of one trash receptacle.

(3) Bicycle racks to accommodate a minimum of 12 bicycles.

(4) Enhanced paving, wherever paving is provided.

(5) Pedestrian scaled lighting.

(6) A minimum of one drinking fountain.

(c) Highly reflective glass may not be used as an exterior building material.

SEC. S-96.117. SIGNS.

(a) Except as provided, s ~~S~~igns must comply with the provisions for non-business zoning districts in Article VII.

(b) Detached signs and monument signs.

(1) A maximum of three are permitted on the Property.

(2) A minimum 10 foot front yard setback is required for a monument sign.

(3) Maximum height of a monument sign is 15 feet.

(4) A monument sign may not exceed 70 square feet in effective area.

(c) Attached signs.

(1) Except as provided in this paragraph, the maximum number of attached signs is eight.

(2) A maximum of one attached sign per occupancy located on the first two stories of a building is allowed up to 180 square feet of effective area for each .

(3) For attached signs located above the fourth story of a building, maximum effective area is 65 square feet each.

SEC. S-96.118. ADDITIONAL PROVISIONS.

(a) The Property must be properly maintained in a state of good repair and neat appearance.

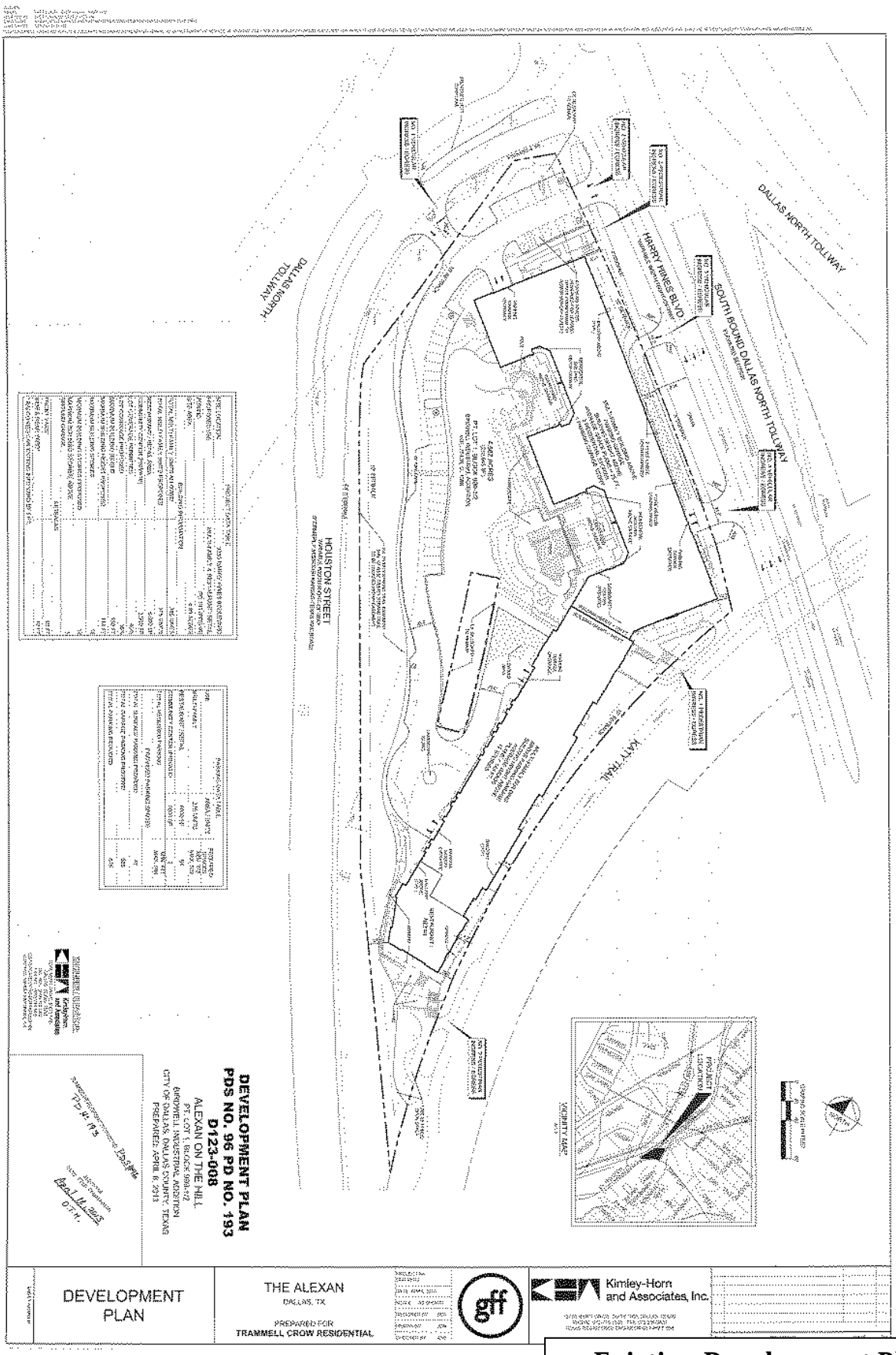
(b) Development and use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the city.

(c) Development and use of the Property must comply with Part I of this article.

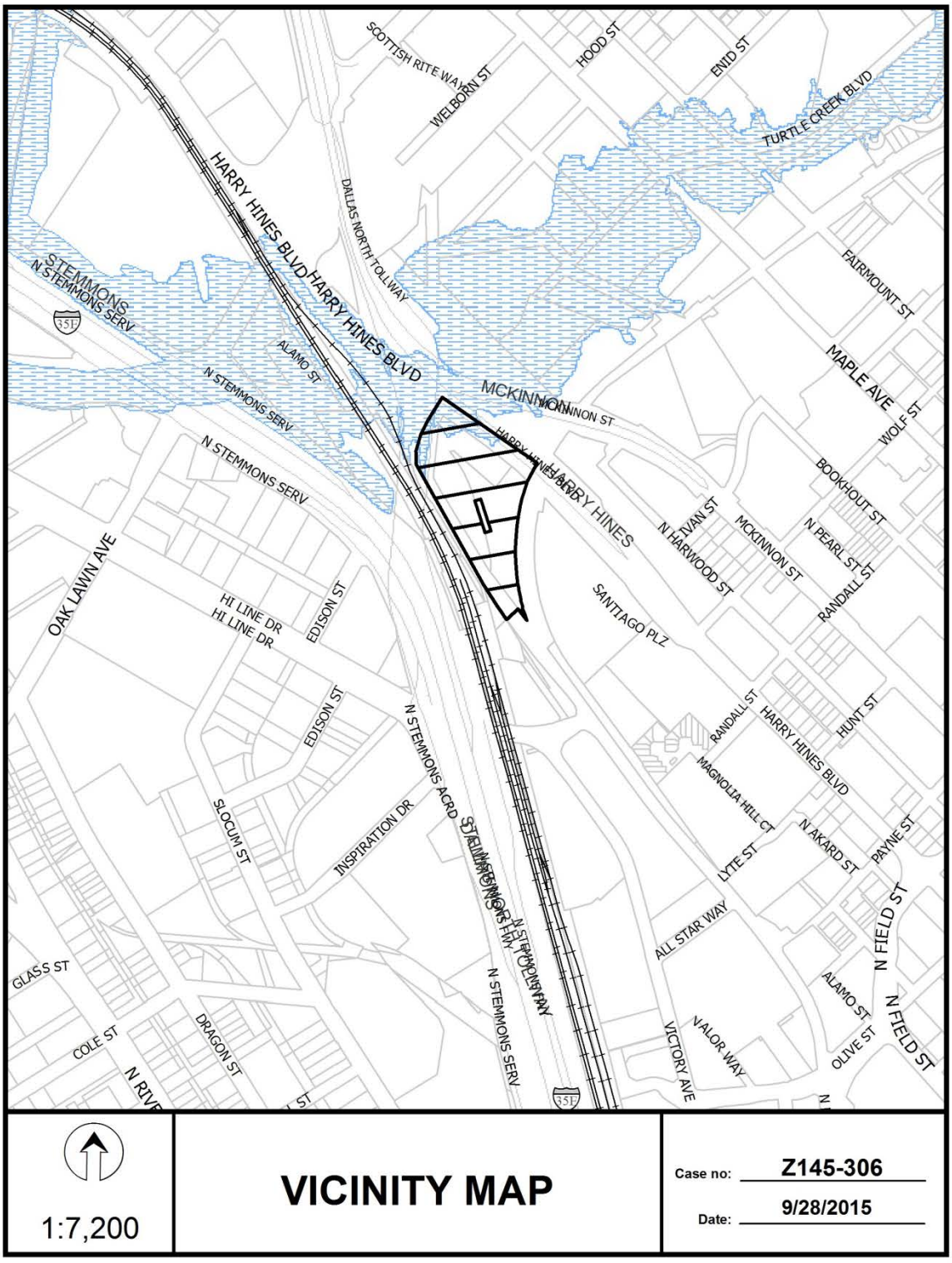
SEC. S-96.119. COMPLIANCE WITH CONDITIONS.

(a) All paved areas, permanent drives, streets, and drainage structures, if any, must be constructed in accordance with standard city specifications, and completed to the satisfaction of the city.

(b) The building official shall not issue a building permit to authorize work, or a certificate of occupancy to authorize the operation of a use, in this subdistrict until there has been full compliance with this division, the Dallas Development Code, the construction codes, and all other ordinances, rules, and regulations of the city.



Existing Development Plan

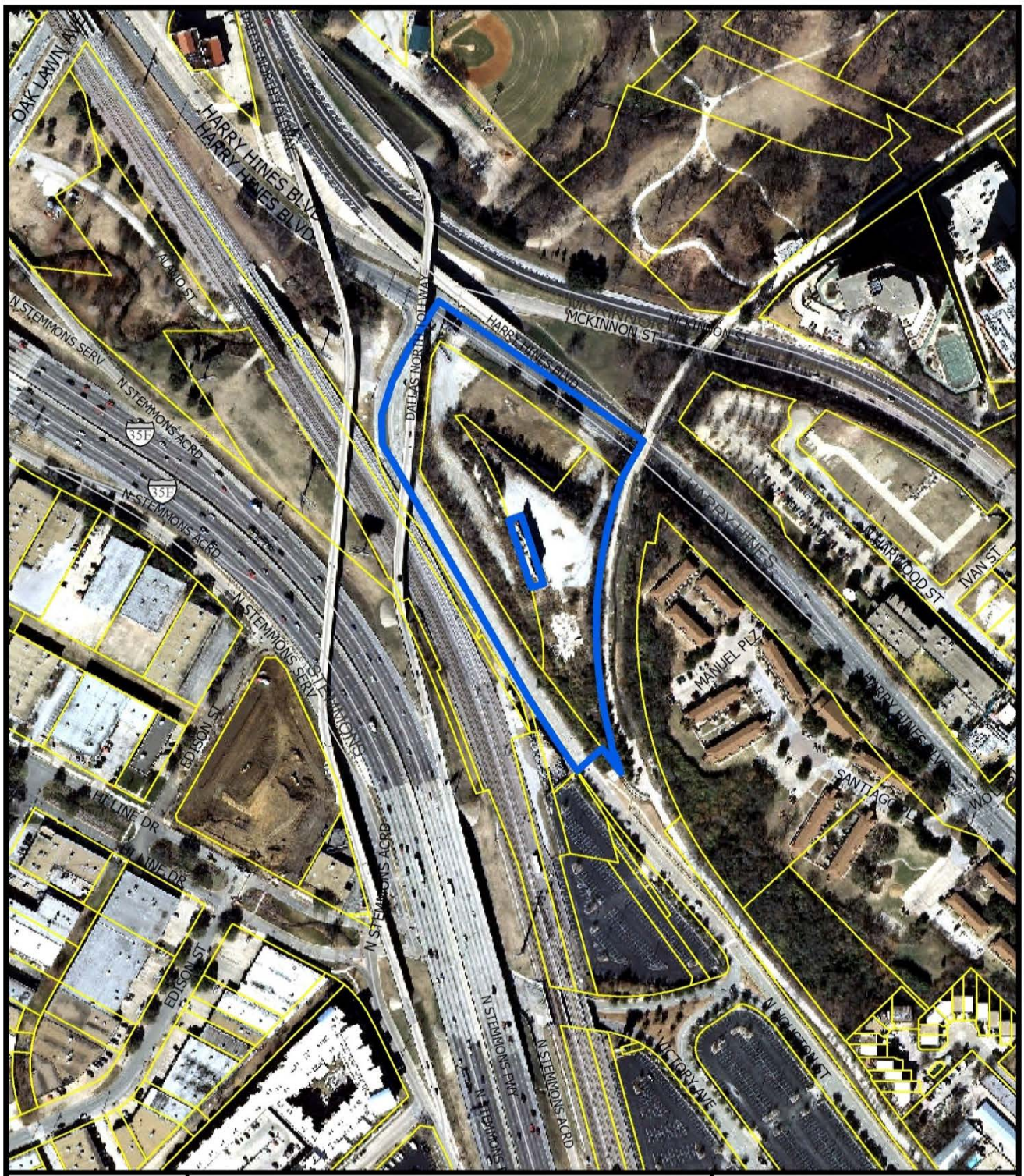


1:7,200

VICINITY MAP

Case no: Z145-306

Date: 9/28/2015

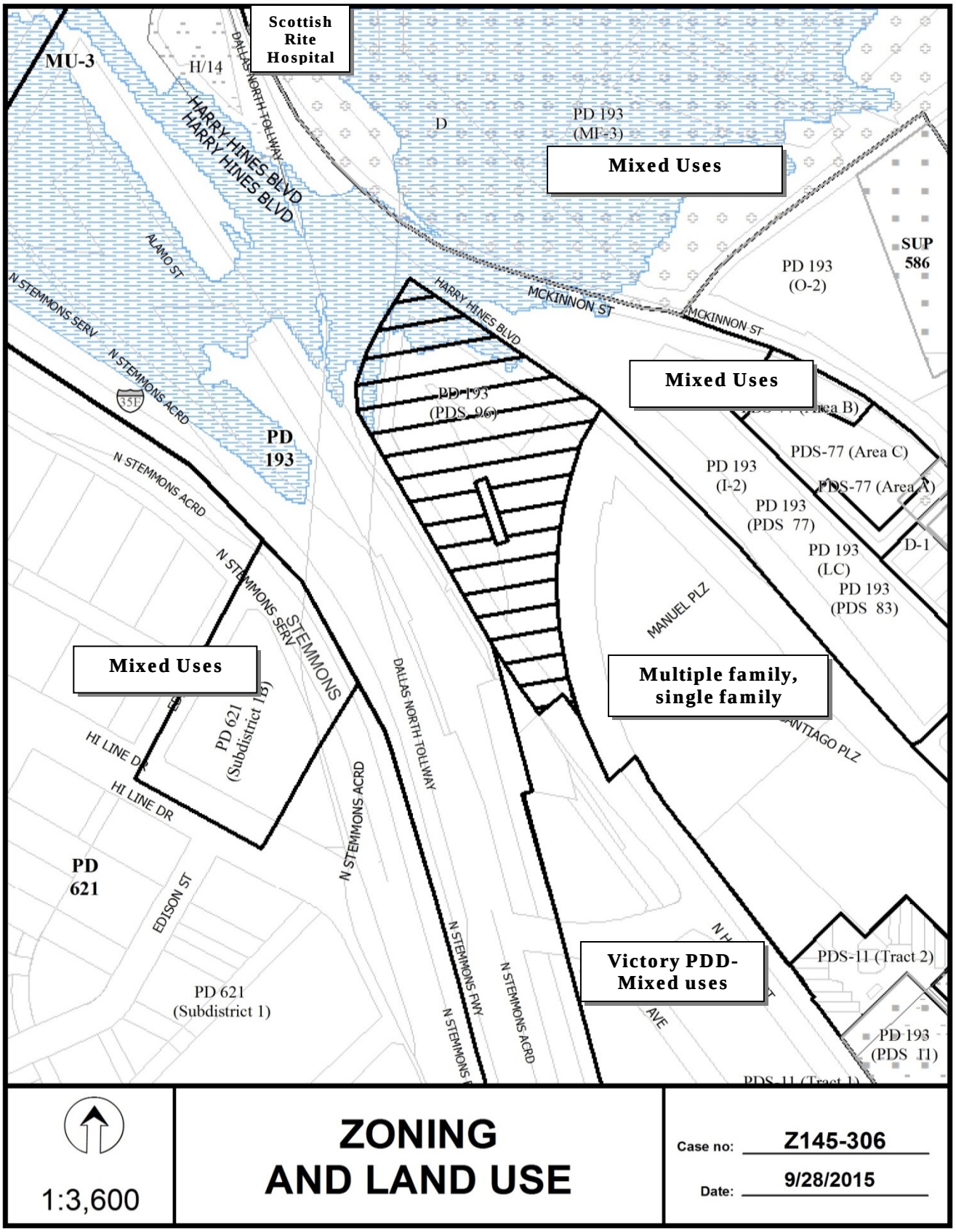


1:3,600

AERIAL MAP

Case no: Z145-306

Date: 9/28/2015


Scottish Rite Hospital
MU-3
H/14
HARRY HINES BLVD
DALLAS NORTH TOLLWAY
D
PD 193 (MF-3)
Mixed Uses
SUP 586
PD 193 (O-2)
MCKINNON ST
ALAMO ST
N STEMMONS SERV
N STEMMONS ACRD
351
PD 193 (PDS 96)
PD 193
PDS-77 (Area C)
PD 193 (I-2)
PDS-77 (Area A)
PD 193 (PDS 77)
D-1
PD 193 (LC)
PD 193 (PDS 83)
MANUEL PLZ
Mixed Uses
Multiple family, single family
STEMMONS
PD 621 (Subdistrict 1B)
HI LINE DR
PD 621
EDISON ST
PD 621 (Subdistrict 1)
N STEMMONS FWY
Victory PDD- Mixed uses
PDS-11 (Tract 2)
PD 193 (PDS 11)
1:3,600
ZONING AND LAND USE
Case no: Z145-306
Date: 9/28/2015

CPC RESPONSES



17	Property Owners Notified (26 parcels)
0	Replies in Favor (0 parcels)
0	Replies in Opposition (0 parcels)
500'	Area of Notification
11/5/2015 Date	10/1/2015 Under Advisement

Z145-306
CPC

N W E S

1:3,600

11/04/2015

Reply List of Property Owners

Z145-306

17 Property Owners Notified ***0 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*	*Address*		*Owner*
	1	3305	HARRY HINES BLVD	ASA APARTMENTS LIMITED PTNERSHIP
	2	3333	HARRY HINES BLVD	ASA APARTMENTS LP
	3	2927	HARRY HINES BLVD	DALLAS HOUSING AUTHORITY
	4	3303	HARRY HINES BLVD	CLEAR CHANNEL OUTDOOR INC
	5	1605	STEMMONS FWY	LUI2 DALLAS OAK LAWN VI
	6	3130	HARWOOD ST	BLEU CIEL TOWER DEVELOPMENT LTD
	7	1300	STEMMONS FWY	DALLAS AREA RAPID TRANSIT
	8	1680	STEMMONS FWY	MILLWEE STEPHEN MICHAEL
	9	1400	ALAMO ST	ANLAND NORTH LP
	10	1400	ALAMO ST	ANLAND 2A LP
	11	1400	ALAMO ST	ANLAND NORTH LP
	12	1400	ALAMO ST	ANLAND NORTH COMM LP
	13	555	2ND AVE	DART
	14	1900	OAK LAWN AVE	DART & FT WORTH TRANSP AUTH
	15	3000	HARRY HINES BLVD	NORTH TEXAS PUBLIC
	16	3100	MCKINNON ST	HINES REIT 3100 MCKINNON
	17	1400	HI LINE DR	LOWER OAK LAWN INVESTMENT LP

AGENDA ITEM # 49

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 7

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 46 S

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting an MF-2(A) Multifamily Subdistrict on property zoned Tract 1, RS-C Regional Service Commercial Subdistrict within Planned Development District No. 595, the South Dallas/Fair Park Special Purpose District on the southeast line of Sanger Avenue, between Riggs Street and South Ervay Street
Recommendation of Staff and CPC: Approval
Z145-332(WE)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER:	Z145-332(WE)	**DATE FILED:**	June 1, 2015
LOCATION:	Southeast line of Sanger Avenue, between Riggs Street and South Ervay Street		
COUNCIL DISTRICT:	7	**MAPSCO:**	46S
SIZE OF REQUEST:	Approx. 0.27 acres	**CENSUS TRACT:**	34.00

APPLICANT / OWNER: Sean Von Merveldt

REPRESENTATIVE: Brad Eubanks

REQUEST: An application for an MF-2(A) Multifamily Subdistrict on property zoned Tract 1, RS-C Regional Service Commercial Subdistrict within Planned Development District No. 595, the South Dallas/Fair Park Special Purpose District.

SUMMARY: The purpose of this request is to allow for the construction of a single-family dwelling.

CPC RECOMMENDATION: **Approval**

STAFF RECOMMENDATION: **Approval**

GUIDING CRITERIA FOR STAFF RECOMMENDATION:

Staff recommends approval based upon:

1. *Performance impacts upon surrounding property* – The request site is contiguous to an MF-2(A) Multifamily Subdistrict to the south and one lot separates the subject site from the MF-2(A) Subdistrict to the northeast. Therefore, there are no anticipated impacts upon these properties. For the remaining, undeveloped property that surrounds the property zoned an RS-C Subdistrict, the only impact would be residential adjacency requirements that the property currently doesn't have.

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has determined that the request will not have a negative impact on the street system.

3. *Comprehensive Plan or Area Plan Conformance* – The proposed request is in compliance with the *forwardDallas! Comprehensive Plan*. The request site is located within the Urban Neighborhood Building Block.

Zoning History: There have not been any zoning cases in the area over the past five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW	Proposed ROW
Sanger Avenue	Local	50 ft.	50 ft.

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that it will not have a detrimental impact on the surrounding street system.

COMPREHENSIVE PLAN: The *fowardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *fowardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site being within a Urban Neighborhood Building Block.

Urban Neighborhoods, including Oak Lawn, the Grand Avenue area in South Dallas, the area near Jefferson Boulevard and the Vickery Meadow area, are predominately residential but are distinguished from other neighborhoods by the wide variety of housing options they provide and easy access to public transit. Housing choices should include single-family detached dwellings, townhomes and low- to mid-rise condominiums or apartments. These neighborhoods will have concentrations of shops and offices along key corridors or at key intersections, providing important services and job opportunities within walking distance of residences. These areas may have mixed-

use buildings with ground floor shops. Areas currently developed with single-family or duplex uses should generally be maintained unless redevelopment is addressed through an Area Planning process. Urban Neighborhood streets will be very pedestrian friendly, providing excellent connectivity to shopping, schools and other community services. Emphasis should be placed on slowing traffic through use of on-street parking and other similar traffic calming measures. Public investments in these areas will focus on parks, pathways, transit stops, pedestrian-oriented landscaping and road improvements.

The proposed MF-2(A) Subdistrict zoning is consistent with the Urban Neighborhood Building Block.

Land Use:

	Zoning within PDD No. 595	Land Use
Site	RS-C	Undeveloped
Northeast	RS-C	Undeveloped, Single Family
Southeast	RS-C, MF-2(A)	Undeveloped,
Northwest	RS-C	Undeveloped
Southwest	RS-C, MF-2(A)	Undeveloped

Land Use Compatibility: The applicant's request for an MF-2(A) Subdistrict will allow for the development of a single family use on site. The area is predominately undeveloped. However, a large portion of the MF-2(A) Multifamily Subdistrict is located along Al Lipscomb Way and adjoins the request site on the southern property line. In addition, a nonconforming motel use is developed approximately 80 feet southwest of the site. The remaining MF-2(A) Subdistrict is developed with a few single family uses. However, prior to the adoption of PDD No. 595 in 2001, the request site and the surrounding properties were zoned for MF-2(A) Multifamily District uses. The MF-2(A) District permitted residential uses, which included multifamily and single family dwellings.

Access to the request site is on Sanger Avenue and the RS-C Subdistrict is contiguous on three sides. Planned Development District No. 595 states that the RS-C Regional Service Subdistrict is characterized by commercial developments providing goods and services to other businesses in South Dallas/Fair Park and the surrounding region. This Subdistrict should be located in proximity to regional transportation such as rail, light rail, freeways, and major thoroughfares. However, because the request site is an internal lot and adjoins an MF-2(A) Subdistrict, staff supports the applicant's request for MF-2(A) Subdistrict.

Development Standards:

DISTRICT	SETBACKS		Density	Height	Lot Coverage	Special Standards	PRIMARY Uses
	Front	Side/Rear					
MF-2(A) - Proposed Multifamily	15’	15’	Min lot 1,000 sq. ft. 800 sq ft – E 1,000 sq. ft – 1 BR 1,200 sq ft – 2 BR +150 sq ft each add BR	36’	60%	Proximity Slope	Multifamily, duplex, single family
RS-C - Existing Regional Service Commercial	15’	15’ adjacent to residential OTHER: No Min.	1.0 FAR combined 1.0 office 0.5 retail	45’ 4 stories	80%	Proximity Slope Visual Intrusion	Retail & personal service, office

Landscaping: Landscaping of any development will be in accordance with Article X, as amended.

CPC Action – November 19, 2015

Z145-332(WE) Planner: Warren Ellis

Motion: It was moved to recommend **approval** of an MF-2(A) Multifamily Subdistrict on property zoned Tract 1, RS-C Regional Service Commercial Subdistrict within Planned Development District No. 595, the South Dallas/Fair Park Special Purpose District on the southeast line of Sanger Avenue, between Riggs Street and South Ervay Street.

Maker: Abtahi
Second: Emmons
Result: Carried: 15 to 0

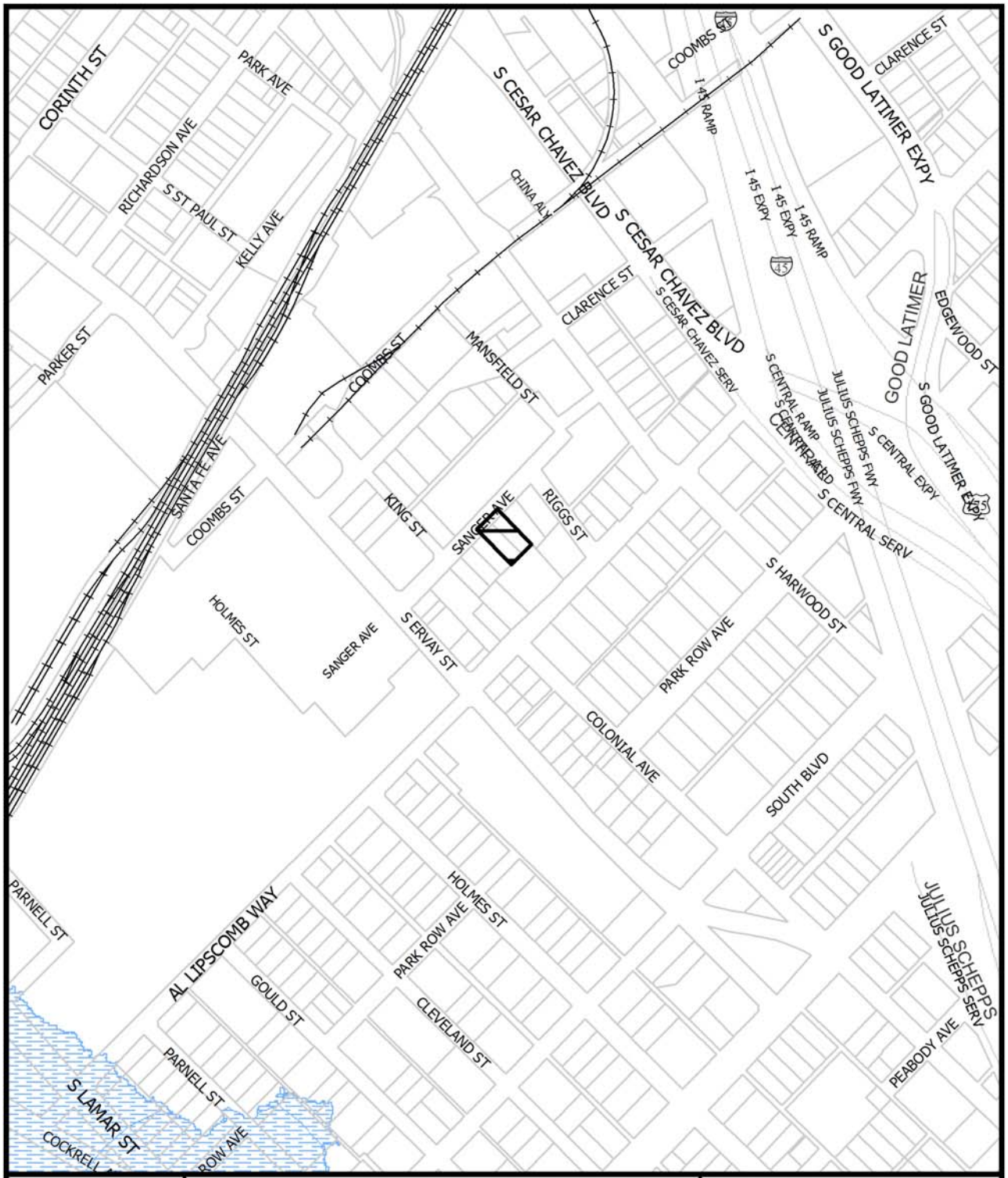
For: 15 - Anglin, Emmons, Houston, Davis, Shidid*, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz*, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 0
Vacancy: 0

*out of the room, shown voting in favor

Notices: Area: 200 Mailed: 14
Replies: For: 0 Against: 0

Speakers: For (Did not speak): Brad Eubanks, 2400 S. Ervay St., Dallas, TX
Against: None

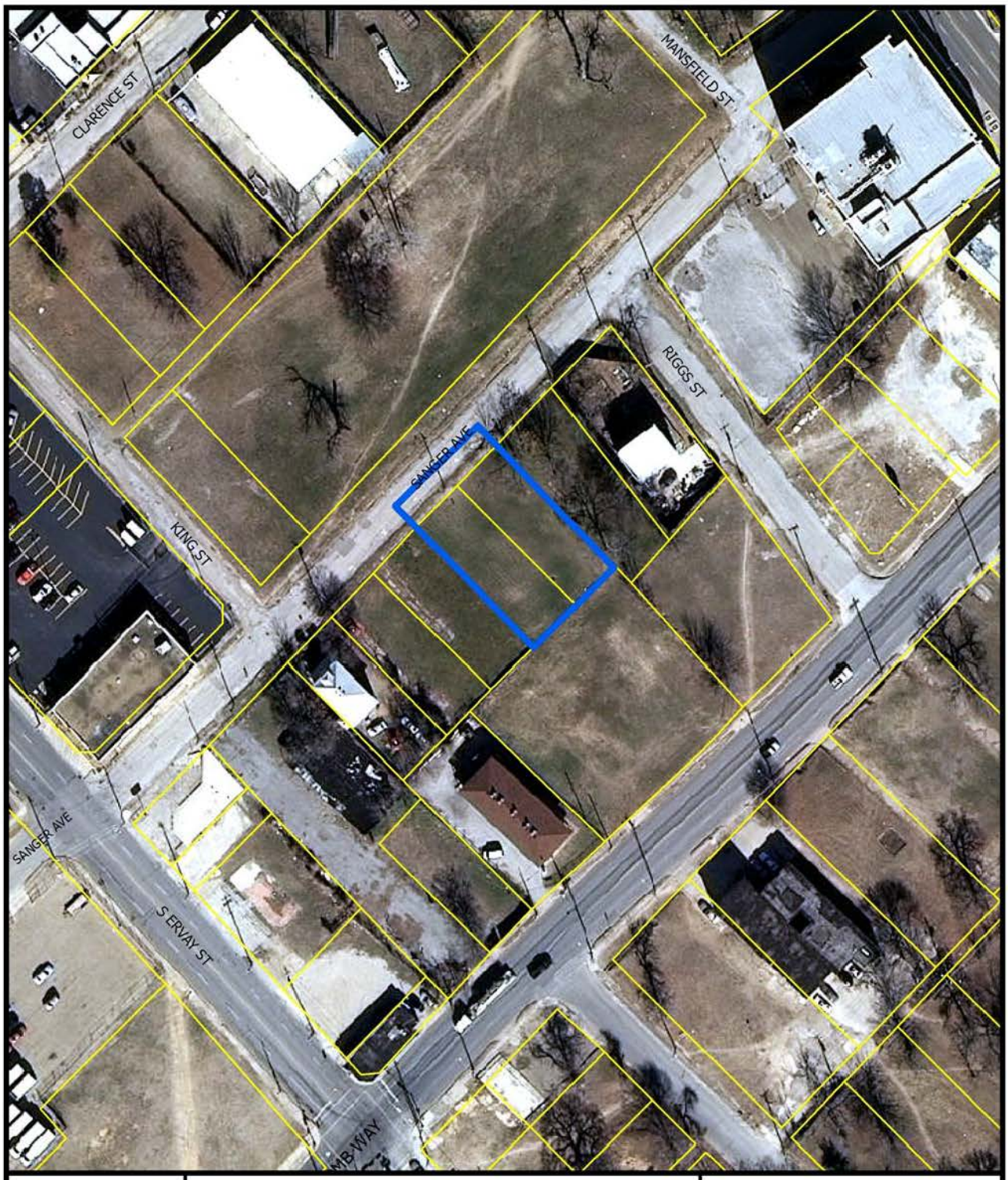


1:4,800

VICINITY MAP

Case no: Z145-332

Date: 11/3/2015

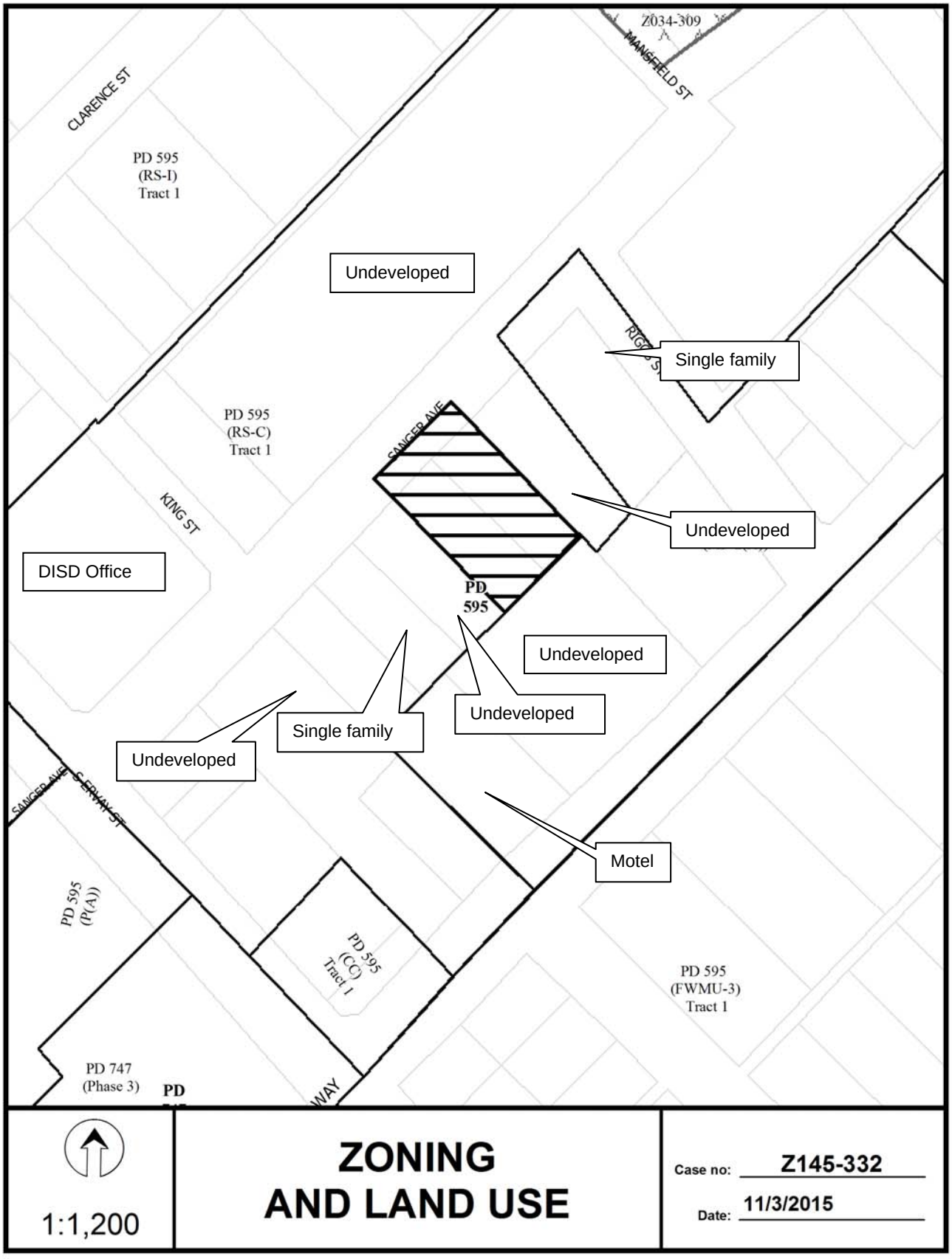


1:1,200

AERIAL MAP

Case no: Z145-332

Date: 11/3/2015


Z034-309
MANSFIELD ST
CLARENCE ST
PD 595
(RS-I)
Tract 1
Undeveloped
Single family
PD 595
(RS-C)
Tract 1
SANGER AVE
KING ST
Undeveloped
DISD Office
PD
595
Undeveloped
Undeveloped
Single family
Undeveloped
SANGER AVE
S ERVAY ST
Motel
PD 595
(P(A))
PD 595
(CC)
Tract 1
PD 595
(FWMU-3)
Tract 1
PD 747
(Phase 3)
PD
1:1,200
ZONING
AND LAND USE
Case no: Z145-332
Date: 11/3/2015

CPC RESPONSES



Notification List of Property Owners

Z145-332

14 Property Owners Notified ***0 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
	1	1812	SANGER AVE	BEER SANDRA M
	2	1901	GRAND AVE	GWYN JAMES
	3	2600	RIGGS ST	LAU WAI HON ETAL
	4	2631	HARWOOD ST	SOUTHWESTERN BELL
	5	1803	GRAND AVE	OPERATION RELIEF CENTER
	6	1809	GRAND AVE	EKUKPE AUGUSTINE A
	7	1822	SANGER AVE	BRADLEY MARIA GLORIA KING
	8	1714	SANGER AVE	LEWIS LOYD ESTATE OF
	9	1826	SANGER AVE	MOYNIHAN DAVID
	10	1711	GRAND AVE	SWIFT BARRELL COMPANY
	11	1808	SANGER AVE	PARK ALICE J
	12	1801	SANGER AVE	BECKLES ROBERT O
	13	1809	SANGER AVE	WAUGH JERRY W
	14	2530	ERVAY ST	Dallas ISD

AGENDA ITEM # 50

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 7

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 48 E

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a D-1 Liquor Control Overlay and an ordinance granting a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store 3,500 square feet or less on property zoned an RR Regional Retail District with a D Liquor Control Overlay on the southwest corner of Jim Miller Road and Samuell Boulevard

Recommendation of Staff: Approval of a D-1 Liquor Control Overlay and approval of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions

Recommendation of CPC: Approval of a D-1 Liquor Control Overlay and approval of a Specific Use Permit for a one-year period, subject to a site plan and conditions

Z134-181(OTH)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z134-181(OTH) **DATE FILED:** March 5, 2014

LOCATION: Southwest corner of Jim Miller Road and Samuell Boulevard

COUNCIL DISTRICT: 7 **MAPSCO:** 48-E

SIZE OF REQUEST: ± 4.5 acres **CENSUS TRACT:** 122.06

APPLICANT: BZ Mart

OWNER: Jim Miller Shopping Ctr, LP

REPRESENTATIVE: Santos Martinez, Masterplan

REQUEST: An application for a D-1 Liquor Control Overlay and a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store 3,500 square feet or less on property zoned an RR Regional Retail District with a D Liquor Control Overlay.

SUMMARY: The applicant proposes the sale of alcoholic beverages for off-premise consumption in conjunction with the existing ±2,460-square-foot convenience store [BZ Mart]. The general merchandise or food store use is permitted by right, but the D Liquor Control Overlay prohibits the sale of alcoholic beverages on the property. No new construction is proposed by this application.

CPC RECOMMENDATION: **Approval** of a D-1 Liquor Control Overlay and **approval** of a Specific Use Permit for a one-year period, subject to a site plan and conditions.

STAFF RECOMMENDATION: **Approval** of a D-1 Liquor Control Overlay and **approval** of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions.

GUIDING CRITERIA FOR STAFF RECOMMENDATION:

The following factors are listed in Chapter 51A of the Dallas Development Code to guide the determination as to whether or not an SUP shall be granted. Staff has listed its findings based upon each component below:

1. *Compatibility with surrounding uses and community facilities* – The existing general merchandise or food store 3,500 square feet or less is compatible with the surrounding land uses. The sale of alcoholic beverages in conjunction with the main use does not affect compatibility.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – The addition of alcoholic beverage sales to the existing use does not appear to negatively impact the adjacent properties.

3. *Not a detriment to the public health, safety, or general welfare* – The existing general merchandise or food store complies with Chapter 12B (Convenience Store) requirements. The purpose of regulating convenience stores is to protect the health, safety, and welfare of the citizens of the City of Dallas by reducing the occurrence of crime, preventing the escalation of crime, and increasing the successful prosecution of crime that occurs in convenience stores in the city.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – Based on information depicted on the site plan, it complies with all applicable zoning regulations and standards. No variances or special exceptions are requested.

Surrounding Zoning History:

1. Z101-310 On Monday, October 10, 2011, the City Council approved a D-1 Liquor Control Overlay and a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store greater than 3,500 square feet on property zoned a RR-D Regional Retail District with a D Liquor Control Overlay on the southeast corner of Samuell Boulevard and N. Jim Miller Road.

2. Z123-302 On Wednesday, December 11, 2013, the City Council approved the renewal of Specific Use Permit No. 1907 for the sale of alcoholic beverages in conjunction with a general merchandise or food store greater than 3,500 square feet on property zoned an RR-D-1 Regional Retail District with a D-1 Liquor Control Overlay on the southeast corner of North Jim Miller Road and Samuell Boulevard.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW
North Jim Miller Road	Principal Arterial	100 feet
Samuell Boulevard	Principal Arterial	100 feet

Traffic:

The Engineering Section of the Department of Sustainable Development and Construction has reviewed the requested amendment and determined that it will not significantly impact the surrounding roadway system.

Surrounding Land Uses:

	Zoning	Land Use
North	RR	Retail uses, auto related use
East	RR-D, MF-2(A)	Retail and multifamily
South	R-7.5(A)	Single Family Residential
West	R-7.5(A)	Single Family Residential

STAFF ANALYSIS:

Comprehensive Plan:

The comprehensive plan does not make a specific land use recommendation related to the request, however the *forwardDallas! Vision Illustration*, adopted June 2006, is comprised of a series of Building Blocks that depicts general land use patterns. Building Blocks are generalized patterns without well-defined boundaries that indicate where certain types and densities of development might logically occur.

The Plan identifies the request site as being in the Business Center or Corridor Building Block. This Building Block represents major employment or shopping destinations outside of Downtown. Business Centers are usually at major intersections or along highways or major arterials and rely heavily on car access.

While the *forwardDallas! Vision Illustration* identifies the request site as being in the *Business Center or Corridor* Building Block, the subject property as well as adjacent properties are zoned a Commercial Service District. The existing convenience store does not have residential adjacency and it is consistent with the following goals and policies of the Comprehensive Plan. The sale of alcoholic beverages in conjunction with the main use and does not directly impact the compatibility.

Land Use Compatibility:

The 4.5 acre request site is developed with four separate buildings that comprise a total of 44,849 square-foot structures that house several retail, office, general merchandise stores, medical clinic or ambulatory service, day child-care facility and church office uses.

There is a childcare facility within the same shopping center and I it is within less than 300 feet of the request site. The applicant will hold a TABC license for wine and beer retailer's off-premise permit listed in the Chapter 26 TABC regulations. However, Chapter 26 of the Dallas City Code does not include TABC Chapter 26 wine and beer retailer's off-premise permits as one of the prohibited dealers

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The city council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards. The regulations in this chapter have been established in accordance with a comprehensive plan for the purpose of promoting the health, safety, morals, and general welfare of the city.

The applicant's request conforms to the applicable zoning regulations and standards and is consistent with the intent of the Dallas Development Code. The proposed sale of alcoholic beverages in conjunction with the existing convenience store is not anticipated to negatively impact the adjacent properties. The short initial time period will allow re-evaluation of the request to ensure ongoing compliance.

Development Standards:

District	Setbacks		Density/ FAR	Height	Lot Coverage	Special Standards	Primary Uses
	Front	Side/Rear					
RR Regional retail	15'	20' adjacent to residential OTHER: No Min.	1.5 FAR overall 0.5 office	70' 5 stories	80%	Proximity Slope U-form setback Visual Intrusion	Retail & personal service, office

Parking:

Pursuant to the Dallas Development Code, the off-street parking requirement for a general merchandise or food store use is one (1) space per 200 square feet of floor area. Therefore, the ±2,460-square-foot convenience store requires 12 parking spaces.

As depicted on the site plan, 251 spaces are provided to serve the both retail uses located on the site.

Landscaping:

No new development is proposed. Therefore, no additional landscaping is required. Any new development on the property will require landscaping per Article X of the Dallas Development Code.

CPC ACTION

April 16, 2015

Motion: It was moved to recommend **approval** of a D-1 Liquor Control Overlay and approval of a Specific Use Permit for the sale of alcoholic beverages in conjunction with a general merchandise or food store 3,500 square feet or less for a one-year period, subject to a revised site plan to include hatch marks and conditions on property zoned an RR Regional Retail District with a D Liquor Control Overlay on the southwest corner of Jim Miller Road and Samuell Boulevard.

Maker: Bagley
Second: Abtahi
Result: Carried: 12 to 0

For: 12 - Anglin, Emmons, Rodgers, Shidid, Anantasomboon, Bagley, Lavallaisaa, Tarpley, Schultz, Murphy, Ridley, Abtahi

Against: 0
Absent: 3 - Culbreath, Shellene, Peadon
Vacancy: 0

Notices: Area: 300 Mailed: 50
Replies: For: 1 Against: 4

Speakers: For: Santos Martinez, 900 Jackson St., Dallas, TX, 75202
Against: None

October 15, 2015

On October 1, 2015 the City Plan Commission recommended a time extension of three months for this item to be considered by City Council.

Proposed SUP Conditions
Z134-181(OTH)

1. USE: The only use authorized by this specific use permit is the sale of alcoholic beverages in conjunction with a general merchandise or food store use 3,500 square feet or less.

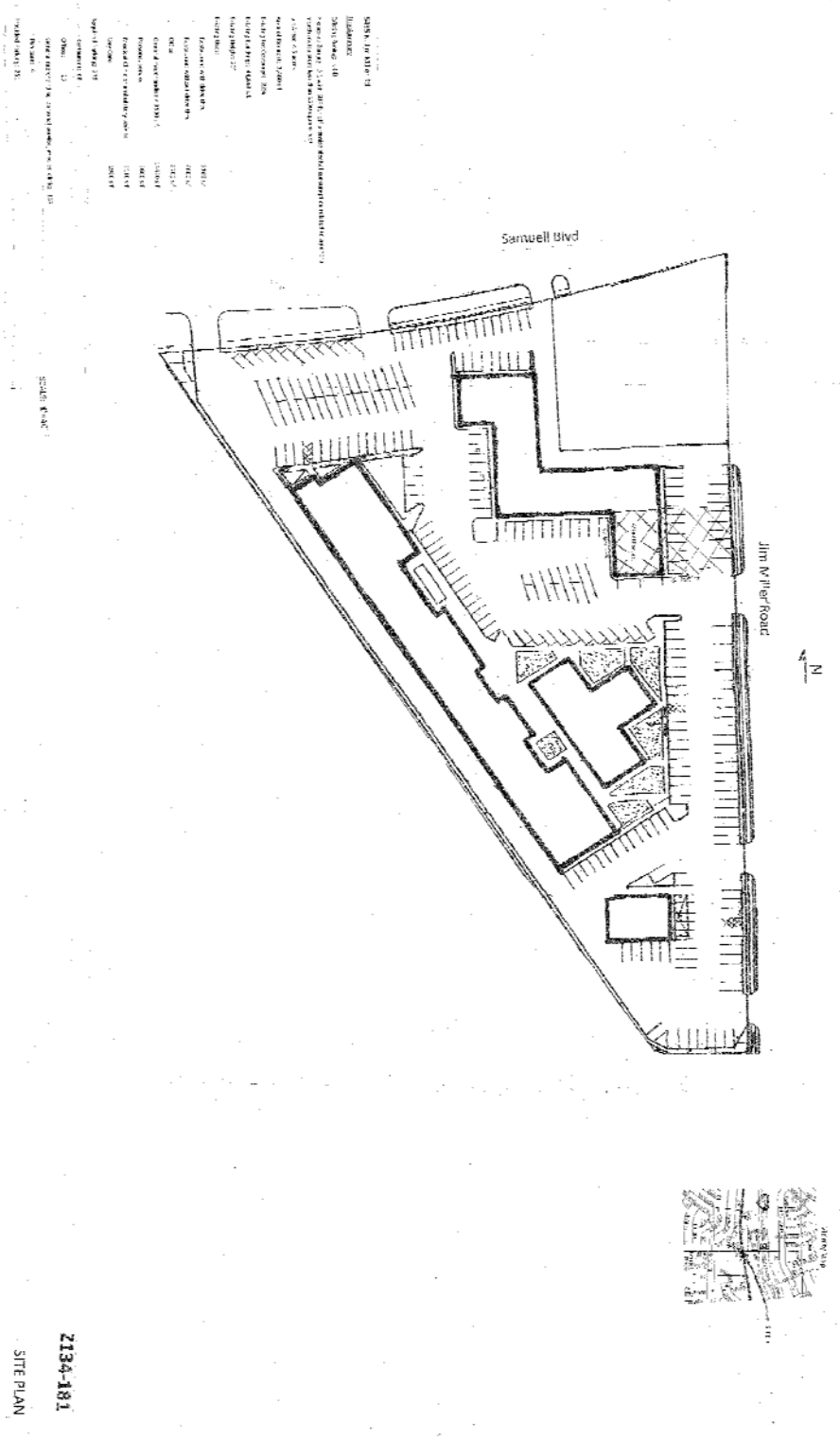
2. SITE PLAN: The sale of alcoholic beverages in conjunction with a general merchandise or food stores use 3,500 square feet or less is allowed only in the location shown in the site plan. Use and development of the Property must comply with the attached site plan.

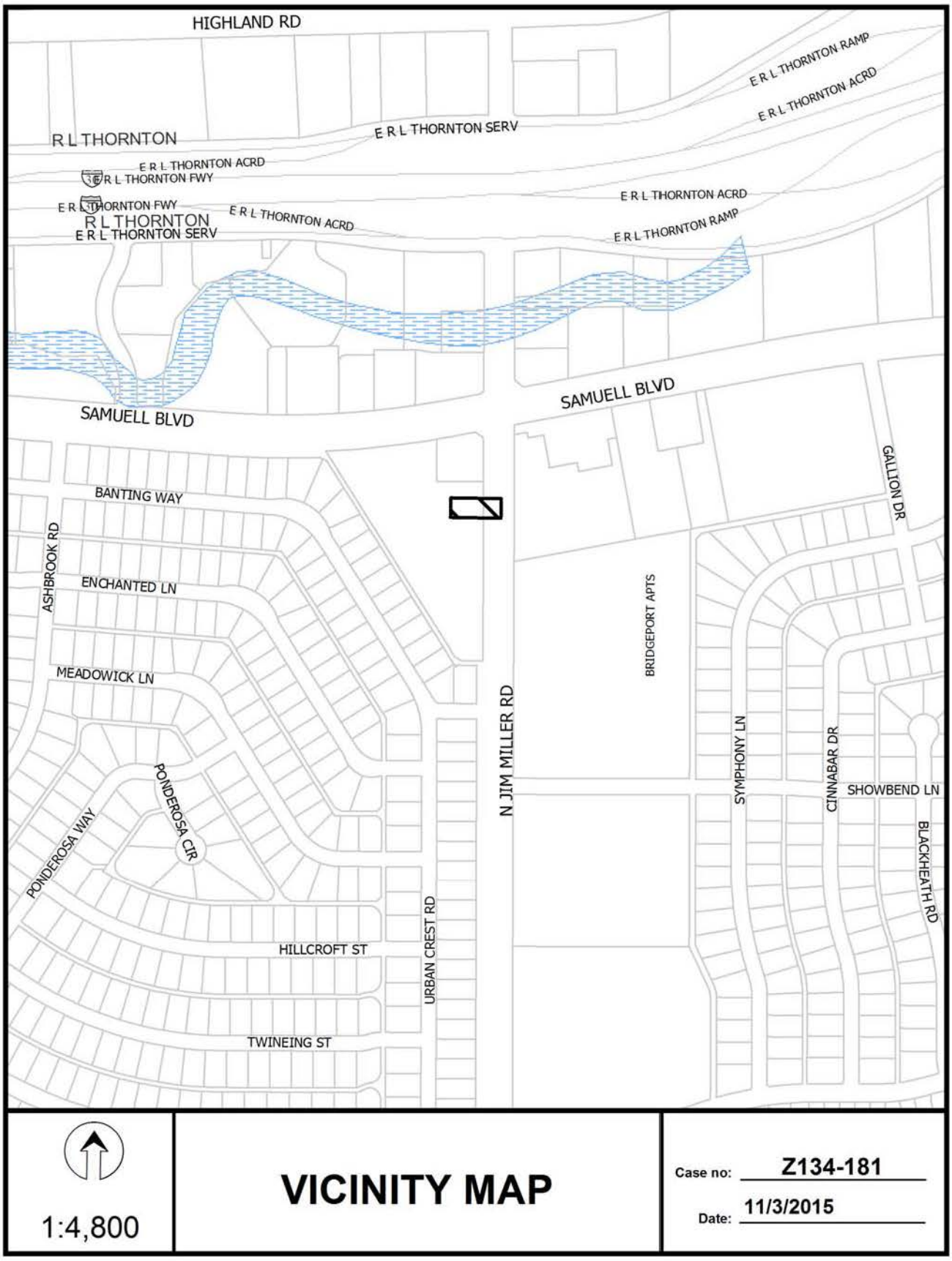
3. TIME LIMIT: This specific use permit expires on _____ (one year).

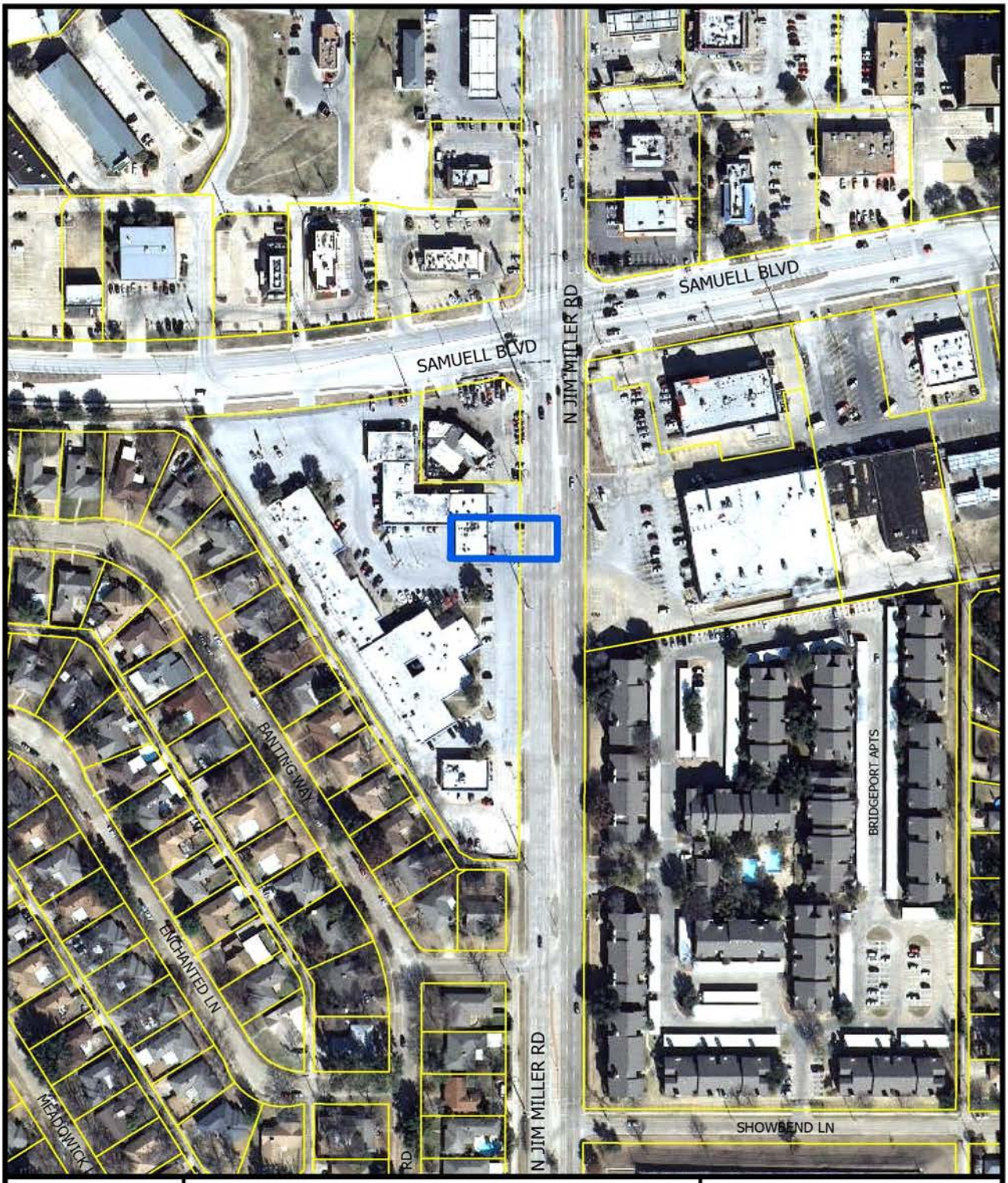
4. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

5. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

Proposed Site Plan




HIGHLAND RD
E R L THORNTON RAMP
E R L THORNTON ACRD
R L THORNTON
E R L THORNTON SERV
E R L THORNTON ACRD
E R L THORNTON FWY
E R L THORNTON FWY
E R L THORNTON ACRD
R L THORNTON
E R L THORNTON SERV
E R L THORNTON ACRD
E R L THORNTON RAMP
SAMUELL BLVD
SAMUELL BLVD
GALLION DR
BANTING WAY
ASHBROOK RD
ENCHANTED LN
MEADOWICK LN
BRIDGEPORT APTS
N JIM MILLER RD
SYMPHONY LN
CINNABAR DR
SHOWBEND LN
BLACKHEATH RD
PONDEROSA CIR
PONDEROSA WAY
HILLCROFT ST
URBAN CREST RD
TWINEING ST
1:4,800
VICINITY MAP
Case no: Z134-181
Date: 11/3/2015

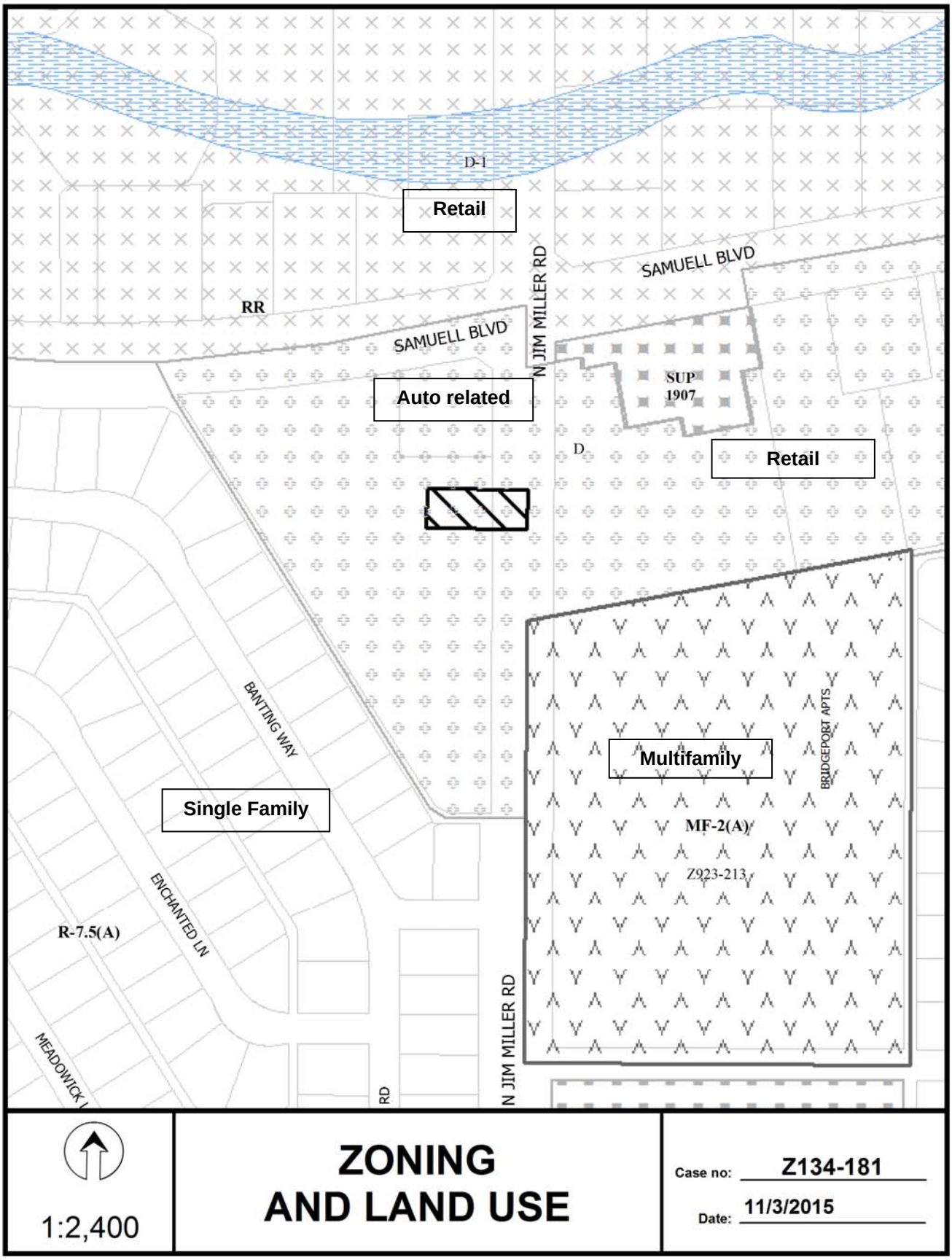


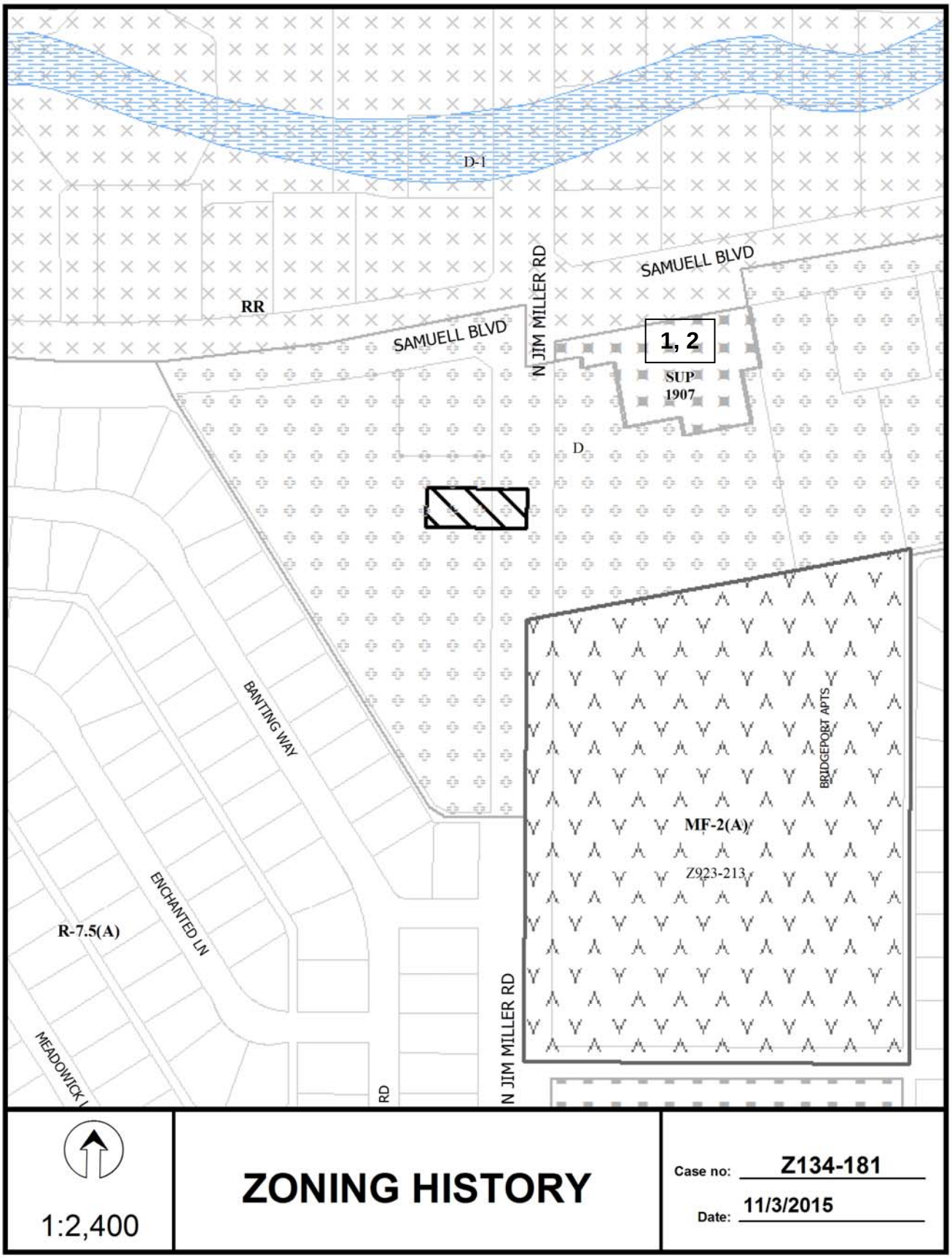
1:2,400

AERIAL MAP

Case no: Z134-181

Date: 11/3/2015


D-1
Retail
SAMUELL BLVD
N JIM MILLER RD
RR
SAMUELL BLVD
SUP
1907
Auto related
D
Retail
BANTING WAY
BRIDGEPORT APTS
Multifamily
Single Family
MF-2(A)
Z923-213
ENCHANTED LN
R-7.5(A)
N JIM MILLER RD
RD
1:2,400
ZONING
AND LAND USE
Case no: Z134-181
Date: 11/3/2015


D-1
SAMUELL BLVD
N JIM MILLER RD
SAMUELL BLVD
RR
1, 2
SUP
1907
D
BANTING WAY
BRIDGEPORT APTS
MF-2(A)
Z923-213
ENCHANTED LN
R-7.5(A)
N JIM MILLER RD
RD
1:2,400
ZONING HISTORY
Case no: Z134-181
Date: 11/3/2015

CPC RESPONSES



50	Property Owners Notified (50 parcels)
1	Replies in Favor (1 parcels)
4	Replies in Opposition (4 parcels)
300'	Area of Notification
10/1/2015	Date

Z134-181
CPC

N
W E
S

1:2,400

09/30/2015

Reply List of Property Owners

Z134-181

50 Property Owners Notified ***1 Property Owners in Favor*** ***4 Property Owners Opposed***

Reply	*Label #*	*Address*		*Owner*
	1	5409	JIM MILLER RD	JIM MILLER SHOPPING CENTER LP
	2	5475	JIM MILLER RD	ISSA DAVID
	3	5711	BANTING WAY	BOURGHS KAREN BLAKE
	4	5715	BANTING WAY	RUIZ ROSENDO & OCTAVIA
	5	5719	BANTING WAY	HORACE PATRICIA A
	6	5723	BANTING WAY	BURLESON CARRIE N
	7	5727	BANTING WAY	MOORE TERRY R & PAMELA
	8	5731	BANTING WAY	STEVENSON CEDRIC C &
	9	5735	BANTING WAY	JOHNSON SONYA L
X	10	5739	BANTING WAY	OEHLSCHLAEGER CHRISTOPHER
	11	5743	BANTING WAY	SANCHEZ SERAFIN
X	12	5747	BANTING WAY	POTTS RUTH
	13	5803	BANTING WAY	DICKERSON RICKEY DONERIA
X	14	5807	BANTING WAY	SCHOENSTEIN VIVIAN
	15	5811	BANTING WAY	CHAVEZ MAYRA KARINA
	16	5815	BANTING WAY	CARRANZA ROBERTO
	17	5819	BANTING WAY	RIVERS KENNETH E &
	18	5823	BANTING WAY	HENDERSON CHRIS
	19	5907	BANTING WAY	DEFATTA SHERRIE H
	20	5915	BANTING WAY	WHITE DORIS HARRIS
	21	5718	BANTING WAY	HALE MAE VAUGHN
	22	5724	BANTING WAY	HADNOT LATONYA
	23	5732	BANTING WAY	FLORES FATIMA
	24	5738	BANTING WAY	MARSHALL REGINALD L
	25	5744	BANTING WAY	CUEVAS APOLONIO
	26	5748	BANTING WAY	PROCTOR REGINA C

09/30/2015

Reply	*Label #*	*Address*		*Owner*
	27	5804	BANTING WAY	MENDOZA JUAN CARLOS DELGADO
	28	5808	BANTING WAY	COX CAROL ANN
X	29	5812	BANTING WAY	MCKOWN OLA FAYE
	30	5816	BANTING WAY	GUTIERREZ ANTONIO ETAL
	31	5820	BANTING WAY	LUCIO ARTURO
	32	5824	BANTING WAY	MORENO EVA LIFE ESTATE
	33	5331	URBAN CREST RD	HALL WILONA &
	34	5325	URBAN CREST RD	MILLER PHILLIP R &
	35	5330	URBAN CREST RD	PORTILLO MARIA I
	36	5324	URBAN CREST RD	LEWIS LAMARA
	37	5510	JIM MILLER RD	DAY MARIE L
	38	6004	SAMUELL BLVD	PARKER MICHAEL
O	39	5470	JIM MILLER RD	CFIC LLC
	40	5440	JIM MILLER RD	MCAF07 BRIDGEPORT LLC
	41	8130	R L THORNTON FWY	RACETRAC PETROLEUM INC
	42	5757	SAMUELL BLVD	HI LO AUTO SUPPLY LP
	43	5575	JIM MILLER RD	SIDERIS BASIL K ET AL
	44	5555	JIM MILLER RD	SIDERIS BASIL K ET AL
	45	5877	SAMUELL BLVD	KENTUCKY FRIED CHICKEN
	46	5763	SAMUELL BLVD	MCCARTY PAUL & RITA
	47	8108	R L THORNTON FWY	JIM MILLER HOSPITALITY LP
	48	5859	SAMUELL BLVD	SAMUELL PROPERTY JOINT VENTURE
	49	5747	SAMUELL BLVD	BMD INCORPORATED
	50	8120	R L THORNTON FWY	POP HOLDINGS LP

AGENDA ITEM # 51

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 14

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 36 U

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a new subdistrict and an ordinance granting a Specific Use Permit for a winery and tasting room on property zoned Center Core Area, Subdistrict E-F within Planned Development District No. 281, the Lakewood Special Purpose District on the southeast corner of Prospect Avenue and Kidwell Street

Recommendation of Staff: Approval of a new subdistrict, subject to conditions; and approval of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions

Recommendation of CPC: Approval of a new subdistrict, subject to conditions; and approval of a Specific Use Permit for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions

Z145-308(SM)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z145-308(SM) **DATE FILED:** July 27, 2015

LOCATION: Southeast corner of Prospect Avenue and Kidwell Street

COUNCIL DISTRICT: 14 **MAPSCO:** 36U

SIZE OF REQUEST: ±0.4502 acre **CENSUS TRACT:** 11.02

APPLICANT/ OWNER: Lawler Platner Wilson, LP

REPRESENTATIVE: Rob Baldwin, Baldwin Associates

REQUEST: An application for a new subdistrict and a Specific Use Permit for a winery and tasting room on property zoned Center Core Area, Subdistrict E-F within Planned Development District No. 281, the Lakewood Special Purpose District.

SUMMARY: The applicant has requested a specific use permit and a new subdistrict to allow for the continued operation of 6324 Prospect Avenue and expansion into the next door building at 2018 Kidwell Street. When the current establishment opened in 2005, the "winery" use was not codified into the Dallas Development Code. The building official determined that the most appropriate use permitted in the planned development regulations was a "beverage [or liquor] store". The new subdistrict will incorporate the "winery and tasting room" use similar to the Dallas Development Code's use for "microbrewery, microdistillery, or winery". The PDD is not incorporating the Development Code's definition in the PDD because Dallas Development Code's definition does not permit outside activities. The newly created use is proposed to be permitted by Specific Use Permit, similar to the Dallas Development Code.

CPC RECOMMENDATION: **Approval** of a new subdistrict, subject to conditions; and **approval** of a Specific Use Permit for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions.

STAFF RECOMMENDATION: **Approval** of a new subdistrict, subject to conditions; and **approval** of a Specific Use Permit for a two-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions.

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends approval of staff's recommended Planned Development Subdistrict regulations based upon:

1. *Performance impacts upon surrounding property* – The proposed conditions offer additional protection for surrounding neighbors as it requires a winery and tasting room to obtain a specific use permit, and prohibits outside activities between the hours of 10 p.m. and 6 a.m. the next day. These restrictions will require specific and regular reviews of a winery and tasting room and the late hours provision will prohibit nighttime activities that cause a nuisance to adjacent residential properties.

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the proposed modifications will not have a negative impact on the surrounding street system.

3. *Comprehensive Plan or Area Plan Conformance* – The *forward*Dallas! Comprehensive Plan indicates that this area is a Commercial Center or Corridor Building Block. The proposed changes are consistent with this building block.

4. *Justification for PD Planned Development District Zoning as opposed to a straight zoning district* – Since a microbrewery, microdistillery, and winery use do not allow outside activities, an amendment to the planned development regulations is required to create a new use, winery and tasting room.

The following factors are listed in Chapter 51A of the Dallas Development Code to guide the determination as to whether or not an SUP shall be granted. Staff has listed its findings based upon each component below:

1. *Compatibility with surrounding uses and community facilities* – Limiting the total floor area and outdoor patio will help mitigate potential impacts upon surrounding land uses.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – While it is unknown at this time whether or not the proposed expansion will contribute to the welfare of the area of the request, it is not anticipated to be a deterrent.

3. *Not a detriment to the public health, safety, or general welfare* – The use is not anticipated to be a detriment to the public welfare. The proposed Specific Use Permit conditions are an additional layer of regulatory requirements the owner will have to comply with when operating the business.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – The request will comply with all zoning regulations and standards.

BACKGROUND INFORMATION:

- The main building at 6324 Prospect Avenue was originally constructed in 1945, according to Dallas Central Appraisal District Records, as an art deco themed post office.

- According to Dallas Central Appraisal District records, the smaller building at 2018 Kidwell Street was originally constructed in 1947 as a retail building.

- The post office building was remodeled in 1978 for an office use.

- In June 2005, Times Ten Cellars was issued a retail certificate of occupancy. The planned development district, originally adopted in 1988, allows a "beverage store". The term "beverage store" was renamed to "liquor store" in the Dallas Development code by ordinance 21735, passed by Council June 23, 1993 and is "an establishment principally for the retail sale of alcoholic beverages for off-premise consumption, as defined in the Texas Alcoholic Beverage Code."[1]

- On July 8, 2005, The Texas Alcoholic Beverage Commission issued the original winery permit for Times Ten Cellars at 6324 Prospect Avenue. Among other authorized activities, a TABC winery permit allows the permit holder to

    - manufacture, bottle, label and package wine containing not more than 24% alcohol by volume;

    - sell or buy wine from permit holders authorized to purchase and sell wine, including wholesalers, winery and wine bottler's permittees;

    - sell wine to ultimate consumers for consumption on the winery premises or in unbroken packages for off-premise consumption; and

    - dispense free wine for consumption on the winery premises.[2]

- On December 12, 2005, the Board of Adjustments (BDA056-057) granted a parking variance of seven spaces for a retail use to allow the site to provide 15 parking spaces, instead of 23. Since a parking variance (not special exception) was granted, the variance is only tied to the approved site plan and has no requirement to a use condition or termination because it was granted based on a hardship of the land. In contrast, parking special exceptions are only applicable to the use that was considered for the special exception; if there is a change in land use, the special exception is no longer valid.

- On May 24, 2006, a permit was completed to extend an outdoor patio 600 square feet at 6324 Prospect Avenue.

[1] Reference Section 51A-4.210(b)(17).
[2] Reference Section 16.01 of the Texas Alcoholic Beverage Code.

- On June 22, 2012, Council approved an amendment to the Dallas Development Code which included the addition of a new term, *microbrewery, microdistillery or winery*, which means:

  > an establishment for the manufacture, blending, fermentation, processing and packaging of alcoholic beverages with a floor area of 10,000 square feet or less that takes place wholly inside a building. A facility that only provides tasting, or retail sale of alcoholic beverages is not a microbrewery, microdistillery or winery use.[3]

- Because "winery" was not codified into the Dallas Development Code in 2005, the time that Times Ten Cellars filed for a certificate of occupancy, the building official determined that the most appropriate use for their certificate of occupancy was a kind of retail store, or more specifically a "beverage [or liquor] store" as allowed by the planned development regulations.

Zoning History: There have been no recent zoning cases in the vicinity in the last five years.

STAFF ANALYSIS:

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the proposed modifications will not have a negative impact on the surrounding street system.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW
Prospect Avenue	Local	50 feet
Kidwell Street	Local	50 feet

Comprehensive Plan:

The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site as being located along a Commercial Center or Corridor.

These areas primarily function as service and job destinations and are similar to Business Centers or Corridors, but are smaller and incorporate less density. These corridors, commonly at the intersection of major streets, are easily accessed via

[3] Reference Section 51A-4.210(4)(A)(ii) of the Dallas Development Code.

automobiles. Buckner Boulevard is an example of a Commercial Corridor. Buildings in these areas tend to be on separate parcels and stand one to five stories with offices, restaurants and a range of retail and commercial uses. In addition to jobs and services, Commercial Centers or Corridors also may include multifamily housing in low- to mid-rise apartment buildings or condominiums. Landscaping and urban design will enhance the visitor's experience and is used to separate sidewalks from major roads and define pedestrian routes in large parking lots. For large shopping centers, this may involve adding public plazas or other "town center" features. Public transit enhancements as well as quality access and visibility are important components of successful auto-oriented development.

Surrounding Land Uses:

	PDD 281 Center Core Area	Land Use
North	Subdistrict S	Medical clinic
East	Subdistrict E-F	Office
South	Subdistrict E-F	Retail
West	Subdistrict P	Single family townhomes

Land Use Compatibility:

The applicant is proposing to continue the following primary operations:

- produce and bottle wines and to provide tastings and retail sales in accordance with Texas Alcoholic Beverage Commission (TABC) regulations,
- allow clients to have food delivered and the applicant provides light meals and plates to compliment the wine, and
- allow designated spaces to be rented for private events.

The applicant also proposes to include the smaller building, 2018 Kidwell Street, if the request is approved. The smaller building will provide room for a commercial kitchen and additional tasting areas so that the applicant can forgo caterers and prepare its own food for its customers.

Pursuant to the Dallas Development Code, *microbrewery, microdistillery or winery* means an establishment for the manufacture, blending, fermentation, processing and packaging of alcoholic beverages with a floor area of 10,000 square feet or less that takes place wholly inside a building. A facility that only provides tasting, or retail sale of alcoholic beverages is not a microbrewery, microdistillery or winery use. This use also prohibits outside activities and therefore a new use, *winery and tasting room*, was proposed.

The applicant operates with a TABC Winery Permit (G). This authorizes the holder to manufacture, bottle, label and package wine containing not more than 24% alcohol by

volume; sell or buy wine from permit holders authorized to purchase and sell wine including wholesalers, winery and wine bottler's permittees; sell wine to ultimate consumers for consumption on the winery premises or in unbroken packages for off-premise consumption; and sell wine to ultimate customers for consumption on the winery premises or in unbroken packages for off-premises consumption.[4]

The area of request is at the corner of two streets that contain both residential and non-residential uses and is on the edge of a non-residentially developed area. To the north of the site, there is a multi-tenant medical office with various practitioners. These clinics also provide private off-street parking just to the west of their building. To the east of the site is a small realtor office, then surface parking, and ultimately there is a multi-tenant retail building before Abrams Road. To the south, there is surface parking and a dental practice just north of Oram Street. These businesses are often compatible with a winery because peak hours of these businesses are often at different times and therefore agreeable private parking agreements are beneficial to those neighbors.

On the opposite Kidwell Street, just to the west of the area of request, there is a seven unit shared access development. Six of the units were constructed in 1999 and the last was constructed in 2000 according to Dallas Central Appraisal District records.

Staff has recommended that a winery and tasting room be allowed by specific use permit, similar to a microbrewery, microdistillery, and winery use.

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The city council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards. The regulations in this chapter have been established in accordance with a comprehensive plan for the purpose of promoting the health, safety, morals, and general welfare of the city.

Parking:

Because the request will add additional tasting areas to the existing use, staff has recommended equivalent parking requirements as adopted in the Dallas Development Code. With staff's recommended conditions, the proposed changes will require accommodations for the increase in patrons in off-street parking areas. Staff has recommended that a winery and tasting room use mimic the parking requirements of a winery because it would require twice as much parking for the retail and seating areas and this will provide more parking for patrons in code compliant off-street parking areas.

[4] Reference Texas Alcoholic Beverage Code Section 16.01 (2015)
http://www.tabc.state.tx.us/laws/code/84th/AllTitles.pdf

The applicant has requested a retail parking ratio for the retail sales and seating areas of the use. A winery requires one space per 1,000 square feet of floor area that is devoted to storage, one space per 100 square feet of floor area for retail sales and seating, and one space per 600 square feet of floor area as otherwise provided.

Landscaping:

The Lakewood Special Purpose District requires landscaping review when a permit for construction is submitted for work that:

- increases the number of stories in a building on the lot;
- increases by more than 10 percent or 10,000 square feet, whichever is less, the combined floor areas of all buildings on the lot; or
- increases by more than 10 percent or 2,000 square feet, whichever is less, the nonpermeable coverage on the lot.[5]

The proposed application does not include any of the above; hence, it will not trigger any landscaping requirements under Lakewood Special Purpose District.

[5] Reference 51P-281.107(c)(2)(A) of the Dallas Development Code.

CPC Action:

On October 15, 2015 this item was held under advisement.

November 5, 2015

Motion: It was moved to recommend **approval** of a new Planned Development Subdistrict, subject to staff's recommended revised conditions with the following change: Parking ratio - One space per 200 square feet of floor area used for retail sales and seating; and **approval** of a Specific Use Permit for a five-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions on property zoned Center Core Area, Subdistrict E-F within Planned Development District No. 281, the Lakewood Special Purpose District, on the southeast corner of Prospect Avenue and Kidwell Street.

Maker: Ridley
Second: Murphy
Result: Carried: 13 to 0

For: 13 - Anglin, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 2 - Emmons, Jung
Vacancy: 0

Notices: Area: 500 Mailed: 158
Replies: For: 5 Against: 2

Speakers: For: Rob Baldwin, 3904 Elm St., Dallas, TX, 75226
Robert Wilson, 5027 Creighton Dr., Dallas, TX, 75214
Against: None

List of Officers

LAWLER PLATNER WILSON, LP

Chris Lawler, Partner

Kert Platner, Partner

Robert Wilson, Partner

CPC Recommended Conditions

ARTICLE 281.

PD 281.

Lakewood Special Purpose District

SEC. 51P-281.101. LEGISLATIVE HISTORY.

PD 281 was established by Ordinance No. 20062, passed by the Dallas City Council on September 14, 1988. Ordinance No. 20062 amended Ordinance Nos. 10962 and 19455, Chapters 51 and 51A of the Dallas City Code, as amended. Ordinance No. 20062 was amended by Ordinance No. 23498, passed by the Dallas City Council on April 22, 1998, and Ordinance No. 24381, passed by the Dallas City Council on September 13, 2000. (Ord. Nos. 10962; 19455; 20062; 23498; 24381; 25711)

SEC. 51P-281.102. PROPERTY LOCATION AND SIZE.

PD 281 is established on property generally located on both sides of Abrams Parkway, between Junius Street and Goliad Avenue. The size of PD 281 is approximately 44.17 acres. (Ord. Nos. 20062; 25711)

SEC. 51P-281.103. PURPOSE.

State law authorizes the city to regulate and restrict the construction, reconstruction, alteration, or razing of buildings and other structures in "places and areas of historic, cultural, or architectural importance and significance." These provisions are established for the Lakewood Special Purpose District for the purpose of providing a means of conserving the area's distinctive atmosphere or character by protecting or enhancing its significant architectural or cultural attributes. (Ord. Nos. 20062; 25711)

SEC. 51P-281.104. CREATION OF AREA AND SUBDISTRICTS.

(a) In general. The following areas and subdistricts are hereby established within the Lakewood Center SPD. A map showing the boundaries of the four areas and the [~~27~~] 28 subdistricts of the Lakewood Center SPD is labelled Exhibit 281A.

(b) The Center Core area. The Center Core area consists of Subdistricts A, B, C, D, E-F, E-F-1, G, H, I, J, K, L, M/a, M/b, N, O, P, Q, R, S, and T on properties more particularly described in Exhibit B of Ordinance No. 20062, as amended.

(c) The North Abrams area. The North Abrams area consists of Subdistricts A, A-1, and B on properties more particularly described in Exhibit C of Ordinance No. 20062, as amended.

(d) The Abrams/Richmond/Gaston area. The Abrams/Richmond/Gaston area consists of Subdistricts A and B on properties more particularly described in Exhibit D of Ordinance No. 20062, as amended.

(e) The Paulus Avenue area. The Paulus Avenue area consists of Subdistricts A and B on properties more particularly described in Exhibit E of Ordinance No. 20062, as amended. (Ord. Nos. 20062; 25711; 26523)

SEC. 51P-281.105. RECONCILIATION WITH OTHER ORDINANCES.

(a) The definitions and other provisions of Chapter 51A apply to the Lakewood Center SPD unless expressly modified by this article or unless a specific reference is made in this article to Chapter 51.

(b) The provisions of Section 51A-4.702, "Planned Development (PD) District Regulations," do not apply to the Lakewood Center SPD. (Ord. Nos. 20062; 25711)

SEC. 51P-281.106. INTERPRETATIONS.

Unless otherwise stated, all references to articles, divisions, or sections in this article are to articles, divisions, or sections in Chapter 51A. (Ord. 25711)

SEC. 51P-281.106.1. EXHIBITS.

The following exhibits are incorporated into this article:

(1) Exhibit 281A: map.

(2) Exhibit 281B: Paulus Avenue elevations.

(3) Exhibit 281C: Abrams Road elevation concept sketch (proposed retail).

(4) Exhibit 281D: Abrams Road elevation concept sketch (proposed bank).

(5) Exhibit 281E: Subdistrict A-1development plan and landscape plan.

(6) Exhibit 281F: photos of existing structure. and existing canopy

SEC. 51P-281.107. GENERAL PROVISIONS APPLICABLE TO THE LAKEWOOD CENTER SPD.

(a) Definitions. Unless the context clearly indicates otherwise, the following definitions apply in the Lakewood Center SPD:

(1) ABRAMS PARKWAY (OLD ABRAMS ROAD) means the right-of-way between Prospect Avenue and Junius Street previously known as Abrams Road before the construction of the bypass roadway to the east.

(2) ABRAMS PARKWAY PARKING MALL means the parking areas and circulation aisles within the Abrams Parkway right-of-way between Prospect Avenue and Abrams Road.

(3) ABRAMS ROAD (BYPASS) means the roadway constructed to the east of the Old Abrams Road right-of-way between Richmond Avenue and a point in Abrams Road south of Junius Street.

(4) ART GALLERY USE means a privately-owned facility for the display or retail sale of art.

(5) AVERAGE SIDEWALK WIDTH means the total sidewalk area divided by the length of its lot frontage.

(6) BLOCKFACE means all of the lots on one side of a block.

(7) BUFFER ZONE means a setback corridor along street frontages providing a landscaped separation between uses in the SPD and adjacent residential uses.

(8) BUSINESS SUPPLY STORE USE means a facility for the sale of supplies used in business, including desk, computer, and mailing supplies.

(9) CALIPER means the diameter of a tree trunk measured 12 inches above the root ball. If a tree is of a multi-trunk variety, the caliper of the tree is the average caliper of all of its trunks.

(10) COMMERCIAL PARKING LOT OR GARAGE means a surface or below-grade vehicle parking facility that is operated as a business enterprise by charging a fee for parking.

(11) COURT OR PLAZA means a pedestrian area covered with a permeable or nonpermeable surface paving material.

(12) COVERED WALKWAY means a pedestrian passageway with a paved surface and a roof structure.

(13) CUSTOM FURNITURE REPAIR OR UPHOLSTERY USE means a facility for repairing or reupholstering furniture on a single-item basis.

(14) DESIGNATED RETAIL STREET means the portion of a street which has been designated for restaurant, food, and drink service uses, and retail and service uses, and where special landscape improvements are required.

(15) DEVELOPMENT IMPACT REVIEW ("DIR") means "development impact review" as provided in the Dallas Development Code.

(16) DEVELOPMENT RIGHTS mean the maximum permissible floor area of structures permitted on a building site, expressed as maximum floor area ratio for the site.

(17) FENCE means a structure or hedgerow that provides a physical barrier.

(18) FLOOR AREA means the total square feet of floor space in a building measured to the outside faces of exterior walls or to the omitted wall lines, whichever produces the larger area. Parking structures are not included in the calculation of floor area.

(19) FLOOR AREA RATIO means the ratio of floor area of a structure, other than a parking structure, to lot area.

(20) FRONT FACADE means the wall of a building that faces an adjoining street.

(21) FRONT YARD means the portion of a lot that abuts a street and extends across the width of the lot between the street and the main building and lines parallel to and extending outward from the front facade of the main building.

(22) GAME COURT CENTER (INDOOR) USE means an indoor facility that contains a court for engaging in tennis, handball, racquetball, or similar physical activities.

(23) GROUND COVER means natural plants, of species which normally reach a height of less than three feet upon maturity, that form a continuous cover over the ground.

(24) JEWELRY STORE OR GIFT SHOP USE means a facility for the retail sale of jewelry, novelties, or other small manufactured articles intended mainly for personal or household adornment.

(25) LARGE SHRUB means a shrub that normally reaches a height of six feet or more upon maturity.

(26) LARGE TREE means a tree of a species that normally reaches a height of 30 feet or more upon maturity.

(27) LOBBY means an enclosed hall or foyer connected with a series of rooms and used as a passageway or waiting room.

(28) MAILING CENTER USE means a facility for handling bulk mailings of small parcels such as letters, advertisements, newspapers, and magazines, including public or private delivery services.

(29) MASONRY PAVER means a solid brick or block of masonry material used as a paving material.

(30) MEDICAL CLINIC USE means a facility for examination, testing, analyzing, and treatment of medical, dental, or optical patients.

(31) MEDIUM TREE means a tree of a species which normally reaches a height of 20 feet or more upon maturity.

(32) MINIMUM FRONT YARD means that portion of a lot that abuts a street and extends across the width of the lot between the street and the setback line.

(33) MOTORCYCLE DISPLAY, SALES, AND SERVICE (INSIDE DISPLAY) USE means a facility for the display, service, and retail sale of new or used motorcycles and motor scooters.

(34) MOUNTED CELLULAR ANTENNA means a cellular antenna that is attached to an existing structure, that does not exceed 12 feet above the structure to which it is attached (whip antennas are excluded from this calculation), that has a cross sectional area less than or equal to 25 square inches, and that is part of a cellular system authorized by the Federal Communications Commission. An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(35) NONPERMEABLE COVERAGE means coverage with nonpermeable pavement.

(36) OFF-STREET PARKING means code-required parking, parking in excess of code requirements, and related circulation areas other than access to and from the adjoining street.

(37) PARKING LOT OR GARAGE USE means a surface or below-grade vehicle parking facility.

(38) PARKWAY means the portion of right-of-way located between the street curb and the property line of an adjoining lot.

(39) PARKWAY LANDSCAPE PERMIT means a permit issued by the director of public works and transportation that allows landscaping within the parkway, subject to certain conditions.

(40) PEDESTRIAN PAVEMENT means pavement for pedestrian foot traffic and not for vehicular traffic.

(41) PROJECTED STREET CURB means the future location of the street curb pursuant to the city thoroughfare plan, as determined by the director of public works and transportation. If the existing street curb is indicated on the city thoroughfare plan, the projected street curb means the existing street curb.

(42) RESIDENTIAL ADJACENCY REVIEW ("RAR") means "residential adjacency review," as provided in the Dallas Development Code.

(43) RESTAURANT WITH ALCOHOLIC BEVERAGE USE means an establishment for the sale and service of food and alcoholic and non-alcoholic beverages on the premises.

(44) RESTAURANT WITH ALCOHOLIC BEVERAGES AND ENTERTAINMENT USE means an establishment for the sale and service of food and alcoholic and non-alcoholic beverages and facilities for entertainment and dancing may be provided under this use.

(45) RESTAURANT WITH DRIVE-THROUGH SERVICE means an establishment principally for the sale and consumption of food which has direct window service allowing customers in motor vehicles to pick up food for off-premise consumption.

(46) ROOF SLOPE means the degree and direction of roof slope in terms of a specified amount of rise in inches for a specified amount of horizontal distance. (Example: A 2:1 roof slope means two inches of rise for each one inch of horizontal distance.)

(47) SERVICE AREA means an off-street occupancy support service area, including but not limited to areas for delivery, loading, and trash storage and removal.

(48) SIDE YARD means any portion of a lot not occupied by a main building that is not a front or rear yard.

(49) SMALL SHRUB means a shrub of a species which normally reaches a height of less than three feet upon maturity.

(50) SMALL TREE means a tree of a species which normally reaches a height of less than 20 feet upon maturity.

(51) SPD means special purpose district.

(52) SPECIAL AMENITIES ZONE means a portion of the parkway, in the form of a corridor area along the street curb, that is designated for landscape improvements and pedestrian facilities.

(53) STORY means the portion of a structure between two successive floors or between the floor and the ceiling of a structure.

(54) STREET FRONTAGE means the length of the portion of a lot abutting a public street.

(55) STREETSCAPE means the landscape improvements and pedestrian amenities located within or adjacent to the parkway.

(56) STREET TREE means a tree within the parkway.

(57) SUBDISTRICT means a designated tract within the Lakewood Center SPD that is governed by unique use regulations and development standards.

(58) "SUP" means "specific use permit" as provided in the Dallas Development Code.

(59) TOOL AND EQUIPMENT AND APPLIANCE RENTAL, SALES, AND SERVICE (INSIDE) USE means a facility for renting, selling, and servicing tools, equipment, or appliances.

(60) TOY STORE USE means a facility for the sale of items with which a child can play for amusement, entertainment, or education.

(61) UNDERGROUND STRUCTURE means a structure with a roof located below-grade. For example, a building basement or an underground parking garage is an underground structure.

(62) UNOBSTRUCTED SIDEWALK WIDTH means the portion of a public sidewalk that is maintained without impediments to the free movement of pedestrians.

(63) VIDEO AND MOVIE STORE USE means a facility for the rental or sale of video tapes or devices.

(64) VOCATIONAL AND TECHNICAL SCHOOL USE means a business enterprise offering instruction and training in a trade such as welding, bricklaying, machinery operation, and other similar trades or crafts.

(65) WATER FEATURE means a pool or fountain.

(66) WINERY AND TASTING ROOM: means a facility for the manufacture, blending, fermentation, processing, packaging, and consumption of wine. A winery and tasting room use includes but is not limited to hosting event meetings, food preparation and service, outdoor consumption, and retail sales for off-premise consumption and related items, and in accordance with Texas Alcoholic Beverage Commission regulations.

(b) Development impact review. Before making application for a building permit, a site plan must be submitted in accordance with Division 51A-4.800 if:

(1) the work to be permitted will create a floor area ratio equal to or greater than one to one on the lot; or

(2) the work to be permitted will increase the building floor area by more than 20,000 square feet.

(c) General landscape and streetscape regulations.

(1) Introduction.

(A) The submission of a landscape plan is required with building permit applications that come under the applicability section below. Each property owner is required to provide landscaping and pedestrian facilities in the minimum front yard or the adjacent parkway. Points may be earned by providing landscaping and trees; enhanced pavement; various pedestrian facilities including covered walkways, courts or plazas, amenities areas, and seating areas; street trees; or pedestrian-scale lighting. Points are earned only if the landscaping and facilities provided occupy a specified amount of area, called an increment, and if they are not required by other provisions in this subsection. Credit is also given for retention of existing trees if they comply with all of the applicable criteria.

(B) In addition to the general landscape regulations, a streetscape amenities zone is required in some areas for building sites with frontage on a designated retail street or for building sites with frontage on a buffer zone. (See area regulations for more information.) Street trees and pedestrian-scale lighting are required in a streetscape amenities zone.

(C) General regulations are provided that require screening of parking, loading, and service areas, as well as those that govern the installation of landscaping, including acceptable landscape materials, soil requirements, protection barriers, and irrigation requirements. Provisions are also provided to regulate when landscaping must be completed and how it must be maintained.

(D) A private license is granted to authorize use of the public parkway for the required landscaping as long as a parkway landscape permit is obtained in accordance with the procedure outlined.

(2) Applicability.

(A) This subsection and the landscape regulations for the areas of this SPD contained in Sections 51P-281.108 through 51P-281.111 only become applicable to a lot when an application is made for a building permit for construction work that:

(i) increases the number of stories in a building on the lot;

(ii) increases by more than 10 percent or 10,000 square feet, whichever is less, the combined floor areas of all buildings on the lot; or

(iii) increases by more than 10 percent or 2,000 square feet, whichever is less, the nonpermeable coverage on the lot.

(B) When this subsection becomes applicable to a lot, its requirements are binding on all current and subsequent owners of the lot.

(C) Paragraphs (3), (4), and (5) of this subsection do not apply to Subdistrict A-1 of the North Abrams area as long as plans submitted for a building permit are in compliance with the development plan/landscape plan for Subdistrict A-1 of the North Abrams area (Exhibit 281E), and elevations (Exhibits 281C and 281D), with any minor amendments authorized in accordance with Section 51A-4.702.

(3) Landscape plan and point requirement. A landscape plan is required for all building sites in this SPD. All landscape plans must earn a minimum of 15 points.

(4) Design standards. In order to earn points under this subsection, landscape areas and pedestrian facilities must be placed in the minimum front yard of a building site or in the adjacent parkway. For building sites with more than one front yard, each front yard or the adjacent parkway must earn 15 points. The following provisions apply to all building sites in all areas, unless more restrictive provisions are stated elsewhere in this subsection.

(A) Front yard area landscaping.

(i) Points for landscape area increments. Five points are awarded for the first landscape area increment, and one point is awarded for each additional landscape area increment, to a maximum under this provision of eight points. A landscape area increment is one square foot times the total length (in feet) of the lot's street frontage. Credits for earning the square foot increment requirements are listed below.

(ii) Square foot landscape area credits. The following is a menu of plant materials for which landscape area credit can be earned. Landscape area (square foot) credits for trees or shrubs must be equal to the landscape area increment requirements specified in Subparagraph (A)(i).

(aa) One large canopy tree earns a 100 square foot landscape area credit.

(bb) One medium canopy tree earns a 50 square foot landscape area credit.

(cc) One small tree or one large shrub earns a 30 square foot landscape area credit.

(dd) One small shrub earns a 15 square foot landscape area credit.

(iii) Ground coverage requirement. The soil beneath trees and shrubs must be planted with ground cover in order to obtain landscape area credit.

(iv) Existing tree credits. Existing healthy trees retained in or relocated to the front yard of a building site or to the parkway may be credited toward meeting the landscape increments if they have a caliper equal to or greater than that required in this paragraph or Subsection (c)(5)(A).

(B) Pavement enhancement.

(i) Five point are awarded when an increment of at least 50 percent of all outdoor pavement area, both vehicular and pedestrian, within the front yard and the adjoining

parkway of a lot, consists of enhanced pavement. One-half of a point is awarded for each additional enhanced pavement increment which represents an additional 10 percent of the total front yard of a lot and the adjoining parkway pavement, to a maximum under this provision of seven and one-half points.

(ii) All vehicular pavement must comply with the applicable construction and maintenance provisions in the Dallas Development Code.

(iii) The material and design for all pedestrian pavement within the public right-of-way, or elsewhere if required as a public pedestrianway, must be approved by the director of public works and transportation.

(C) Pedestrian facilities and amenities.

(i) Covered walkways. Three points are awarded for the first 25 percent covered walkway increment, and one point is awarded for each additional 25 percent increment. The covered walkway increment is expressed as a percentage of the total length of the allowable front facade for the lot occupied by a covered walkway with a depth of at least five feet.

(ii) Courts or plazas. Three points are awarded for the first on-site court or plaza area increment equal to three square feet times the length (in feet) of the lot's street frontage. One point is awarded for each additional on-site court or plaza area increment equal to .5 square feet times the length (in feet) of the lot's street frontage. The maximum number of points available under this provision is five points. Court or plaza areas must be covered with a pedestrian paving surface. Vehicle parking or traffic is not permitted on the court or plaza pavement.

(iii) Amenities areas. Three points are awarded for the first amenities area increment, and one point is awarded for each additional amenities area increment, up to a maximum under this provision of five points. An amenities area is that area occupied by fountains, pools, or sculpture. An amenities area increment is equal to .5 square feet times the total length (in feet) of the lot's street frontage.

(iv) Seating areas. Three points are awarded for the first seating area increment equal to 25 percent of the length (in feet) of the lot's street frontage. One point is awarded for each additional 25 percent seating area increment. The maximum number of points available under this provision is five points. The seating area must have at least a 16-inch width or depth.

(D) Street trees outside of streetscape amenities zone. This paragraph applies to all building sites where the designation of a streetscape amenities zone is not required. A building site under this provision is awarded six points for street trees that meet the standards listed in Paragraph (5)(A).

(E) Pedestrian-scale lighting. This paragraph applies to all building sites where the designation of a streetscape amenities zone is not required. A building site which qualifies under this provision is awarded three points for pedestrian-scale lighting that meets the standards listed in Paragraph (5)(C).

(5) Mandatory provisions.

(A) Street trees within streetscape amenities zone. The following provisions apply to building sites in any area where the designation of a streetscape amenities zone is a requirement.

(i) Location, number, and type of trees required.

(aa) Each building site must have a minimum number of trees located within the streetscape amenities zone pursuant to Subparagraph (bb). A tree is not considered located within the streetscape amenities zone unless its trunk is entirely within that zone. If a property owner cannot obtain a parkway landscape permit in accordance with provisions of Paragraph (10), the trees must be located in the required front yard as near as practicable to the front lot line. If a lot has no front yard requirement and the property owner cannot obtain a parkway landscape permit to locate a required tree in the parkway, the property owner need not provide that required tree.

(bb) The minimum number of trees required is one or the number calculated by dividing the length (in feet) of the lot's street frontage by 25, whichever is greater. Fractions are rounded to the nearest whole number, with .5 being rounded up to the next higher whole number.

(cc) All required trees must be recommended for local area use by the director of the park and recreation department.

(ii) Minimum tree height and trunk caliper. Required trees must have a minimum height of 12 feet, and a minimum trunk caliper of two and one-half inches measured at a point 12 inches above the root ball.

(iii) Tree spacing requirements. Required trees must be spaced as uniformly as practicable. The center of the trunk of a required tree, measured at grade, must be within 50 feet of the center of the trunk of another required tree, measured at grade.

(iv) Minimum clearance above pavement. All required trees must be maintained to comply with the following minimum vertical height clearances over street and sidewalk pavements:

(aa) Thirteen and one-half feet above street pavement.

(bb) Seven and one-half feet above public sidewalks and any other sidewalk required by this article.

(v) Tree grates required near sidewalks. Tree grates must be provided for large and medium size trees with trunks within 18 inches of public sidewalks or any other sidewalk required by this article. The grates must:

(aa) conform to state standards and specifications adopted to eliminate, insofar as possible, architectural barriers encountered by aged, handicapped, or disabled persons; and

(bb) be large enough to permit healthy tree growth.

(B) Screening of off-street parking spaces, loading spaces, and service areas.

(i) Screening required in this paragraph must comply with the standards set forth in Section 51A-4.602.

(ii) Off-street parking spaces and related vehicular circulation areas must be screened by a three-foot-high fence or hedge from public streets, and by a six-foot-high fence or

hedge from all residentially zoned abutting property or residentially zoned property located directly across an alley or easement from the parking.

(iii) Off-street loading spaces and service areas, including related vehicular circulation areas, must be screened by a six-foot-high fence or hedge from public streets and from abutting residentially zoned property or residentially zoned property located directly across an alley or easement from the loading or service area.

(C) Pedestrian-scale lighting. At least one pedestrian-scale light must be provided for each building site located in an area where the designation of a streetscape amenities zone is required. The design and placement of the standards and fixtures must be approved by the director of public works and transportation. Each property owner is responsible for the cost of installation, operation, and maintenance of pedestrian-scale lighting on his property or in the public right-of-way adjacent to his property. To qualify as pedestrian scale lighting, lighting must:

(i) be mounted at a height no greater than 14 feet above the grade of the sidewalk; and

(ii) provide a minimum maintained average illumination level of 1.5 footcandles on the designated public sidewalk.

(6) Installation standards for landscaping.

(A) Acceptable landscape materials. No artificial plant materials may be used to satisfy the requirements of this section. The plant materials used to satisfy the requirements of this section must comply with the following minimum size requirements at the time of installation.

(i) Large trees must have a minimum caliper of five inches and a minimum height of 18 feet.

(ii) Medium trees must have a minimum caliper of two and one-half inches and a minimum height of 12 feet.

(iii) Small trees must have a minimum caliper of one inch and a minimum height of six feet.

(iv) Large shrubs must be installed from at least five gallon containers and have a minimum height of four feet.

(v) Small shrubs must be installed from at least three gallon containers and have a minimum height of two feet.

(B) Measurement of height. For purposes of this subparagraph, "height" is measured from a point 12 inches above the top of the root ball or, if the plant is in a container, from the soil level in the container.

(C) Plant materials recommended. In satisfying the landscaping requirements of this section, the use of high-quality, hardy, and drought-tolerant plant materials is recommended.

(D) Soil requirements.

(i) Landscape planting areas must have the following soil depths and dimensions. (The building official may waive the minimum soil requirements if a landscape architect certifies that the proposed alternative soil depth and dimensions are sufficient to support the health and vigorous growth of the plant materials.)

(ii) For each small shrub installed, a minimum of 16 inches of soil depth and four square feet of surface area (totaling five cubic feet) is required. For each small shrub installed above an underground structure, a minimum of 18 inches of soil depth and nine square feet of surface area, totaling 13.5 cubic feet, is required.

(iii) For each large shrub or small tree installed, a minimum of 24 inches of soil depth and 12 square feet of surface area (totaling 24 cubic feet) is required. For each large shrub or small tree installed above an underground structure, a minimum of 30 inches of soil depth and 16 square feet of surface area, totaling 40 cubic feet, is required.

(iv) For each medium tree installed, a minimum of 36 inches of soil depth and 25 square feet of surface area (totaling 75 cubic feet) is required. For each medium tree installed above an underground structure, a minimum of 42 inches of soil depth and 36 square feet of surface area (totaling 126 cubic feet) is required.

(v) For each large tree installed, a minimum of 48 inches of soil depth and 49 square feet of surface area (totaling 196 cubic feet) is required. For each large tree installed above an underground structure, a minimum of 54 inches of soil depth and 64 square feet of surface area (totaling 288 cubic feet) is required.

(E) Protection of landscape areas. Required landscape areas must be protected from vehicular traffic by concrete curbs, wheel stops, or other permanent barriers.

(F) Irrigation requirements. Required plant materials must be located within 100 feet of a verifiable water supply. Proposed water sources must be:

(i) shown on the landscape plan; and

(ii) adequate to maintain the plant materials in a healthy, growing condition at all times.

(7) When landscaping must be completed.

(A) Except as otherwise provided in this paragraph, all landscaping must be completed in accordance with the approved landscape plant before a certificate of occupancy may be issued for any use on the lot.

(B) If the property owner provides the building official with satisfactory documentation showing that the landscaping will be completed within six months, the building official may issue one six-month temporary certificate of occupancy and permit the property owner to complete his landscaping during the six-month period. For purposes of this subsection, "documented assurance" means:

(i) a copy of a valid contract to install the landscaping in accordance with the landscape plan within the six-month period; or

(ii) a set of deed restrictions containing a covenant to install the landscaping in accordance with the landscape plan within the six-month period. The deed restrictions must:

(aa) expressly provide that they may be enforced by the city;

(bb) be approved as to form by the city attorney; and

(cc) be filed in the deed records of the county in which the land is located.

(iii) If a temporary certificate of occupancy is issued under this paragraph and if, at the end of the six-month period, no permanent certificate of occupancy has been issued because the landscaping has not been installed in accordance with the landscape plan, the owner of the property is liable to the city for a civil penalty in the amount of $2,000 a day for each calendar day thereafter until the landscaping is properly installed. The building official shall give written notice to the property owner of the amount owed to the city in civil penalties, and shall notify the city attorney of any unpaid civil penalty. The city attorney shall collect unpaid civil penalties in a suit on the city's behalf.

(iv) The civil penalty provided for in Subparagraph (B)(iii) is in addition to any other enforcement remedies the city may have under city ordinances and state law.

(8) General maintenance.

(A) Required landscaping must be maintained in a healthy, growing condition at all times. The property owner is responsible for regular weeding, mowing of grass, irrigation, fertilizing, pruning, and other maintenance of all plantings as needed. Any plant that dies must be replaced with another living plant that complies with the approved landscape plan within 90 days after notification by the city.

(B) Any damage to utility lines resulting from the negligence of the property owner or his agents or employees in the installation and maintenance of required landscaping in a utility easement is the responsibility of the property owner. If a public utility disturbs a landscaped area in a utility easement, it shall make every reasonable effort to preserve the landscaping materials and return them to their prior locations after the utility work. If, nonetheless, some plant materials die, it is the obligation of the property owner to replace the plant materials.

(9) Private license granted. The city council hereby grants a private license to the owners of all property in the Lakewood Center SPD for the exclusive purpose of authorizing compliance with the parkway landscaping requirements of this section. A property owner is not required to pay an initial or annual fee for this license, although a fee may be charged for issuance of a parkway landscape permit in accordance with Subparagraph (10)(B). This private license shall not terminate at the end of any specific time period, however, the city council retains the right to terminate this license whenever the purpose or use of this license is likely to become a nuisance.

(10) Parkway landscape permit.

(A) It is the responsibility of the property owner to apply for and obtain a parkway landscape permit before locating trees, landscaping, or pavement other than for the sidewalk required under this article in the parkway. An application for a parkway landscape permit, if required, must be made to the director of public works and transportation before an application for a building permit is made for work on the lot. The application must be in writing on a form approved by the director

of public works and transportation and accompanied by plans or drawings showing the area of the parkway affected and the construction and planting proposed.

(B) Upon receipt of the application and any required fees, the director of public works and transportation shall circulate it to all affected city departments and utilities for review and comment. If, after receiving comments from affected city departments and utilities, the director of public works and transportation determines that the construction and planting proposed will not be inconsistent with and will not unreasonably impair the public use of the right-of-way, the director shall issue a parkway landscape permit to the property owner; otherwise, the director shall deny the permit.

(C) A property owner is not required to comply with any parkway landscaping requirement of this section if compliance is made impossible due to the director of public works and transportation's denial of a parkway landscape permit.

(D) A parkway landscape permit issued by the director of public works and transportation is subject to immediate revocation upon written notice if at any time the director determines that the use of the parkway authorized by the permit is inconsistent with or unreasonably impairs the public use of the right-of-way. The property owner is not required to comply with any parkway landscaping requirement of this section if compliance is made impossible due to the director's revocation of a parkway landscape permit.

(E) The issuance of a parkway landscape permit under this section does not excuse the property owner, his agents, or employees from liability in the installation or maintenance of trees, landscaping, or pavement in the public right-of-way.

(d) Lakewood Center SPD general plan review.

(1) Except as otherwise provided, prior to applying for a building permit, a person desiring to develop property in the Lakewood Center SPD shall consult with the director or his designated representative to discuss whether the project is consistent with the general plan for the area and the requirements of this article. The director shall determine if the project complies with this article generally, and shall advise the applicant of any landscape review, residential adjacency review, development impact review, or any other review which may be necessary prior to the issuance of a building permit. The director shall forward a written copy of his determination to the building official.

(2) Paragraph (1) of this subsection does not apply in Subdistrict A-1 of the North Abrams area as long as plans submitted for a building permit are in compliance with Exhibits 281C, 281D, and 281E, with minor amendments authorized in accordance with Section 51A-4.702.

(e) Nonconforming uses and structures. Section 51A-4.704, relating to nonconforming uses and structures, applies in the Lakewood Center SPD.

(f) Parking structures (above-grade) prohibited. Above-grade parking structures are prohibited in this district.

(g) Use group categories applicable to the Lakewood Center SPD. The uses listed in the following use group categories are the only uses permitted in the Lakewood Center SPD. If "*[SUP]*" follows a use, a specific use permit is required for that use. If "*[RAR]*" follows a use, residential adjacency review is required for that use. If "*[DIR]*" follows a use, development impact review is required for that use. Unless expressly modified by this article, the definitions of uses contained in Chapter 51 apply in this district.

(1) Office uses.

-- Bank or savings and loan office (without drive-in windows).
-- Bank or savings and loan (with drive-in window). *[DIR required except in Subdistrict A-1 of the North Abrams area as long as plans submitted for a building permit are in compliance with Exhibits 281C, 281D, and 281E, with any minor amendments authorized in accordance with Section 51A-4.702.]*
-- Broadcasting or recording studio.
-- Medical clinic.
-- Office.
-- Veterinarian's office.
-- Safe deposit boxes.
-- Travel bureau.

(2) Public service, utility, and institutional uses.

-- Amateur communication tower.
-- Bus passenger shelter.
-- Church.
-- Electrical substation. *[SUP]*
-- Establishments of a religious, charitable, or philanthropic nature. *[SUP]*
-- Local utilities.
-- Parking lot or garage.
-- Public or private school. *[SUP]*
-- Public park or playground.
-- Radio, television, or microwave tower. *[SUP]*
-- Sewage pumping station. *[SUP]*
-- Telephone exchange, switching, and transmitting equipment. *[SUP]*
-- Temporary construction or sales office.
-- Utility or governmental installation other than listed. *[SUP]*
-- Water reservoir, well, or pumping station. *[SUP]*

(3) Residential uses.

-- Multiple-family.
-- Residence home for the aged.
-- Single-family.
-- The following residential accessory uses: game court (private); home occupation; occasional sales (garage sales); open storage; and swimming pool (private).

(4) Restaurant, food, and drink service uses.

-- Bakery or confectionery shop.
-- Private club. *[SUP]*
-- Catering service.
-- Restaurant with alcoholic beverages.
-- Restaurant with alcoholic beverages and entertainment. *[SUP]*
-- Restaurant with drive-through service. *[RAR]*

(5) Restricted Paulus Avenue Subdistrict A uses.

(A) Residential uses.

-- Single-family.
-- Duplex.

(B) Office-related uses.

-- All office uses listed in Paragraph (1).

(C) Retail uses (2,000 square feet or less).

-- Art gallery.
-- Antique shop.
-- Book and stationery store.
-- Camera shop.
-- Florist store.
-- Jewelry store or gift shop.
-- Photography studio.
-- Travel bureau.

(6) Restricted Paulus Avenue Subdistrict B uses.

(A) Residential uses.

-- Single-family.
-- Duplex.

(B) Office-related uses.

-- All office uses listed in Paragraph (1).

(C) Retail uses (3,500 square feet or less).

-- Antique shop.
-- Appliance fix-it shop.
-- Art gallery.
-- Book and stationery store.
-- Business school.
-- Business supply store.
-- Camera shop.
-- Cigar, tobacco, and candy store.
-- Clothing store.
-- Computer service center.
-- Custom print shop.
-- Custom commercial engraving.
-- Duplication shop.
-- Florist store.
-- Furniture store.
-- Game court center (indoor).
-- Handcraft bookbinding.
-- Handcrafted art work studio.
-- Hardware or sporting goods store.
-- Hobby and art supplies store.
-- Home improvement center.

-- Instructional arts studio.
-- Jewelry store or gift shop.
-- Key shop.
-- Mailing center.
-- Medical appliance fitting and sales.
-- Optical shop.
-- Paint and wallpaper store.
-- Pet shop.
-- Photography studio.
-- Retail or service uses similar to those listed in this group category.
-- Safe deposit boxes.
-- Shoe repair.
-- Tailor, custom sewing, and millinery shop.
-- Toy store.
-- Travel bureau.
-- Venetian blind or window shade repair, assembly, and sales.
-- Video and movie store.
-- Vocational and technical school.

(7) Retail and service uses.

-- Aluminum collection center. *[SUP]*
-- Ambulatory surgical center.
-- Animal clinic without outside run.
-- Antique shop.
-- Appliance fix-it shop.
-- Auto glass, muffler, or seat cover shop. *[RAR]*
-- Auto parts sales (inside only).
-- Auto repair garage (inside). *[RAR]*
-- Barber and beauty shop.
-- Beverage store.
-- Book and stationery store.
-- Business school.
-- Camera shop.
-- Car wash. *[SUP]*
-- Cigar, tobacco, and candy store.
-- Clothing store.
-- Commercial parking lot or garage.
-- Community, welfare, or health center. *[SUP]*
-- Computer service center.
-- Custom commercial engraving.
-- Custom furniture repair or upholstery.
-- Custom print shop.
-- Custom cleaning shop.
-- Day care center.
-- Diamond and precious stone sales (wholesale only).
-- Drug store.
-- Duplication shop.
-- Feed store.
-- Florist store.
-- Furniture store.

-- Game court center.
-- Garden shop, plant sales, or greenhouse.
-- Handcraft bookbinding.
-- Handcrafted art work studio.
-- Hardware or sporting goods store.
-- Health studio.
-- Hobby and art supplies store.
-- Home improvement center. *[RAR]*
-- Inside commercial amusement.
-- Instructional arts studio.
-- Key shop.
-- Laundry or cleaning pickup and receiving station.
-- Library, art gallery, or museum.
-- Medical appliance fitting and sales.
-- Mortuary or funeral home.
-- Motorcycle display, sales, and service (inside display).
-- Optical shop.
-- Outside commercial amusement. *[SUP]*
-- Paint and wallpaper store.
-- Passenger bus station and terminal. *[RAR]*
-- Pet shop.
-- Photography studio.
-- Plumbing, electrical, air conditioning, and heating shops. *[RAR]*
-- Post office.
-- Private recreation club or area. *[SUP]*
-- Retail and personal service uses similar to those listed in this group category.
-- Retail food store. *[RAR]*
-- Safe deposit boxes.
-- Second hand store.
-- Self service laundry or dry cleaning.
-- Service station. *[RAR]*
-- Shoe repair.
-- Swimming pool sales and supply.
-- Tailor, custom sewing, and millinery.
-- Theatre.
-- Tool and equipment and appliance rental, sales, and service (inside).
-- Travel bureau.
-- Venetian blind or window shade repair, assembly, and sales.
-- Wax museum.

(8) Winery and tasting room. *[Limited to Subdistrict E-F-1 only.] [SUP]*

(h) Use restrictions. The following use restrictions apply in the Lakewood Center SPD.

(1) Business supply store use. The sale of heavy equipment is prohibited in this use.

(2) Medical clinic use. This use may only be conducted between 7 a.m. through 7 p.m., Monday through Saturday. This use is limited to office space for no more than three doctors.

(3) Motorcycle display, sales, and service (inside display) use. Only display, sales, and service conducted within a structure are permitted in this use.

(4) Restaurant with alcoholic beverage use. The on-premise sale of alcoholic beverages may comprise no more than 75 percent of this use's gross revenue.

(5) Restaurant with alcoholic beverages and entertainment use. The on-premise sale of alcoholic beverages may comprise no more than 75 percent of this use's gross revenue.

(6) Tool and equipment and appliance rental, sales, and service (inside) use. Only rental, sales, and service conducted within a structure are permitted in this use. (Ord. Nos. 20062; 23498; 25711; 26523)

SEC. 51P-281.108. DEVELOPMENT STANDARDS FOR THE CENTER CORE AREA.

(a) Height and story standards in the center core area.

(1) Residential proximity slope applies. If any portion of a structure is over 26 feet in height, that portion may not be located above a residential proximity slope. Exceptions:

(A) Structures on building sites located in Subdistricts G and H are not required to observe any proximity slope emanating from the Lakewood Country Club property.

(B) Structures listed in Section 51A-4.408(a)(2) may project through the residential proximity slope to a height not to exceed the maximum structure height or 12 feet above the slope, whichever is less.

(2) Height and stories. Unless further restricted under Paragraph (1), maximum height and number of stories allowed in all subdistricts of the center core area are as follows:

Subdistrict	Maximum Height (In feet)	Maximum Number of Stories
A, B, E-F, E-F-1 G, and M/a	75	5
C	125	9
D and Q	60	4
H, I, M/b, O, P, R, S, and T	50	3
J and N	36	2
K	75	5
L	90	7

(b) Landscaping in the center core area.

(1) Additional regulations. General landscape regulations applicable to the Lakewood Center SPD are listed in Section 51P-281.107(c) of this article. The following landscaping regulations must be satisfied in addition to the regulations in Section 51P-281.107(c).

(2) Buffer zone. All building sites with frontage on Abrams Road (Bypass) between Abrams Parkway and Gaston Avenue must designate the area between a line 25 feet back of and parallel to the Abrams Road Street curb and the street curb as a buffer zone. Use of the buffer zone area is restricted to landscaping, pedestrian walkways and facilities, and vehicular driveways to and from the street. The buffer zone area must contain a streetscape amenities zone.

(3) Streetscape amenities zone. All building sites with frontage on either a designated retail street or a buffer zone must designate the area between a line three feet back from the designated retail street curb, and a line six feet back and parallel to the curb, as a streetscape amenities zone. Use of a streetscape amenities zone is restricted to vehicular driveways to and from the street, street trees, pedestrian-scale lights, and other pedestrian amenities approved by the director of public works and transportation. The installation of street trees and pedestrian-scale lights is mandatory and must be completed before a certificate of occupancy is issued for any use located on these building sites.

(c) Lot coverage in the center core area. Maximum lot coverage for building sites in all subdistricts of the center core area is as follows:

Subdistrict	**Maximum Lot Coverage (in percent)**
A, B, C, E-F, E-F-1, G, I K, M/a, Q, and S	**80**
D, H, M/b, N, O, P, R, and T	**70**
J	**40**
L	**60**

(d) Lot size in the center core area. There are no lot size requirements in the center core area.

(e) Maximum floor area ratios in the center core area.

(1) General standards. Maximum floor area ratios for building sites in all subdistricts of the center core area are as follows:

Subdistrict	**Maximum Floor Area Ratio**
A, B, G, and K	**2.0**
C	**2.5**
D, E-F, E-F-1, L, Q, and S	**1.5**
H, I, M/b, N, O, P, R, and T	**1.0**
J	**0.8**
M/a	**1.5**

(2) Special provisions.

(A) Retail and service use bonus.

(i) Maximum floor area ratios provided in Paragraph (1) may be increased in Subdistricts A, B, E-F, E-F-1, G, H, I, K, M/a, Q, and R if:

(aa) the amount of floor area designated for retail and service uses exceeds that required in the ground floor use requirement contained in Subsection (k)(2); and

(bb) an exterior entrance accessible from a city sidewalk is provided for all retail and service uses in excess of the ground floor use requirement. An exterior entrance that requires passage through a lobby serving multiple uses does not satisfy this requirement.

(ii) The floor area available under this bonus is calculated by subtracting the amount of floor area of retail and service uses required under the ground floor use requirement from the total amount of floor area designated for retail and service uses and multiplying the difference by two.

(iii) A development plan designating all retail and service uses must be submitted to the building official at the time application is made for a building permit. A deed restriction instrument must be filed with the building official concurrently with the development plan which contains a covenant limiting the relevant portion of the property to retail and service use. This instrument must expressly provide that the restrictions may be enforced by the city; must be approved as to form by the city attorney's office; and must be filed in the deed records of Dallas County.

(iv) An amendment to this article is required to permit any use other than one within the retail and service use group in space designated for retail and service use pursuant to this subparagraph. At least 30 days before filing an application for such an amendment with the city, the owner of the property subject to the amendment must mail notices of intent to amend this article to all owners of lots or land within 500 feet of the subject property and to the designated representative of the following neighborhood groups:

(aa) Abrams Brookside Neighborhood Association.

(bb) Lakewood Heights Neighborhood Association.

(cc) Edgemont Park Residents Association.

(dd) Lakewood Homeowners Association.

(ee) Junius Heights Homeowners Association.

(ff) Gastonwood/Coronado Hills Association.

(gg) Lakewood Country Club Estates Association.

(hh) Swiss Avenue Historic District Association.

(B) Transfer of development rights from Subdistrict J.

(i) Introduction. The following provisions permit a one-time transfer of floor area from the building sites where the Lakewood Theater and the former city library structures are located to other specified subdistricts in the center core area. A review procedure is provided to insure proper documentation of the transfer. The listed information must be provided on a document that must be filed in county deed records. The consequences of the transfer to the property from which the transfer is made would be to tie the future development of that property to the elevation drawings filed in deed records. The purpose of this provision is to provide an incentive to conserve and

protect the Lakewood Theater and the former city library structures pursuant to state law authority to regulate places and areas of historical, cultural, or architectural importance and significance.

(ii) Transfer allowed. If the Lakewood Theater and the former city library structures are preserved in accordance with this subparagraph, square footage reflecting up to a floor area ratio of 1.2 may be transferred from each of the building sites where those structures are located to building sites in Subdistricts A, B, E-F, E-F-1, G, H, I, K, M/a, Q, or R.

(iii) Transfer process.

(aa) An owner who wishes to transfer development rights shall submit to the director the following information on a form approved by the director and suitable for filing in the county deed records:

-- Names and addresses of the owners of the development rights.

-- Street address, lot, and block number, and legal description of the property from which the development rights are to be transferred.

-- Street address, lot, and block number, and legal description of the property to which the development rights are to be transferred.

-- The floor area of the structure on the property from which the development rights are to be transferred (Lakewood Theater or former city library) and the lot area of the building site where the structure involved is located.

-- The amount of development rights to be transferred.

(bb) The applicant shall also provide to the director elevation drawings of the structure (Lakewood Theater or former city library structure) on the property from which the development rights are to be transferred. These elevations must indicate facade materials, roof form and materials, door and window openings, entry covers, and signage spaces, including the theater marquee.

(cc) The director shall check the information supplied on the form and sign the form if the applicant has complied with the requirements of this section.

(dd) When the director has signed the form, the applicant shall file the form in the county deed records, and shall supply the director and the building official with a copy of the filed document.

(ee) When a person applies for a building permit to use the transferred development rights, the building official shall forward the building permit application and the form transferring the development rights to the director. The director shall review the application and verify that the development rights have been properly transferred and may be used.

(iv) Consequences of transfer. If development rights are transferred in accordance with this subparagraph, all development of the building sites where the Lakewood Theater or the former city library structure are located must comply with the elevation drawings of those structures required in this subparagraph. If the Lakewood Theater or former city library structure is

destroyed after the transfer of development rights, any new structure on those building sites must comply with the elevation drawings.

(C) Maximum floor area ratio under special provisions. Maximum floor area ratios attainable under Subparagraphs (A) and (B) are as follows:

Subdistrict	Maximum Bonus Floor Area Ratio
A, B, G, and K	**.5**
E-F, E-F-1, M/a, and Q	**.375**
H, I, and R	**.25**

(D) Transfer bonus from Subdistricts M/b and N.

(i) The following provisions permit a one-time transfer of floor area from Subdistricts M/b and N to Subdistrict M/a. The transfer must occur when an application for a building permit is made which would involve the use of the additional floor area in Subdistrict M/a. Before the building permit application may be accepted as complete, the applicant must submit deed restrictions in accordance with the following provisions that limit the maximum floor area in Subdistrict M/b or N to reflect the amount transferred to Subdistrict M/a. The purpose of this provision is to permit flexibility in the development of Subdistricts M/a, M/b, and N, and to provide an incentive for lessening the intensity of development in Subdistricts M/b and N due to their proximity to residential uses and for increasing the intensity of development in Subdistrict M/a, which is further from residential uses and good accessibility to major area roadways.

(ii) The floor area in Subdistrict M/a may be increased by a transfer of the amount of floor area not used in Subdistricts M/b or N if deed restrictions are filed in accordance with Subparagraphs (D)(iii) at the time application is made for a building permit involving the use of the additional floor area in Subdistrict M/a.

(iii) A set of deed restrictions must be filed in deed records of Dallas County that contains a covenant limiting the floor area to that existing or reserved for Subdistricts M/b or N after the transfer to Subdistrict M/a. The formula for calculating the amount of floor area for Subdistricts M/b or N after the transfer to Subdistrict M/a is as follows:

$$A - B = C$$

where A represents the maximum floor area permitted under this article in Subdistricts M/b or N, B represents the amount of floor area transferred to Subdistrict M/a, and C is the maximum amount of floor area permitted in Subdistricts M/b or N after the transfer. These restrictions must expressly provide that they may be enforced by the city, and must be approved as to form by the city attorney.

(f) Off-street parking in the center core area.

(1) Minimum number of spaces required.

(A) Uses in the public service, utility, and institutional use group must provide off-street parking at the ratios indicated in Division 51-4.200 of Chapter 51.

(B) Except as provided in Subparagraph (D), uses in the retail and service use group must provide off-street parking at the ratios indicated in Division 51-4.200 of Chapter 51.

(C) Except as provided in Subparagraph (D), uses in the restaurant, food, and drink service use group must provide one off-street parking space for each 100 square feet of floor area.

(D) Uses in the retail and service, and restaurant, food, and drink service use groups located on building sites in Subdistricts A, B, E-F, G, I, and J with frontage on the Abrams Parkway Parking Mall must provide off-street parking at the ratio of 65 percent of the requirement indicated in Division 51-4.200 of Chapter 51.

(E) Uses in the office use group must provide one off-street parking space for each 333 square feet of floor area.

(F) Uses in the residential use group must provide one off-street parking space for each dwelling unit.

(G) For a winery and tasting room,

(i) Except as otherwise provided, one space per 600 square feet of floor area.

(ii) One space per 1,000 square feet of floor area used for storage.

(iii) One space per 200 square feet of floor area used for retail sales and seating.

(2) Location of off-street parking. No off-street parking is permitted in the front yard. Required off-street parking must be provided on the lot occupied by the main use, or in compliance with the special parking regulations of the Dallas Development Code.

(g) Other regulations applicable to the center core area.

(1) Outside speaker and intercom system use restrictions.

(A) The use of an outside public address or paging speaker is prohibited.

(B) The use of an outside speaker as a part of an intercom system is prohibited within 150 feet of a residential zoning district unless its use is approved through the residential adjacency review procedure.

(C) Outside speakers are prohibited along Kidwell Street in Subdistrict E-F-1.

(D) In Subdistrict E-F-1, a use defined within the restaurant, food, and drink service use group and a winery and tasting room must cease outdoor activities between the hours of 10 p.m. and 6 a.m. the next day.

(2) Alley use restriction. If a nonresidential use adjoins an alley that is within or abuts a residential zoning district, truck delivery and garbage or trash pickup is prohibited between the hours of 10 p.m. and 7 a.m. The board of adjustment may grant a special exception to the alley use restriction in accordance with the provisions of Section 51A-4.301(h)(2).

(3) Building site. For parking purposes and yard, lot, and space regulations, all of Subdistrict E-F-1 is considered a building site.

(h) Setbacks in the center core area.

(1) Setbacks in subdistricts. The setbacks required in the subdistricts of the center core area are as follows. All street frontages are treated as front yards, and there is no distinction between side and rear yard setbacks.

Subdistrict	Front Yard Setback	Side and Rear Yard Setback
A, B, C, D, E-F, E-F-1, G, H, I, J, K, M/a, O, P, Q, R, and S	**0**	**0**
L and T	**10**	**10**
M/b and N	**15**	**0**

(2) Other setback requirements in the center core area.

(A) Residential adjacency setbacks. The following setbacks apply to building sites adjacent to a residential zoning district.

(i) A 10-foot front yard setback must be provided on a building site located across an adjoining street from a residential zoning district or on a building site located within the same blockface as a residential zoning district.

(ii) A 10-foot side and rear yard setback must be provided on a building site that adjoins or is across a public alley or easement from a residential district.

(B) Designated retail street setbacks.

(i) Designation. The designated retail streets in this area are Abrams Parkway between Abrams Road (Bypass) and Prospect Avenue; Abrams Road between Gaston Avenue and Richmond Avenue; Gaston Avenue between Paulus Avenue and Abrams Road (Bypass); La Vista Drive between Alderson Street and Gaston Avenue; and Paulus Avenue between Gaston Avenue and La Vista Drive. The following setbacks apply to building sites with frontage on a designated retail street.

(ii) Minimum front yard setback. Structures on a building site with frontage on a designated retail street must have a minimum setback of five feet from the front property line and 15 feet from the projected street curb.

(iii) Exception to the minimum front yard setback. Trellises, screens, stairs, awnings, and canopies may encroach into the minimum front yard of a building site with frontage on a designated retail street if at least a seven-foot unobstructed sidewalk width is maintained between these improvements and the projected street curb.

(iv) Maximum front yard setback. Structures on a building site with frontage on a designated retail street may not have a setback greater than 15 feet from the front property line, or 25 feet from the projected street curb.

(C) Buffer zone setback. A minimum setback of 25 feet must be provided for all structures on a building site with frontage on Abrams Road (Bypass) between Abrams Parkway and Gaston Avenue. This buffer zone setback area may not be used for vehicular parking or vehicular circulation except for access to and from the street.

(D) Urban form setback. If any portion of a structure located in this area is over 36 feet in height, an additional front yard setback of 15 feet must be provided for that portion of the structure.

(E) Setback from Lakewood Theater required. Any structure located in Subdistrict K that is more than 36 feet in height must provide a setback from the Lakewood Theater structure of at least one foot of horizontal distance for each one foot of height over 36 feet.

(i) Sidewalks in the center core area.

(1) Sidewalks required. Before the issuance of a certificate of occupancy, owners of building sites in the center core area must construct and maintain a minimum average seven-foot sidewalk width generally parallel to the back curb of any adjoining street. Five feet of the required average sidewalk width must be maintained in an unobstructed state. The remaining two feet may be used as authorized by this article or the Dallas City Code, as amended.

(2) Special sidewalk width standards. Before the issuance of a certificate of occupancy, all owners of building sites in the center core area with frontage on a designated retail street, as defined in Subsection (h)(2)(B), must construct and maintain a minimum average 10-foot sidewalk width generally parallel to the back curb of any adjoining designated retail street. Seven feet of the required average sidewalk width must be maintained in an unobstructed state. The remaining three feet may be used as authorized by this article or the Dallas City Code, as amended.

(3) Sidewalk easement required in some cases. If any portion of the sidewalk is to be located in the front yard of the building site, the owner must dedicate a sidewalk easement to the city to assure its availability to the public as a permanent pedestrianway.

(j) Sign in the center core area.

(1) Except as otherwise provided in Paragraphs (2) and (3), attached and detached signs are permitted in the center core area in accordance with the provisions for business zoning districts contained in the Dallas Development Code.

(2) In Subdistricts L, M/b, N, O, and T, attached and detached signs must comply with the provisions for non-business zoning districts contained in the Dallas Development Code.

(3) Signs in the front yard of a building site in Subdistricts D and P with frontage on Prospect Street, Alderson Street, or Oram Street must comply with provisions for non-business zoning districts contained in the Dallas Development Code.

(k) Uses in the center core area.

(1) Subdistrict uses. Only the uses within the listed use groups are permitted in the following subdistricts of the center core area.

(A) Subdistricts A, B, C, E-F, E-F-1, G, H, I, K, M/a, Q, and R.

(i) Office use group.

(ii) Public service, utility, and institutional use group.

(iii) Residential use group, providing that residential uses do not exceed 50 percent of the total developed floor area of any structure.

(iv) Restaurant, food, and drink service use group.

(v) Retail and service use group.

(vi) Mounted cellular antenna. *[Permitted in Subarea C only.]*

(vii) Winery and tasting room. *[Permitted in Subdistrict E-F-1 only. SUP.]*

(B) Subdistrict J.

(i) Office use group.

(ii) Public service, utility, and institutional use group.

(iii) Restaurant, food, and drink service use group.

(iv) Retail and service use group.

(C) Subdistrict M/b.

(i) Office use group.

(ii) Public service, utility, and institutional use group.

(iii) Residential use group, except that the southerly 50 feet of this subdistrict is limited to only those uses allowed in the Restricted Paulus Avenue Subdistrict B use group.

(iv) Restaurant, food, and drink service use group.

(v) Retail and service use group.

(D) Subdistrict P.

(i) Office use group.

(ii) Public service, utility, and institutional use group.

(iii) Residential use group.

(iv) Retail and service use group, with the condition that access to any retail use is limited to the Kidwell Street frontage.

(E) Subdistrict S.

(i) Office use group.

(ii) Public service, utility, and institutional use group.

(iii) Residential use group.

(iv) Retail and service use group.

(F) Subdistricts D, N, O, and T.

(i) Office use group.
(ii) Public service, utility, and institutional use group.

(iii) Residential use group.

(G) Subdistrict L.

(i) Mounted cellular antenna.

(ii) Office use group.

(iii) Public service, utility, and institutional use group.

(iv) Residential use group, providing that residential uses do not exceed 50 percent of the total developed floor area of any structure.

(2) Ground floor use requirement.

(A) The ground floor use requirement set forth in Subparagraph (B) applies to all new construction and additions that increase floor area. The ground floor use requirement does not apply to existing structures or to remodeling or additions that do not increase floor area.

(B) At least 75 percent of the floor area of all uses on the ground floor of structures in Subdistricts A, B, E-F, G, I, K, Q, and R must be devoted to those uses listed in the retail and service, or restaurant, food, and drink service use groups.

(C) At least 75 percent of the floor area of all uses on the ground floor of structures in Subdistrict E-F-1 must be devoted to those uses listed in the retail and service, or restaurant, food, and drink service use groups.

(l) Width in the center core area.

(1) The minimum building width regulations in this subsection apply only to that portion of a building site in Subdistricts A, B, C, D, E-F, G, I, K, M/a, Q, and R that has frontage on a designated retail street.

(2) All structures must have a front building wall that extends through the setback corridor along a line generally parallel to the street for a distance that is at least 70 percent of a number equal to the length of the minimum front yard setback line minus any required setbacks at either end of the minimum front yard setback line. This calculation expressed mathematically is: .70 x (length of front yard setback line minus required setback lines at either end). The setback corridor is a ten-foot-wide corridor that runs across the width of the lot from the minimum front yard setback line towards the rear of the lot a distance of 10 feet and across the lot from setback line to setback line. The portion of front building wall affected by this subsection extends from grade to 15 feet in height. (Ord. Nos. 20062; 23498; 24381; 25711)

SEC. 51P-281.109. DEVELOPMENT STANDARDS FOR THE NORTH ABRAMS AREA.

OMITTED FOR BREVITY

SEC. 51P-281.110. DEVELOPMENT STANDARDS FOR THE ABRAMS/RICHMOND/GASTON AREA.

OMITTED FOR BREVITY

SEC. 51P-281.111. DEVELOPMENT STANDARDS FOR THE PAULUS AVENUE AREA.

OMITTED FOR BREVITY

SEC. 51P-281.112. SPECIAL PENALTY PROVISIONS.

(a) General. A person violating a provision of this article, upon conviction, is punishable by a fine not to exceed $2,000. A person commits an offense if the person is criminally responsible for a violation of the use regulations or development standards of this article. A person is criminally responsible for a violation if the person:

(1) commits or assists in the commission of an act in violation; or

(2) owns part or all of the land or a structure on the land where a violation exists.

(b) Additional penalty. In addition to punishment by fine, the city may institute any appropriate action or proceedings to prevent, restrain, correct, or abate the unlawful erection, construction, reconstruction, alteration, repair, conversion, or maintenance of a building, structure, or land in the Lakewood Center SPD. (Ord. Nos. 20062; 25711)

~~**[SEC. 51P-281.113. ZONING MAP.**~~

~~PD 281 is located on Zoning Map No. I-8.~~] (Ord. Nos. 20062; 25711)

CPC RECOMMENDED SUP CONDITIONS

Z145-308

1. USE: The only use authorized by this specific use permit is a winery and tasting room.

2. SITE PLAN: Use and development of the Property must comply with the attached site plan.

3. TIME LIMIT: This specific use permit expires on _____ (five years), but is eligible for automatic renewal for additional five-year periods pursuant to Section 51A-4.219 of Chapter 51A of the Dallas City Code, as amended. For automatic renewal to occur, the Property owner must file a complete application for automatic renewal with the director before the expiration of the current period. Failure to timely file a complete application will render this specific use permit ineligible for automatic renewal. (Note: The Code currently provides that applications for automatic renewal must be filed after the 180th but before the 120th day before the expiration of the current specific use permit period. The Property owner is responsible for checking the Code for possible revisions to this provision. The deadline for applications for automatic renewal is strictly enforced.

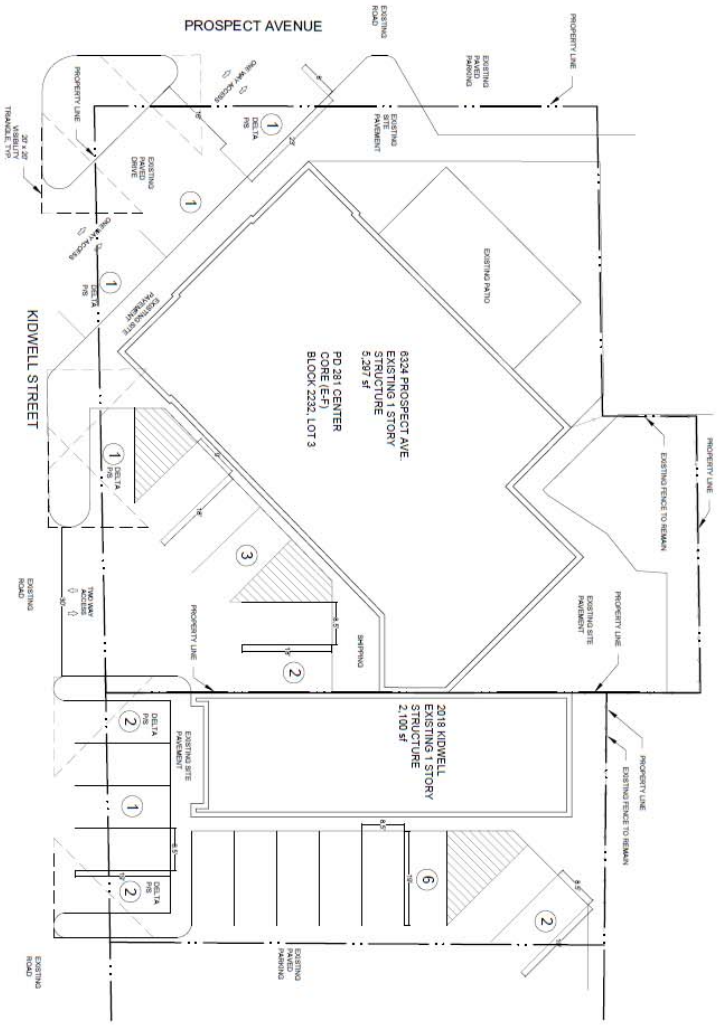
4. FLOOR AREA: The maximum floor area is 7,600 square feet in the location shown on the attached site plan.

5. OUTDOOR PATIO: The outdoor patio may not exceed 900 square feet in area in the location shown on the attached site plan.

6. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

7. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

Proposed SUP Site Plan



1 TIMES TEN CELLARS SUP SITE PLAN
SCALE: 1" = 10'-0"

10 0 5 10 20 40

SITE INFORMATION:
PD 281 Sub-area E-F-1
Winery and Tasting Room

Lot Area: 0.45 acres
Total Floor Area: 7,507 sf
Patio Area: 732 sf

Parking:
Parking Required: 26 spaces
Parking Provided: 26 spaces
(includes delta credits and remote parking)

VICINITY MAP
NTS



CASE #Z145-308

2018 KIDWELL ST.
CITY OF DALLAS, TEXAS

Baldwin Associates

BALDWIN ASSOCIATES
3904 Elm Street, Suite B
Dallas, Texas 75226
MOBILE: 214.729.7949
OFFICE: 214.824.7949
rob@baldwinplanning.com

11/16/2015
PROJECT NUMBER

CASE NUMBER

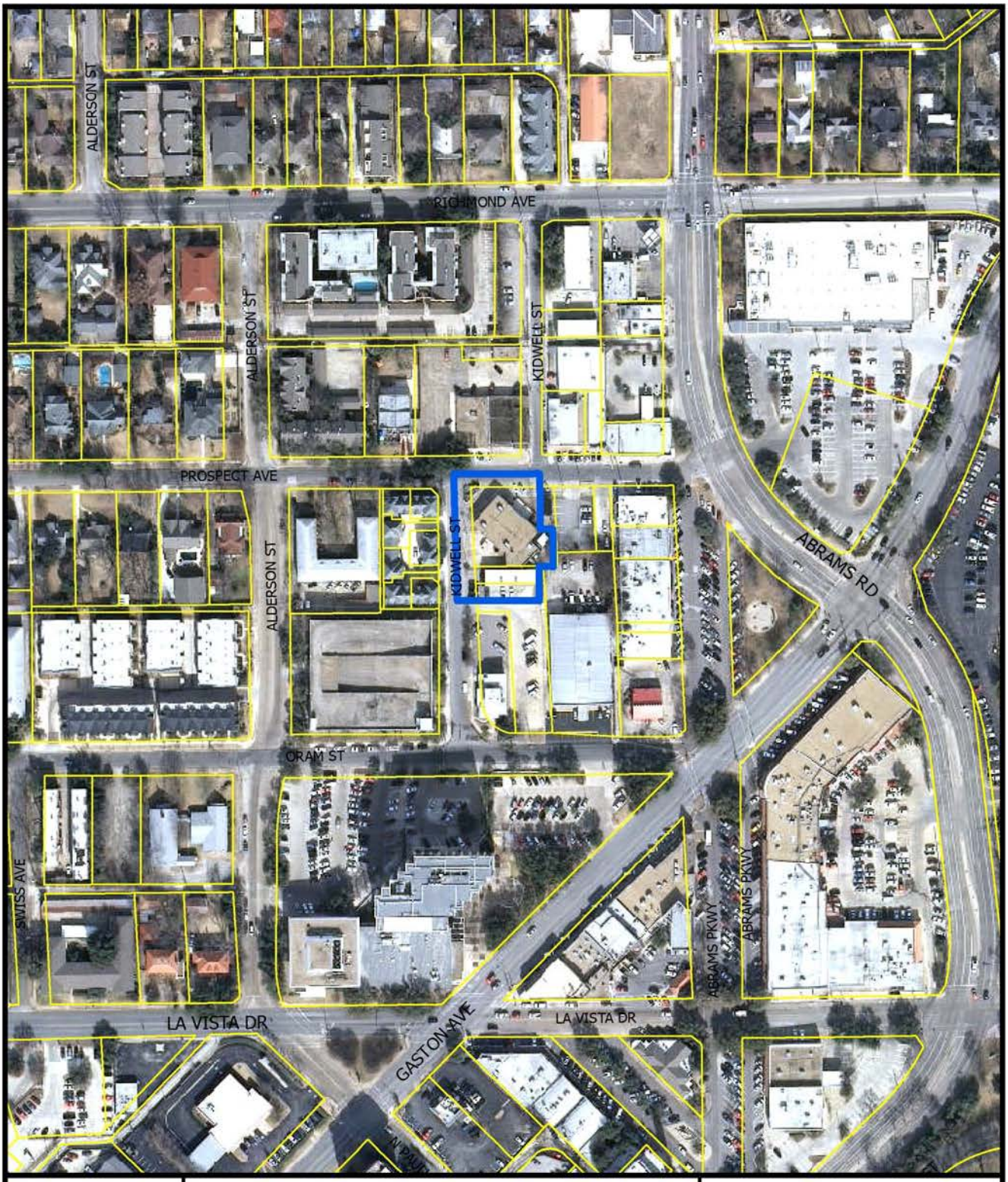


1:6,000

VICINITY MAP

Case no: Z145-308

Date: 10/1/2015

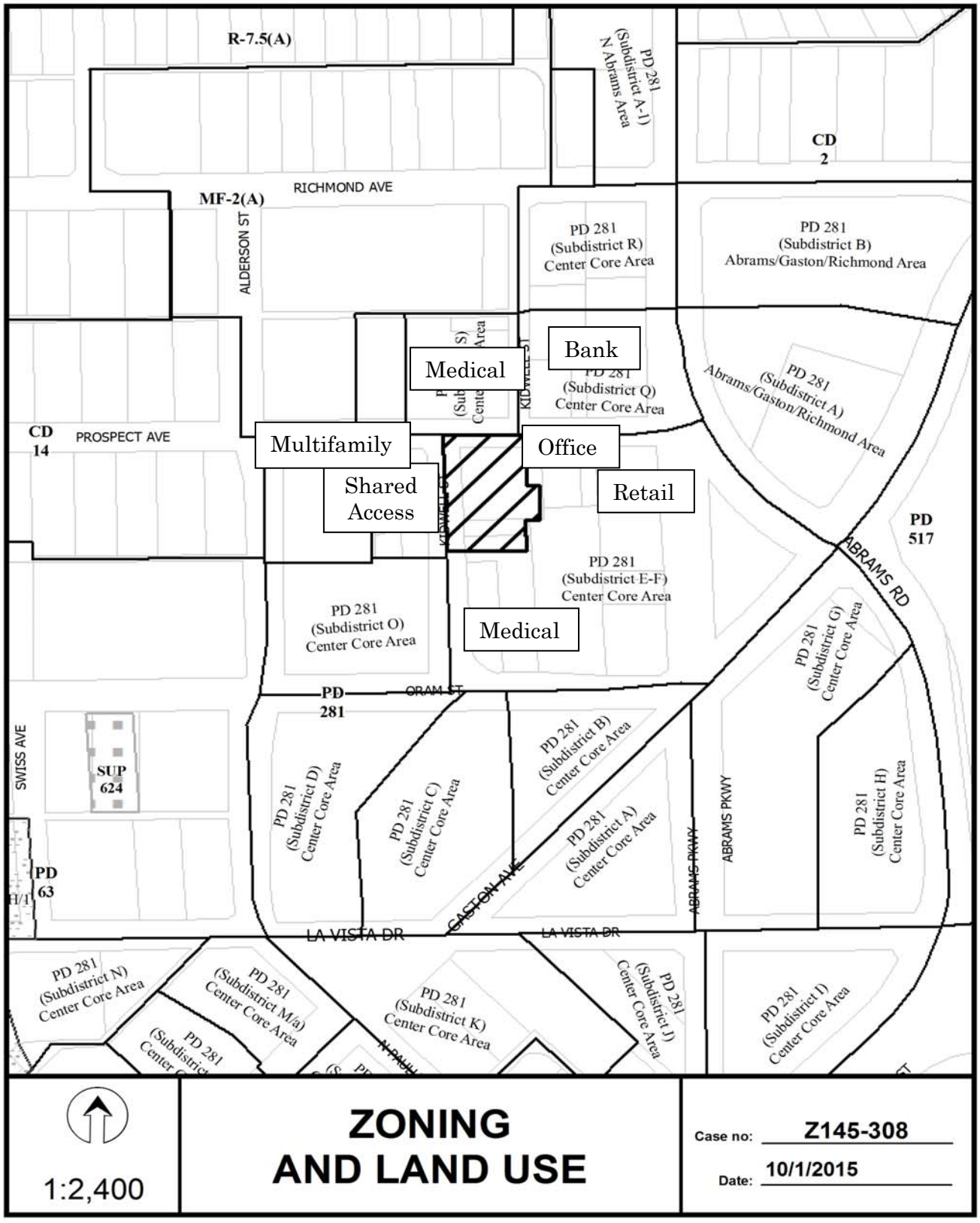


1:2,400

AERIAL MAP

Case no: Z145-308

Date: 10/1/2015


R-7.5(A)
MF-2(A)
RICHMOND AVE
ALDERSON ST
PROSPECT AVE
CD 14
CD 2
PD 281 (Subdistrict A-1) N Abrams Area
PD 281 (Subdistrict R) Center Core Area
PD 281 (Subdistrict B) Abrams/Gaston/Richmond Area
PD 281 (Subdistrict Q) Center Core Area
PD 281 (Subdistrict A) Abrams/Gaston/Richmond Area
Bank
Medical
Multifamily
Office
Shared Access
Retail
PD 517
ABRAMS RD
PD 281 (Subdistrict E-F) Center Core Area
PD 281 (Subdistrict O) Center Core Area
Medical
PD 281
ORAM ST
SWISS AVE
SUP 624
PD 63
H/1
PD 281 (Subdistrict D) Center Core Area
PD 281 (Subdistrict C) Center Core Area
PD 281 (Subdistrict B) Center Core Area
PD 281 (Subdistrict A) Center Core Area
PD 281 (Subdistrict G) Center Core Area
PD 281 (Subdistrict H) Center Core Area
ABRAMS PKWY
GASTON AVE
LA VISTA DR
PD 281 (Subdistrict N) Center Core Area
PD 281 (Subdistrict M/a) Center Core Area
PD 281 (Subdistrict K) Center Core Area
PD 281 (Subdistrict J) Center Core Area
PD 281 (Subdistrict I) Center Core Area
1:2,400
ZONING AND LAND USE
Case no: Z145-308
Date: 10/1/2015

Z145-308(SM)

CPC Responses



158	Property Owners Notified (65 parcels)
5	Replies in Favor (5 parcels)
2	Replies in Opposition (2 parcels)
500'	Area of Notification
11/5/2015 Date	10/15/2015 Under Advisement

Z145-308
CPC

N
W E
S

1:2,400

11/04/2015

Reply List of Property Owners

Z145-308

158 Property Owners Notified ***5 Property Owners in Favor*** ***2 Property Owners Opposed***

Reply	*Label #*	*Address*		*Owner*
	1	2016	KIDWELL ST	PLATNER KERT &
	2	2018	KIDWELL ST	PLATNER KERT &
	3	6324	PROSPECT AVE	LAWLER PLATNER WILSON LP
	4	6343	RICHMOND AVE	FERGUSON CARLTON W &
	5	6339	RICHMOND AVE	LAHAT GAL
	6	6329	RICHMOND AVE	SCOTT WILLIAM H JR &
	7	6325	RICHMOND AVE	PATTS NICHOLAS JAMES
	8	6285	PROSPECT AVE	CORNELIUS TODD M & ELIZABETH B
	9	6277	PROSPECT AVE	YOUNG JENEAN A &
	10	6284	RICHMOND AVE	HOLMES JOHN B
	11	6315	PROSPECT AVE	SMITH JAMES & LAUREL REVOCABLE TRUST
	12	6328	RICHMOND AVE	2122 KIDWELL LLC
	13	6341	PROSPECT AVE	J LAKEWOOD LTD
	14	2111	ABRAMS RD	J LAKEWOOD LTD
	15	6280	PROSPECT AVE	CHITWOOD ROBERT EUGENE &
O	16	6274	PROSPECT AVE	SMITH HELEN L
	17	6284	PROSPECT AVE	DONLIN PATRICK
	18	6336	PROSPECT AVE	ALLEGRO MANAGEMENT TRUST
	19	6338	PROSPECT AVE	INTERRANTE INTERESTS LTD
	20	6337	ORAM ST	TETER JACK
O	21	2031	ABRAMS PKWY	2031 ABRAMS LLC
	22	6304	PROSPECT AVE	WWW PROPERTIES LTD
	23	2010	ALDERSON ST	HIGHLAND LAKEWOOD LLC
O	24	6282	ORAM ST	BETHANY CHRISTIAN CHURCH
	25	2201	ABRAMS RD	JB & T PROPERTIES LLC
	26	6345	RICHMOND AVE	BUCHANAN JO ANN

11/04/2015

Reply	*Label #*	*Address*		*Owner*
O	27	6276	RICHMOND AVE	GARRETT JOHN & NATALIA
O	28	2005	KIDWELL ST	IVERSON CLAIRE A
	29	2007	KIDWELL ST	BOZARTH CHARLOTTE TR
	30	2009	KIDWELL ST	WHETSTINE DANIEL A
X	31	2013	KIDWELL ST	REGO RHONDA A
	32	2015	KIDWELL ST	HEDRICK KATHLEEN
X	33	2017	KIDWELL ST	ETHRIDGE RICHARD L
	34	2011	KIDWELL ST	FEROZE ZAMMURAD H
	35	2011	KIDWELL ST	LAKEWOOD VILLAS HOA
	36	6433	GASTON AVE	MERIDITH JANET DINES ETAL
	37	6331	PROSPECT AVE	LAKEWOOD MEDICAL BLDG INC
	38	2105	KIDWELL ST	LAKEWOOD MEDICAL BLGD INC
	39	2115	ABRAMS RD	GOOD PPTIES LLC
	40	6333	PROSPECT AVE	J LAKEWOOD LTD
	41	2108	KIDWELL ST	HOLMES JOHN
	42	2122	KIDWELL ST	2122 KIDWELL LLC
	43	2114	KIDWELL ST	CHAMBERLAIN NICHOLAS
	44	2101	ABRAMS RD	J LAKEWOOD LTD
	45	2121	ABRAMS RD	SEJ ASSET MGMT & INVESTMENT COMPANY
	46	2009	ABRAMS PKWY	CCP 2009 ABRAMS LP
	47	2011	ABRAMS PKWY	MAST ELIZABETH
	48	6329	ORAM ST	HELDON CORP
	49	2025	ABRAMS PKWY	INTERRANTE INTERESTS LTD
	50	6326	PROSPECT AVE	ALLEGRO MANAGEMENT TRUST
	51	6337	ORAM ST	TETER JACK
	52	2015	ABRAMS PKWY	LAKEWOOD SHOPPING CTR LTD
	53	6301	GASTON AVE	HIGHLAND LAKEWOOD LLC
	54	6316	GASTON AVE	GREENWAY LAKEWOOD PTNRS
	55	1904	ABRAMS PKWY	1924 ABRAMS LTD
	56	6363	RICHMOND AVE	HOPKINS A F TRUSTEE
	57	2001	ABRAMS PKWY	TEXAS MCFARLIN LTD PS

Reply	*Label #*	*Address*		*Owner*
	58	2118	ABRAMS RD	ALEFF LLC
	59	6318	RICHMOND AVE	SHEUMAKER ANDREW
	60	6318	RICHMOND AVE	BURKHALTER BRADLEY G
	61	6318	RICHMOND AVE	HALE VALLI
	62	6318	RICHMOND AVE	HEARN ROBERT J
	63	6318	RICHMOND AVE	MOSELEY KATE K
	64	6318	RICHMOND AVE	TOPP PATRICIA ANN
	65	6318	RICHMOND AVE	PIGG MICHAEL W
	66	6318	RICHMOND AVE	SAUCEDO GUADALUPE
	67	6318	RICHMOND AVE	JOHN PAUL HOLDING INVESTMENTS CORP
	68	6318	RICHMOND AVE	ADCOCK RONALD K & BARBARA
	69	6318	RICHMOND AVE	NEMETH MARY A
	70	6318	RICHMOND AVE	ECKIAN ALBERT G REVOCABLE TRUST
	71	6318	RICHMOND AVE	BRADY PATRICIA A
	72	6318	RICHMOND AVE	MAYER BARBARA ANN &
	73	6318	RICHMOND AVE	SHRIVER JODI LYN
	74	6318	RICHMOND AVE	SEUFER AIMEE R
	75	6318	RICHMOND AVE	THIBAUT JEANNINE
	76	6318	RICHMOND AVE	LACHER KIMBERLY A
	77	6318	RICHMOND AVE	TODD BRETT
	78	6318	RICHMOND AVE	BAILEY GRETCHEN
	79	6318	RICHMOND AVE	COX CRISTIN E
	80	6318	RICHMOND AVE	GONZALEZ LEONOR
	81	6318	RICHMOND AVE	HARTFIEL HOLLY M
	82	6318	RICHMOND AVE	DELANEY DENA
	83	6318	RICHMOND AVE	LEOPOLD ANTHONY M
	84	6318	RICHMOND AVE	BALARAMA KRISHNA
	85	6318	RICHMOND AVE	BELL KENDRA
	86	6318	RICHMOND AVE	MCLEAN MELISSA MARY
	87	6318	RICHMOND AVE	MILLER JACQUELINE N
	88	6318	RICHMOND AVE	AUTREY STEPHANIE M

Reply	*Label #*	*Address*		*Owner*
	89	6318	RICHMOND AVE	LABRIE LINDSAY
	90	6318	RICHMOND AVE	PERKINS SYDNEY MARIE &
	91	6318	RICHMOND AVE	MOON ADAM
	92	6318	RICHMOND AVE	J & P LEYMON FAMILY TRUST
	93	6318	RICHMOND AVE	BLONS JEANETTE M LIF EST
	94	6318	RICHMOND AVE	ROBINSON BECKY
	95	6318	RICHMOND AVE	GANN THOMAS K & ANN M
	96	6318	RICHMOND AVE	MCCOLLUM MILES G
	97	6318	RICHMOND AVE	POLLAK ROBERT N
	98	6318	RICHMOND AVE	BACH PROPERTIES LLC
	99	6318	RICHMOND AVE	FANNIE MAE
	100	6318	RICHMOND AVE	MINICK MATTHEW
	101	6318	RICHMOND AVE	BONGANI HOLDINGS LLC
	102	6318	RICHMOND AVE	WILLE ELIZABETH A
	103	6318	RICHMOND AVE	CLAYTON LESLEY
	104	6318	RICHMOND AVE	LEATHERWOOD NANCY R
	105	6318	RICHMOND AVE	MEYERS KAREN LINNET
	106	6318	RICHMOND AVE	GERHART MARTHA
	107	6318	RICHMOND AVE	BONDURANT KAREN
	108	6318	RICHMOND AVE	HUTCHESON MELEISSA L
	109	6318	RICHMOND AVE	BERRELLS BRENDAN J
	110	6318	RICHMOND AVE	WADINO MICHAEL J JR &
	111	6318	RICHMOND AVE	REAVES CATHRYN
	112	6318	RICHMOND AVE	REYNA MICHAL
	113	6318	RICHMOND AVE	ACOSTA VERONICA M
	114	6355	RICHMOND AVE	TRAVIS PATRICIA J
	115	6355	RICHMOND AVE	ESPENSEN SCOTT LETH
	116	6355	RICHMOND AVE	MARSHALL DAHL
	117	6355	RICHMOND AVE	MARTIN ELAINE P
	118	6303	PROSPECT AVE	WOHLRABE BARBARA LEE
	119	6303	PROSPECT AVE	BRAZOS PROPERTIES INC

Reply	*Label #*	*Address*		*Owner*
	120	6303	PROSPECT AVE	NELSON JAMES ANDREW
	121	6303	PROSPECT AVE	SHELTON THOMAS B
	122	6303	PROSPECT AVE	DANZA ISABEL C
	123	6303	PROSPECT AVE	ARTH WILLIAM P
	124	6303	PROSPECT AVE	WITT KENT P & YOLANDA E
	125	6303	PROSPECT AVE	CROSIER PAMELA G
	126	6269	ORAM ST	WEST SHELLY V
	127	6269	ORAM ST	EVANS JOSHUA & TANYA
	128	6269	ORAM ST	SULLIVAN CYNTHIA ANN
	129	6269	ORAM ST	HERNANDEZ ELIZABETH
	130	6269	ORAM ST	QUICK BRENDON C & GENEVIEVE
	131	6269	ORAM ST	IRONS KYLE T
	132	6269	ORAM ST	GOBERT JUSTIN R
	133	6269	ORAM ST	CULLISON MATTHEW T
	134	6269	ORAM ST	GRUSSENDORF CECILIA
	135	6269	ORAM ST	PERRYMAN JOHN
	136	6269	ORAM ST	RICE ADAM T
	137	6269	ORAM ST	RICKARD LIONEL
	138	6269	ORAM ST	BRONAUGH SHARON L
	139	6269	ORAM ST	DOUGLAS ANN B
	140	6269	ORAM ST	ANDRIEN KENNETH J & ANNE B
	141	6269	ORAM ST	BILL NATALIE A
	142	6269	ORAM ST	SCHMITT JULIE ANNA
	143	6269	ORAM ST	CARTER ANDREW F
	144	6269	ORAM ST	FERTITTA STACY MICHELLE
	145	6269	ORAM ST	LUBBOCK B & V INVESTMENTS LLC
	146	6269	ORAM ST	MONNICH C R
	147	6269	ORAM ST	LYNCH CAROL J
	148	6269	ORAM ST	LACHER KIMBERLY A
	149	6269	ORAM ST	FREDERICK LISA
	150	6269	ORAM ST	STEPHENS KANDICE

11/04/2015

Reply	*Label #*	*Address*		*Owner*
	151	6269	ORAM ST	HILL VAN D & ANNE B
	152	6269	ORAM ST	MIKESKA JEFFREY W & DEBORAH J
	153	6333	RICHMOND AVE	HILL HAYLEY &
	154	6333	RICHMOND AVE	SHAH LINA A & ATIT M
	155	6333	RICHMOND AVE	MERBLER KENNETH G
	156	6333	RICHMOND AVE	BOHANNON GEORGE T
	157	6333	RICHMOND AVE	FENNER RYAN DONALD
	158	6333	RICHMOND AVE	JOHANNESEN TRACE

AGENDA ITEM # 52

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 5

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 57 M

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a utility or government installation other than listed on property zoned an LI Light Industrial District on the east line of Guard Drive, north of Lake June Road
Recommendation of Staff and CPC: Approval for a permanent period, subject to a site plan and conditions
Z145-322(SM)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER:	Z145-322(SM)	**DATE FILED:**	August 10, 2015
LOCATION:	East line of Guard Drive, north of Lake June Road		
COUNCIL DISTRICT:	5	**MAPSCO:**	57M
SIZE OF REQUEST:	Approx. 5.447 acres	**CENSUS TRACT:**	115.00

APPLICANT: Raul Acosta, City of Dallas

REPRESENTATIVE: Charyl F. McAfee-Duncan, McAfee3 Architects, Inc.

OWNER: Louise Elam, City of Dallas

REQUEST: An application for a Specific Use Permit for a utility or government installation other than listed on property zoned an LI Light Industrial District.

SUMMARY: The purpose of the request is to operate a service center with offices and storage for the City of Dallas' Parks and Recreation Department. The floor area of the existing building is being expanding for a City of Dallas, Parks and Recreation Department District Service Center.

CPC RECOMMENDATION: **Approval** for a permanent period, subject to a site plan and conditions.

STAFF RECOMMENDATION: **Approval** for a permanent period, subject to a site plan and conditions.

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends approval permit based upon:

1. *Compatibility with surrounding uses and community facilities* – The service yard is fully screened and physically separated by changes in elevation from single-family homes. As a result, the request is not anticipated to have a negative impact on the surrounding areas.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – The functions of the utility or government installation other than listed use contributes to the city functions in the management of the parks and recreation centers throughout the City of Dallas.

3. *Not a detriment to the public health, safety, or general welfare* – The proposed use will not be a detriment to the public health, safety or general welfare of the general public as it will provide a location for parks and recreation equipment for the City of Dallas.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – The proposed use will comply with all applicable zoning regulations and standards.

BACKGROUND INFORMATION:

- In 1949, the site was annexed into the City of Dallas.

- In 1961, the site was dedicated to the City of Dallas for purposes of building an armory building for the Texas National Guard and the 60-foot right-of-way was named Guard Drive.

- In 2004 plat number S012-249R was recorded in Dallas County records to create 125 single family lots to the north and west of the site. The majority of new construction on these lots took place between 2004 and 2007.

- In 1961, a permit for new construction was issued for the armory building.

- In 2006, Mortenson Broadcasting filed for a certificate of occupancy for a radio station.

- In 2013, the radio station vacated the building.

- Preliminary plat S145-247 was approved by the City Plan Commission August 20, 2015.

Zoning History: There has not been any recent zoning activity in the immediate area relevant to this request within the last five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	ROW
Guard Drive	Local	100 ft.

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the proposed SUP will not have a negative impact on the surrounding street system. The analysis is based upon the traffic worksheet the applicant provided during the application submittal.

COMPREHENSIVE PLAN: The *forwardDallas! Comprehensive Plan* designates the area of request in the Urban Neighborhood Building Block.

The Urban Neighborhoods, including Oak Lawn, the Grand Avenue area in South Dallas, the area near Jefferson Boulevard and the Vickery Meadow area, are predominately residential but are distinguished from other neighborhoods by the wide variety of housing options they provide and easy access to public transit. Housing choices should include single-family detached dwellings, townhomes and low- to midrise condominiums or apartments. These neighborhoods will have concentrations of shops and offices along key corridors or at key intersections, providing important services and job opportunities within walking distance of residences. These areas may have mixed-use buildings with ground floor shops. Areas currently developed with single-family or duplex uses should generally be maintained unless redevelopment is addressed through an Area Planning process. Urban Neighborhood streets will be very pedestrian friendly, providing excellent connectivity to shopping, schools and other community services. Emphasis should be placed on slowing traffic through use of on-street parking and other similar traffic calming measures. Public investments in these areas will focus on parks, pathways, transit stops, pedestrian-oriented landscaping and road improvements.

LI zoning is not typically a zoning district that is envisioned for Urban Neighborhood Building Blocks. However, given that LI is the existing zoning on the property, the proposed site changes are minor in nature, the screening wall will mitigate potential impacts the use may have on surrounding properties, and because the site has been commercially utilized for over 40 years, the request can be supported.

STAFF ANALYSIS:

Surrounding Land Uses:

	Zoning	Land Use
Site	LI	Vacant (former Armory Building)
South	MU-1	Undeveloped
North, East, and West	R-7.5(A)	Single Family

Land Use Compatibility: The site is developed with a one-story, masonry building and surface parking lots on the north and south. The original armory building was constructed for the Texas National Guard on city-owned land in 1962 when it was surrounded by undeveloped land. The building was used as offices, locker rooms, warehouse, and a drill hall and the Guard also stored vehicles and equipment outside.

The site to the south is undeveloped and the request site is also bounded by the Green DART rail right-of-way to the east and the Lake June Station just a half-mile walk to the southeast.

A single-family subdivision exists to the north and west of the request site. The previously undeveloped land was subdivided and the homes were constructed in the mid-2000's. The physical separation of the single-family homes to the north and the service yard ranges from 170 feet to 300 feet. The homes to the west of the request site are about six to eight feet below the level of Guard Drive, as the topography of the area slopes down into the floodplain to the west. The homes to the west of the request site have a six-foot solid screening fence atop a six to eight-foot retaining wall that separates the homes from Guard Drive and the request site.

The request site is also required to provide a solid screening fence to enclose the service yard. The physical separation between the proposed service yard's screening fence to the single-family fences to the north is thirty feet and the physical separation between the screening fence to the single family fences to the west is 75 feet.

Because the service yard is fully screened and physically separated from single-family homes, staff recommendation is for approval of a Specific Use Permit for a utility or governmental installation, for a permanent time period, subject to a site plan and conditions.

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The city council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with

the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards.

Parking: The Dallas Development Code states that a government installation other than listed use requires that minimum off-street parking that must be provided is a ratio that is, "the most equivalent to the proposed use in terms of function."[1] Equivalencies for this use are as follows: the structure's proposed occupancy classification is a B occupancy, which is similar to an office use, which is parked at one space per 333 square feet; the proposed service yard is similar to outside storage, which is parked at one space per 5,000 square feet of site area. The equivalent minimum parking requirements are as shown in the below table.

Area	***Size***	***Ratio***	***Required***
Structure	11,046 SF	1 per 333 SF	33
Service yard	61,860 SF	1 per 5,000 SF	12
Total			**45**

The request will provide 61 parking spaces on site, which exceeds the minimum required parking requirements by 35 percent.

Landscaping: Landscaping must be provided in accordance with Article X, as amended.

[1] Reference Section 51A-4.212(11)(C) of the Dallas Development Code.

CPC Action – November 5, 2015:

Motion: It was moved to recommend **approval** of a Specific Use Permit for a utility or government installation other than listed for a permanent period, subject to a site plan and conditions on property zoned an LI Light Industrial District on the east line of Guard Drive, north of Lake June Road.

Maker: Shidid
Second: Anglin
Result: Carried: 13 to 0

For: 13 - Anglin, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 2 - Emmons, Jung
Vacancy: 0

Notices: Area: 400 Mailed: 138
Replies: For: 6 Against: 4

Speakers: For: Charyl McAfee Duncan, 2014 Portsmouth Dr., Richardson, TX, 75082
Against: John Sheppard, 1449 Mission Hills Ln., Dallas, TX, 75217
Staff: Raul Ascosta, 1111 S. Akard St., Dallas, TX, 75215
James Page, 9818 Navajo Ln., Quinlan, TX, 75474

CPC RECOMMENDED SUP CONDITIONS

1. USE: The only use authorized by this specific use permit is for a utility or governmental Installation other than listed.

2. SITE PLAN: Use and development of the Property must comply with the attached site plan.

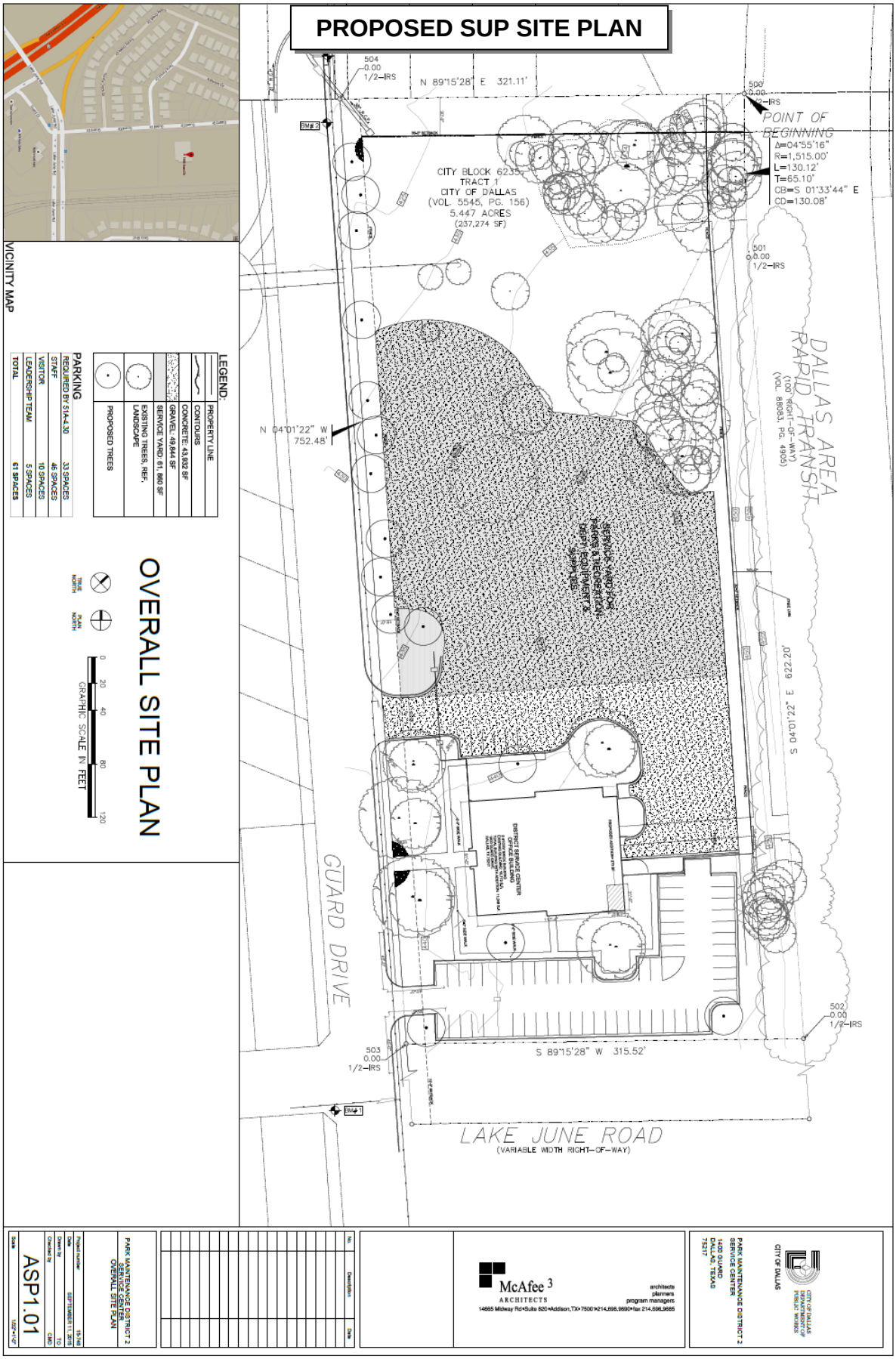
3. TIME LIMIT: This specific use permit has no expiration date.

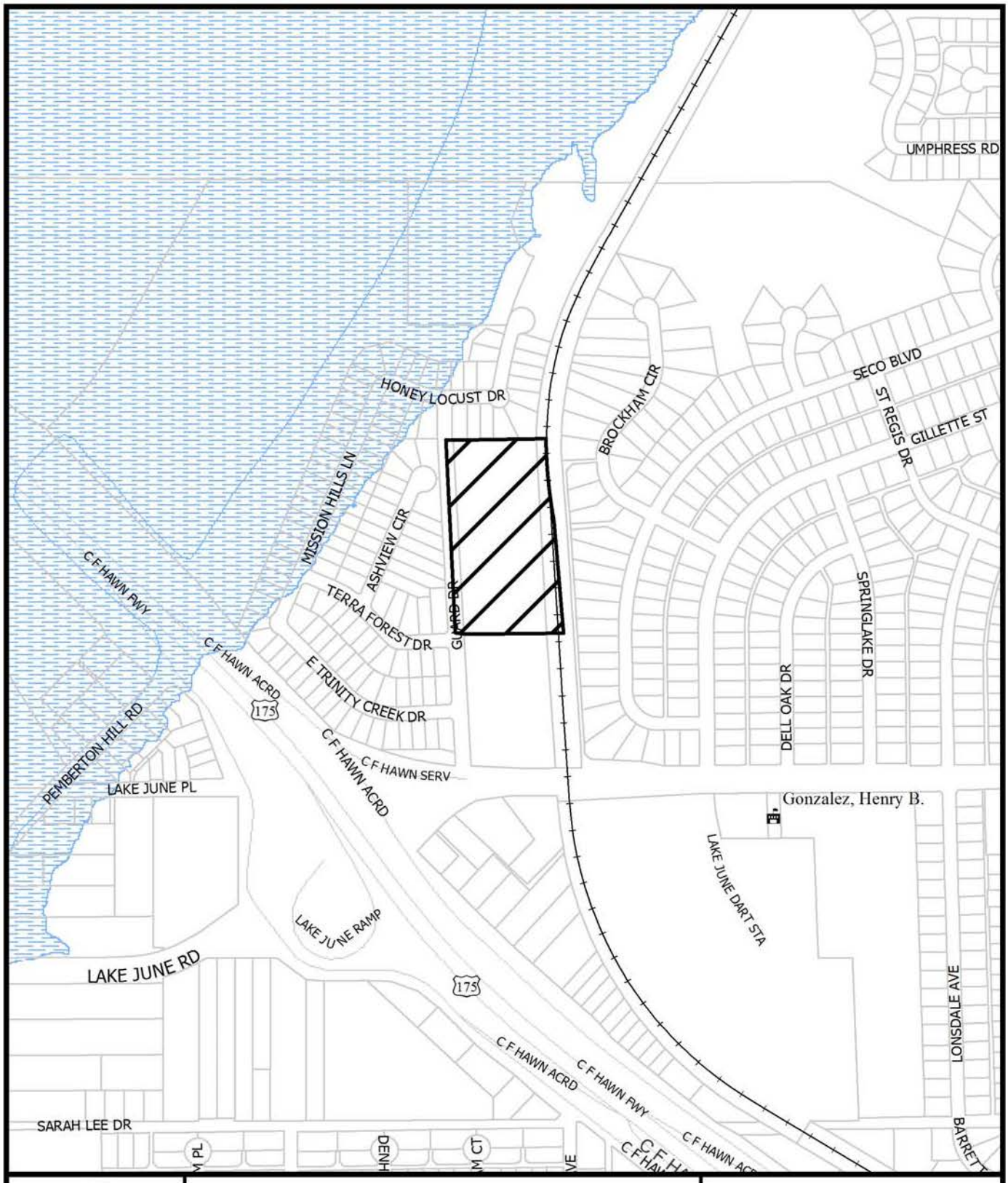
4. PARKING: Parking must be located as shown on the attached site plan.

5. SCREENING: A minimum six-foot-high solid fence must be provided in the location shown on the attached site plan.

6. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

7. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.


PROPOSED SUP SITE PLAN
VICINITY MAP
OVERALL SITE PLAN
LEGEND
PROPERTY LINE
CONTOURS
CONCRETE: 43,602 SF
GRAVEL: 49,844 SF
SERVICE YARD: 61, 860 SF
EXISTING TREES, REF. LANDSCAPE
PROPOSED TREES
PARKING
REQUIRED BY SUA-4.30 33 SPACES
STAFF 46 SPACES
VISITOR 10 SPACES
LEADERSHIP TEAM 5 SPACES
TOTAL 61 SPACES
GRAPHIC SCALE IN FEET
0 20 40 80 120
504 0.00 1/2-IRS
N 89°15'28" E 321.11'
500 0.00 1/2-IRS
POINT OF BEGINNING
Δ=04°55'16"
R=1,515.00'
L=130.12'
T=65.10'
CB=S 01°33'44" E
CD=130.08'
CITY BLOCK 6235
TRACT 1
CITY OF DALLAS
(VOL. 5545, PG. 156)
5.447 ACRES
(237,274 SF)
501 0.00 1/2-IRS
DALLAS AREA RAPID TRANSIT
(100' RIGHT-OF-WAY)
(VOL. 88083, PG. 4905)
N 04°01'22" W 752.48'
SERVICE YARD FOR PARKS & RECREATION DEPT. EQUIPMENT & SUPPLIES
S 04°01'22" E 622.20'
DISTRICT SERVICE CENTER OFFICE BUILDING
GUARD DRIVE
502 0.00 1/2-IRS
S 89°15'28" W 315.52'
503 0.00 1/2-IRS
LAKE JUNE ROAD
(VARIABLE WIDTH RIGHT-OF-WAY)
McAfee 3 ARCHITECTS
architects planners program managers
14665 Midway Rd•Suite 820•Addison, TX•75001•214.696.9690•fax 214.696.9685
PARK MAINTENANCE DISTRICT 2 SERVICE CENTER 1400 GUARD DALLAS, TEXAS 75217
CITY OF DALLAS
PARK MAINTENANCE DISTRICT 2 SERVICE CENTER OVERALL SITE PLAN
ASP1.01

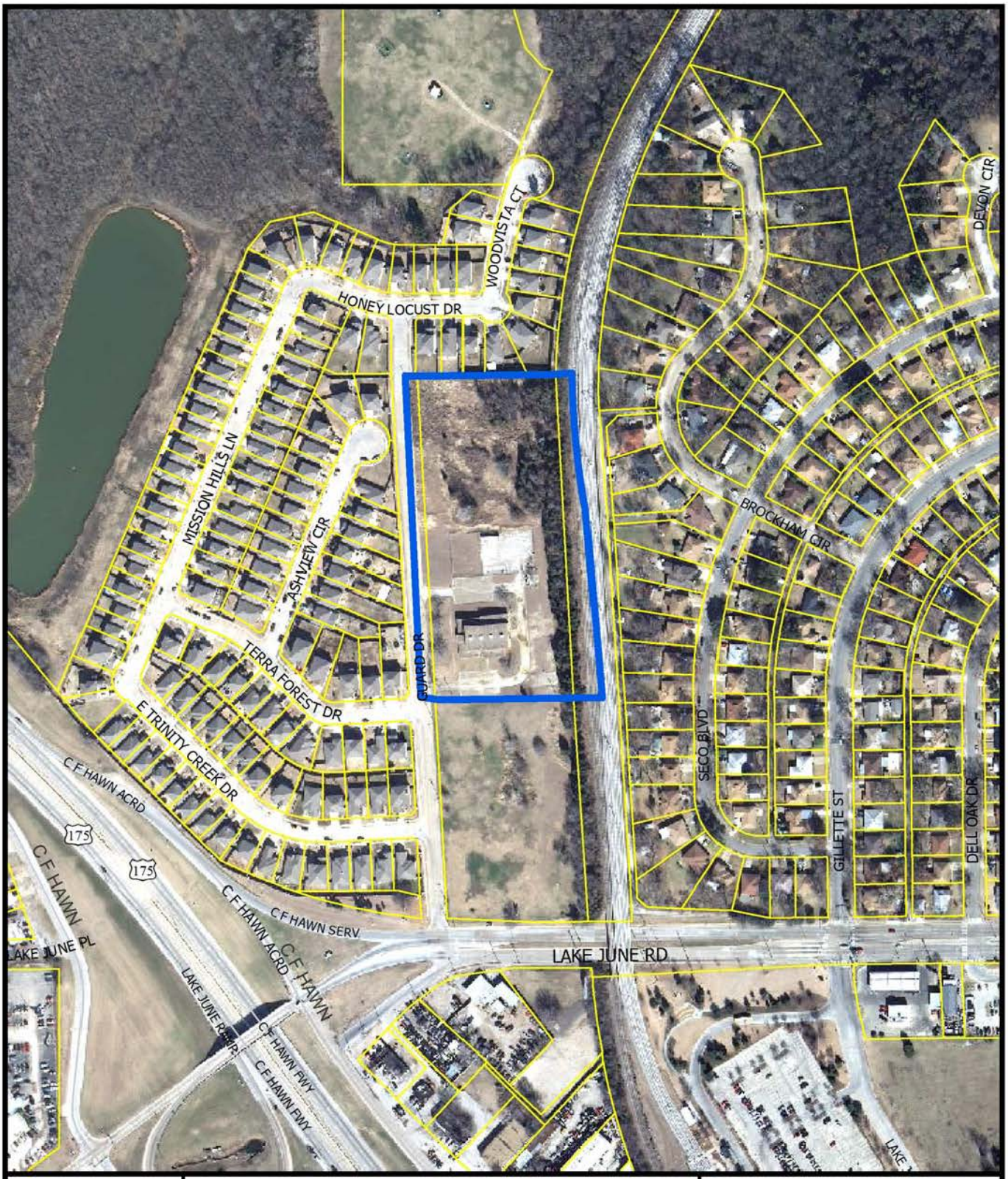


1:6,000

VICINITY MAP

Case no: Z145-322

Date: 9/15/2015

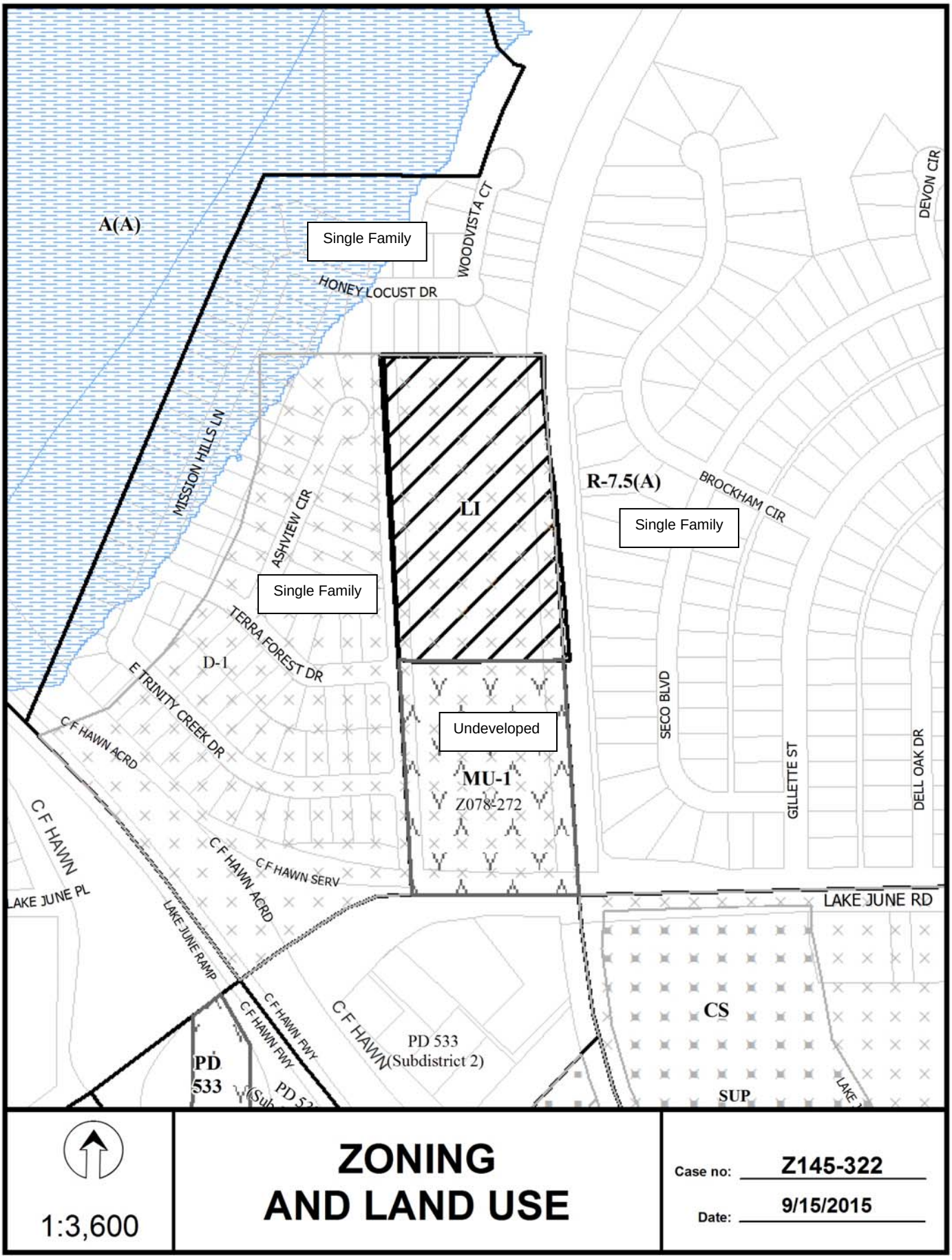


1:3,600

AERIAL MAP

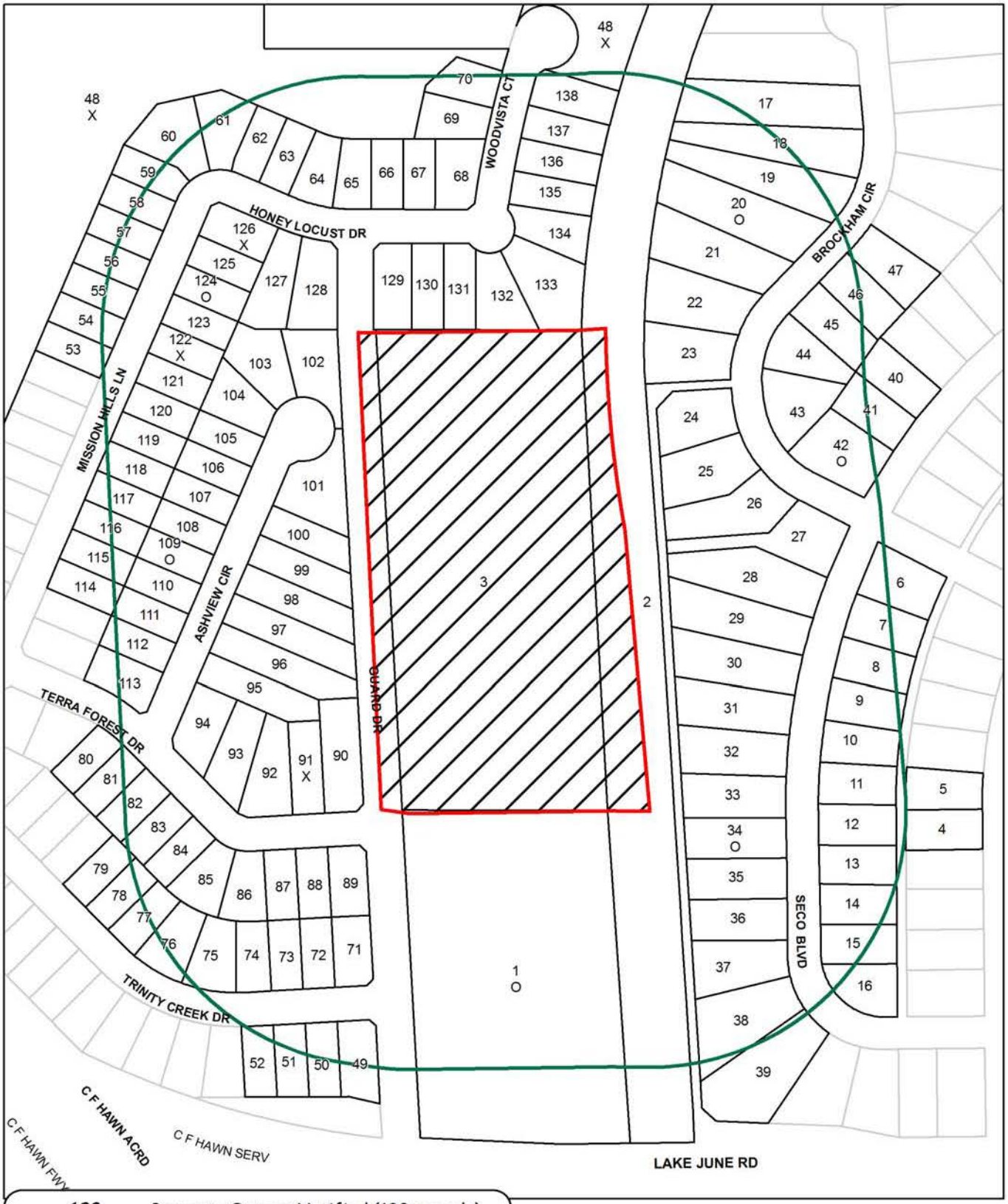
Case no: Z145-322

Date: 9/15/2015


A(A)
Single Family
WOODVISTA CT
DEVON CIR
HONEY LOCUST DR
MISSION HILLS LN
ASHVIEW CIR
LI
R-7.5(A)
BROCKHAM CIR
Single Family
Single Family
TERRA FOREST DR
D-1
E TRINITY CREEK DR
C F HAWN ACRD
Undeveloped
SECO BLVD
GILLETTE ST
DELL OAK DR
MU-1
Z078-272
C F HAWN
C F HAWN ACRD
C F HAWN SERV
LAKE JUNE PL
LAKE JUNE RD
LAKE JUNE RAMP
C F HAWN FWY
C F HAWN FWY
C F HAWN
PD 533
(Subdistrict 2)
CS
PD 533
SUP
1:3,600
ZONING
AND LAND USE
Case no: Z145-322
Date: 9/15/2015

Z145-322(SM)

CPC Responses



138	Property Owners Notified (139 parcels)
6	Replies in Favor (6 parcels)
4	Replies in Opposition (5 parcels)
400'	Area of Notification
11/5/2015	Date 10/1/2015 Under Advisement

Z145-322
CPC

N W E S

1:2,400

11/04/2015

Reply List of Property Owners

Z145-322

138 Property Owners Notified ***6 Property Owners in Favor*** ***4 Property Owners Opposed***

Reply	*Label #*	*Address*		*Owner*
O	1	6343	LAKE JUNE RD	FLECK LINDSAY A TRUSTEE
	2	401	BUCKNER BLVD	DART
	3	1400	GUARD DR	DALLAS CITY OF
	4	1337	GILLETTE ST	WEBB SELMA
	5	1341	GILLETTE ST	MAGEE VERA M
	6	6482	SECO BLVD	BROWN ADA J
	7	6478	SECO BLVD	STARLING JOHN R JR
	8	6474	SECO BLVD	PAXTON MILDRED L
	9	6468	SECO BLVD	IBARRA JUAN
	10	6460	SECO BLVD	MORA PEDRO AGUILAR
	11	6454	SECO BLVD	DYESS ROGER R
	12	6450	SECO BLVD	TORRES DANIEL &
	13	6444	SECO BLVD	RODRIGUEZ MOISES &
	14	6440	SECO BLVD	WILSON BOBBIE J
	15	6436	SECO BLVD	WILSON CAROL V
	16	6426	SECO BLVD	PARSEEC BOBBIE J
	17	1525	BROCKHAM CIR	STANTON FREDERICK A
	18	1517	BROCKHAM CIR	SAVING GRACE LLC
	19	1511	BROCKHAM CIR	DAVIS DOROTHY
O	20	1505	BROCKHAM CIR	BUTLER JAMES OTIS
	21	1459	BROCKHAM CIR	BROWN INEZ
	22	1453	BROCKHAM CIR	WALKER GEORGE W & ARACELI
	23	1447	BROCKHAM CIR	NUNEZ DOROTHY O
	24	1441	BROCKHAM CIR	FLORES JOSE L & GENOVEVA
	25	1435	BROCKHAM CIR	PORCAYO LEOPOLDA ANDREA &
	26	1431	BROCKHAM CIR	MARTINEZ LUIS

11/04/2015

Reply	*Label #*	*Address*		*Owner*
	27	6481	SECO BLVD	TODD LUE E
	28	6479	SECO BLVD	RAMIREZ RAMIRO & MARIA
	29	6475	SECO BLVD	GALARZA SALVADOR & MARIA
	30	6469	SECO BLVD	VILLEGAS MIGUEL & MARIA
	31	6465	SECO BLVD	RODRIGUEZ CRESCENCIO
	32	6459	SECO BLVD	PATTERSON CAROLYN J
	33	6453	SECO BLVD	WARREN MARY R
O	34	6449	SECO BLVD	BOCANEGRA ROSENDO ALMANZA & OLGA EQUIA
	35	6443	SECO BLVD	BUTLER ANNETTA AVERY
	36	6439	SECO BLVD	YATES ANITA
	37	6435	SECO BLVD	GONZALEZ VINCENTE &
	38	6429	SECO BLVD	PRICE CAMERON
	39	6425	SECO BLVD	BROGDON WALLACE E
	40	6515	SECO BLVD	BUSTOS FERNANDO &
	41	6509	SECO BLVD	WILLIAMS WILLIE G
O	42	6505	SECO BLVD	ERVIN BARBARA JANE
	43	1442	BROCKHAM CIR	FERNANDEZSANABRIA JORGE A &
	44	1450	BROCKHAM CIR	WHALEY REESTHER
	45	1458	BROCKHAM CIR	HUFF KENNETH EARL &
	46	1504	BROCKHAM CIR	DANIELS BERNETTA
	47	1508	BROCKHAM CIR	GUAJARDO RAUL GERARDO JR
X	48	6010	C F HAWN FWY	TRINITY FOREST DALLAS HOA
	49	6266	TRINITY CREEK DR	RESIDENTIAL RESERVICES LLC
	50	6262	TRINITY CREEK DR	HOLLAND KELVIN
	51	6258	TRINITY CREEK DR	GUTIERREZ RODRIGO S &
	52	6254	TRINITY CREEK DR	MARTINEZ VALENTIN
	53	1457	MISSION HILLS LN	COLFIN AI TX 1 LLC
	54	1461	MISSION HILLS LN	ESCOBEDO FAUSTO &
	55	1465	MISSION HILLS LN	RODRIGUEZ JOHN
	56	1469	MISSION HILLS LN	BARNES TIMOTHY &
	57	1473	MISSION HILLS LN	AH4R I TX DFW LLC

11/04/2015

Reply	*Label #*	*Address*		*Owner*
	58	1477	MISSION HILLS LN	MONSIBAIS SULEMA &
	59	1481	MISSION HILLS LN	GARCIA VICTOR C & MARIA
	60	1485	MISSION HILLS LN	WILLIAMS TONI
	61	6301	HONEY LOCUST DR	POLK NENA A
	62	6305	HONEY LOCUST DR	SINGLETON PHYLLIS E
	63	6309	HONEY LOCUST DR	GARCIA JOSE L
	64	6313	HONEY LOCUST DR	DELATORRE JUAN C JR
	65	6317	HONEY LOCUST DR	CASAS MARIO & YAZMIN
	66	6321	HONEY LOCUST DR	SWENEY JOSIE L
	67	6325	HONEY LOCUST DR	CAMARILLO MIRIAM
	68	6329	HONEY LOCUST DR	VENCES VICTOR H
	69	1513	WOODVISTA CT	CASAS JESUS & ALMA D
	70	1517	WOODVISTA CT	RAMOS LEONARDO &
	71	6255	TRINITY CREEK DR	GUADALUPE JOSE &
	72	6251	TRINITY CREEK DR	ROBINSON KEN
	73	6247	TRINITY CREEK DR	HERRERA CRYSTAL &
	74	6243	TRINITY CREEK DR	ADAMS GODFREY A
	75	6239	TRINITY CREEK DR	ESCOBOSA JORGE R
	76	6235	TRINITY CREEK DR	MOIBI MOJISOLA O
	77	6231	TRINITY CREEK DR	SIMON GENESIS CASTILLO & JUSTIN J
	78	6227	TRINITY CREEK DR	HARWELL RONNIE &
	79	6223	TRINITY CREEK DR	LAMPKIN MILDRED & JAMES
	80	6210	TERRA FOREST DR	F & M PPTIES
	81	6214	TERRA FOREST DR	ZAMORA PATRICIA
	82	6218	TERRA FOREST DR	AGUILAR ERIKA
	83	6222	TERRA FOREST DR	RUNNELS GLENN
	84	6226	TERRA FOREST DR	CAMARILLO JAELA
	85	6230	TERRA FOREST DR	WOODS KENETRA & KERRY
	86	6234	TERRA FOREST DR	MYERS LETRECIA
	87	6238	TERRA FOREST DR	ESCOBAR EDWIN
	88	6242	TERRA FOREST DR	PERETTE ERICK G & FABIOLA

11/04/2015

Reply	*Label #*	*Address*		*Owner*
	89	6246	TERRA FOREST DR	ZUNIGA BONIFACIO &
	90	6241	TERRA FOREST DR	IBARRA JOSE G &
X	91	6237	TERRA FOREST DR	TRINITY FOREST HOMEOWNERS ASSOCIATION
	92	6233	TERRA FOREST DR	SAUCEDO URBANO &
	93	6229	TERRA FOREST DR	CANELO SERAFIN & M CONSUELO
	94	6225	TERRA FOREST DR	RODRIGUEZ IGNACIO & CONSUELO
	95	1406	ASHVIEW CIR	HERNANDEZ FELIX J
	96	1410	ASHVIEW CIR	HERNANDEZ MARIA A
	97	1414	ASHVIEW CIR	PRECIADO CARLOS &
	98	1418	ASHVIEW CIR	HERNANDEZ TERESA
	99	1422	ASHVIEW CIR	VARGAS YURITZA
	100	1426	ASHVIEW CIR	ROBINSON JOSHUA A
	101	1430	ASHVIEW CIR	LOPEZ JOSE
	102	1445	ASHVIEW CIR	RUELAS JAIME & AMPARO
	103	1441	ASHVIEW CIR	EQUITY TRUST COMPANY
	104	1437	ASHVIEW CIR	WADLEY LORENZO III &
	105	1433	ASHVIEW CIR	TORRES LUIS DE REFUGIO &
	106	1429	ASHVIEW CIR	NEGRETE MOISES
	107	1425	ASHVIEW CIR	CHAN SHUN H & VIVIAN THUAN HIANG
	108	1421	ASHVIEW CIR	RODRIGUEZ MARLLY
O	109	1417	ASHVIEW CIR	TONCHE ISIAS & MARIA
	110	1413	ASHVIEW CIR	LEE VICKIE
	111	1409	ASHVIEW CIR	AMH 2014 1 BORROWER LLC
	112	1405	ASHVIEW CIR	SANCHEZ WENDOLYN C
	113	1401	ASHVIEW CIR	HUNT EVANS & BEULAH
	114	1430	MISSION HILLS LN	VELASQUEZ FRANCISCO
	115	1434	MISSION HILLS LN	YOUNG JOHN W
	116	1438	MISSION HILLS LN	HADNOT WALTER
	117	1442	MISSION HILLS LN	BELTRAN ARMIDA
	118	1446	MISSION HILLS LN	RETIZ JULIAN V &
	119	1450	MISSION HILLS LN	GALVAN BERTHA ALICIA

11/04/2015

Reply	*Label #*	*Address*		*Owner*
	120	1454	MISSION HILLS LN	ROMERO EVERADO
	121	1458	MISSION HILLS LN	ROSS JEREMIAH & NORMA
X	122	1462	MISSION HILLS LN	TRINITY FOREST HOA INC
	123	1466	MISSION HILLS LN	GIRON DAVID R
O	124	1470	MISSION HILLS LN	ROSS PAMELA &
	125	1474	MISSION HILLS LN	PEREZ CARLOS & MARIA GUADALUPE REYES
X	126	1478	MISSION HILLS LN	GALVAN JUAN
	127	6312	HONEY LOCUST DR	HARRIS FAMILY TRUST
	128	6316	HONEY LOCUST DR	AVALOS SALVADOR
	129	6324	HONEY LOCUST DR	PATIN DAVID M
	130	6328	HONEY LOCUST DR	GIBSON DENISE M
	131	6332	HONEY LOCUST DR	MACARENO REYNALDO &
	132	6336	HONEY LOCUST DR	MENDOZA ADRIAN O
	133	6340	HONEY LOCUST DR	BATRES JULIA E
	134	1502	WOODVISTA CT	LUCIANO MARTIN V &
	135	1506	WOODVISTA CT	MANRIQUEZ JUAN
	136	1510	WOODVISTA CT	SALAZAR LUIS F
	137	1514	WOODVISTA CT	CAMPA JUAN M DE LA
	138	1518	WOODVISTA CT	BLT REJV3 DALLAS LLC

AGENDA ITEM # 53

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 6

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 44 P

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for an animal shelter or clinic with outside runs on property zoned an IR Industrial Research District along the north line of West Commerce Street, west of Chappell Street

Recommendation of Staff and CPC: Approval for a three-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions

Z145-348(AF)

Note: This item was considered by the City Council at a public hearing on December 9, 2015, and was deferred until January 13, 2016

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**
ACM: Ryan S. Evans

FILE NUMBER: Z145-348(AF) **DATE FILED:** September 3, 2015

LOCATION: North line of West Commerce Street, west of Chappell Street

COUNCIL DISTRICT: 6 **MAPSCO:** 44P

SIZE OF REQUEST: Approx. 0.62 acres **CENSUS TRACT:** 43.00

APPLICANT: Steven Bell, Bones & Bacon, LLC.

OWNER: Daboub Realty LTD.

REPRESENTATIVE: Steven Bell, Bones & Bacon, LLC.

REQUEST: An application for a Specific Use Permit for an animal shelter or clinic with outside runs on property zoned an IR Industrial Research District.

SUMMARY: The intention of the applicant is to add outside runs to an animal boarding facility [Bones and Bacon Pet Resort] that is currently operating. Generally speaking, animal shelters with outside runs are allowed by right within IR, Industrial Research Districts. Pursuant to the Dallas Development Code, Division 51A-4.210, an SUP is required to be obtained by animal shelters or clinics with outside runs that are located less than 1,000 feet from residential districts. The site is located approximately 550 feet from a residential district, hence the need for an SUP.

CPC RECOMMENDATION: **Approval** for a three-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions.

STAFF RECOMMENDATION: **Approval** for a three-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and conditions.

GUIDING CRITERIA FOR STAFF RECOMMENDTION:

The following factors are listed in Chapter 51A of the Dallas Development Code to guide the determination as to whether or not an SUP shall be granted. Staff has listed its findings based upon each component below:

1. *Compatibility with surrounding uses and community facilities* – The surrounding area primarily consists of industrial uses and an operational freight rail. Therefore, the outdoor runs are not anticipated to negatively impact the surrounding uses.

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – This request neither contributes to nor is a detriment to the welfare of adjacent property.

3. *Not a detriment to the public health, safety, or general welfare* – The proposed use will not be a detriment to the public health, safety, or general welfare. The proposed Specific Use Permit conditions are an additional layer of regulatory requirements the owner will have to comply with when operating the business.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – Based on information depicted on the site plan, the request will comply with all applicable zoning regulations and standards. No variances or exceptions are proposed. All proposed improvements will require compliance with the building code and require final inspection compliance with the site plan.

Sounding Zoning History:

1. **Z145-129:** On March 13, 2015, an application was approved for an automatic renewal of Specific Use Permit No. 1804 for an industrial (outside) not potentially incompatible use limited to a concrete batch plant, located at 1025 W. Commerce Street, was approved for a three year period.

2. **Z134-327:** On December 10, 2014 City Council approved an application for the renewal and amendment of Specific Use Permit No. 1752 for an industrial (outside) use limited to a concrete batch plant on property zoned an IR Industrial Research District.

3. **Z134-145:** On September 10, 2014, City Council approved an application for a Planned Development District for certain Residential and Utility and public service uses on property zoned a TH-3(A) Townhouse District, an MF-2(A) Multifamily District, an MF-4(A) Multiple Family District, and a CS Commercial Service District.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing Dimension
West Commerce Street	Major Arterial	60’
Sylvan Avenue	Major Arterial	Variable

Traffic:

The Engineering Section of the Department of Sustainable Development and Construction has reviewed the requested amendment and determined that it will not impact the current state of the surrounding roadway system.

STAFF ANALYSIS:

Comprehensive Plan: The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant’s request. The Plan identifies the request site as being in an Industrial Area Building Block.

Industrial Areas, which offer important employment opportunities, occupy large areas of land and usually are near major roads and heavy rail lines. Evolving technology and the need for freight movement through Dallas to the rest of the country and internationally means this sector can offer good opportunities for jobs. Logistics and warehousing, a growing industry with strong potential for upward mobility of skilled workers, would thrive in such areas. Examples include Southport and the Agile Port, parts of West Dallas along I-30, and the Stemmons industrial area. These areas include a mix of low- and medium-density industrial buildings and industrial yards and have large surface parking for cars and trucks. Industrial Areas rely on quality road access and may be linked to rail for freight purposes. Street lanes are wide and intersections are large. Transit, sidewalks and other pedestrian improvements are limited.

Land Use:

	Zoning	Land Use
Site	IR	Animal Shelter or Clinic
North	IR & TH-3(A)	Railroad & Single Family Homes
East	PD 714	Office/Showroom/Warehouse
South	CS	Office
West	IR	Office/Showroom/Warehouse

Land Use Compatibility: The site is located within a predominately low density industrial area, west of Sylvan Avenue and north of West Commerce Street. A certificate of occupancy for an animal shelter or clinic was originally issued in August of 2015. The applicant has been conducting business under the current CO since that time. It is now the applicant's intention to add outdoor runs. Generally speaking, animal shelters with outdoor runs are allowed by right within IR Industrial Research Districts. Pursuant to the Dallas Development Code, Division 51A-4.210, an SUP is required to be obtained by animal shelters or clinics with outdoor runs that are located less than 1,000 feet from residential districts. The site is located approximately 550 feet from a residential district, hence the need for an SUP. Although within 1,000 feet of a residential district, the site is separated by a fully functional industrial railroad, which creates a sufficient buffer.

The general provisions for a Specific Use Permit in Section 51A-4.219 of the Dallas Development Code specifically state: (1) The SUP provides a means for developing certain uses in a manner in which the specific use will be consistent with the character of the neighborhood; (2) Each SUP application must be evaluated as to its probable effect on the adjacent property and the community welfare and may be approved or denied as the findings indicate appropriate; (3) The city council shall not grant an SUP for a use except upon a finding that the use will: (A) complement or be compatible with the surrounding uses and community facilities; (B) contribute to, enhance, or promote the welfare of the area of request and adjacent properties; (C) not be detrimental to the public health, safety, or general welfare; and (D) conform in all other respects to all applicable zoning regulations and standards. The regulations in this chapter have been established in accordance with a comprehensive plan for the purpose of promoting the health, safety, morals, and general welfare of the city.

The applicant's request conforms to the applicable zoning regulations and standards and is consistent with the intent of the Dallas Development Code. Therefore, staff recommends approval subject to a site plan and conditions.

Development Standards:

District	Setbacks		Density FAR	Height	Lot Coverage	Special Standards	Primary Uses
	Front	Side/Rear					
Existing: IR Industrial research	15’	30’ adjacent to residential OTHER: No Min.	2.0 FAR overall 0.75 office/ retail 0.5 retail	200’ 15 stories	80%	Proximity Slope Visual Intrusion	Industrial, wholesale distribution & storage, supporting office & retail

Landscaping: Landscaping requirements of Article X of the Dallas Development Code will be triggered if additional impervious surface is added to the site.

Parking: Pursuant to the Dallas Development Code, off-street parking and loading must be provided in accordance with Division 51A-4.200. One parking space is required per 300 square feet of floor area. The existing build measures to be approximately 4,320 square feet, which would require 14 parking spaces. The site has 15 parking spaces. No additional parking is required for outside runs.

CPC Action – November 5, 2015:

Motion: It was moved to recommend **approval** of a Specific Use Permit for an animal shelter or clinic with outside runs for a three-year period with eligibility for automatic renewals for additional five-year periods, subject to a site plan and revised conditions to include the following: 1) Outside runs – Hours of Operation will be limited to 7:00 a.m. to 7:00 p.m., Sunday thorough Saturday and 2) Amend Condition 5B to include daily monitoring and cleaning of waste containers and dumpsters on property zoned an IR Industrial Research District along the north line of West Commerce Street, west of Chappell Street.

Maker: Ridley
Second: Murphy
Result: Carried: 13 to 0

For: 13 - Anglin, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 2 - Emmons, Jung
Vacancy: 0

Notices: Area: 200 Mailed: 21
Replies: For: 4 Against: 0

Speakers: None

List of Partners

Steven Bell, Managing Partner, Bones & Bacon LLC

Henry A. Daboub, Owner, Daboub Realty, LTD

Catehrine M. Daboub, Daboub Realty LTD

Proposed CPC SUP Conditions

1. USE: The only use authorized by this specific use permit is an animal shelter or clinic with outside runs.

2. SITE PLAN: Use and development of the Property must comply with the attached site plan.

3. TIME LIMIT: This specific use permit expires on ____ (three years), but is eligible for automatic renewals for additional five-year periods pursuant to Section 51A-4.219 of Chapter 51A of the Dallas City Code, as amended. For automatic renewal to occur, the Property owner must file a complete application for automatic renewal with the director before the expiration of the current period. Failure to timely file a complete application will render this specific use permit ineligible for automatic renewal. (Note: The Code currently provides that applications for automatic renewal must be filed after the 180th but before the 120th day before the expiration of the current specific use permit period. The Property owner is responsible for checking the Code for possible revisions to this provision. The deadline for applications for automatic renewal is strictly enforced.)

4. HOURS OF OPERATION: The hours of operation for the outside runs are limited to 7:00 am to 7:00 pm, Sunday through Saturday.

5. LANDSCAPING: Landscaping must be provided and maintained in accordance with Article X of the Dallas Development Code, as amended.

6. ANIMAL WASTE CONTAINERS & DUMPSTERS:

   A. Animal waste containers and dumpsters must be provided in the locations shown on the attached site plan.

   B. Animal waste containers and dumpsters must be monitored daily for noxious odors and treated to eliminate odors if noxious odors are present.

7. FENCING:

   A. Outside runs, as shown on the attached site plan, must be enclosed
   with a minimum eight-foot-high solid wood fence (unless another material is required by the floodplain administrator).

   B. The screening fence on the south side of the property must be maintained in a state of good repair at all times (and prior to the issuance of a of occupancy) such that:

i. the screening is not out of vertical alignment more than six inches, measured at the top of the screening; and

ii.. any rotted, fire damaged, or broken slats or support posts are repaired or replaced.

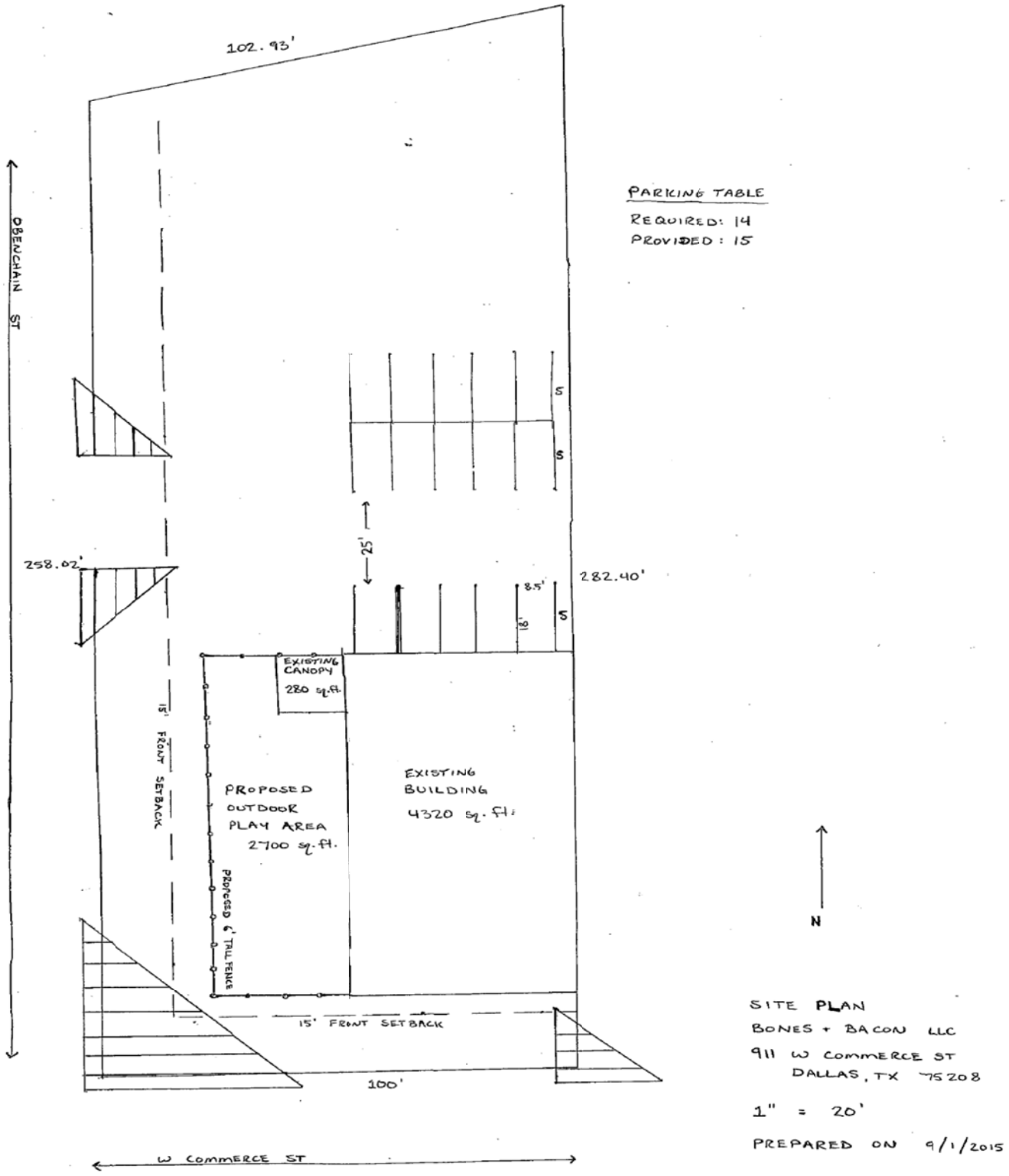
8. FLOOR AREA: The location of the outdoor runs is limited to the location shown on the attached site plan, labeled “play area”.

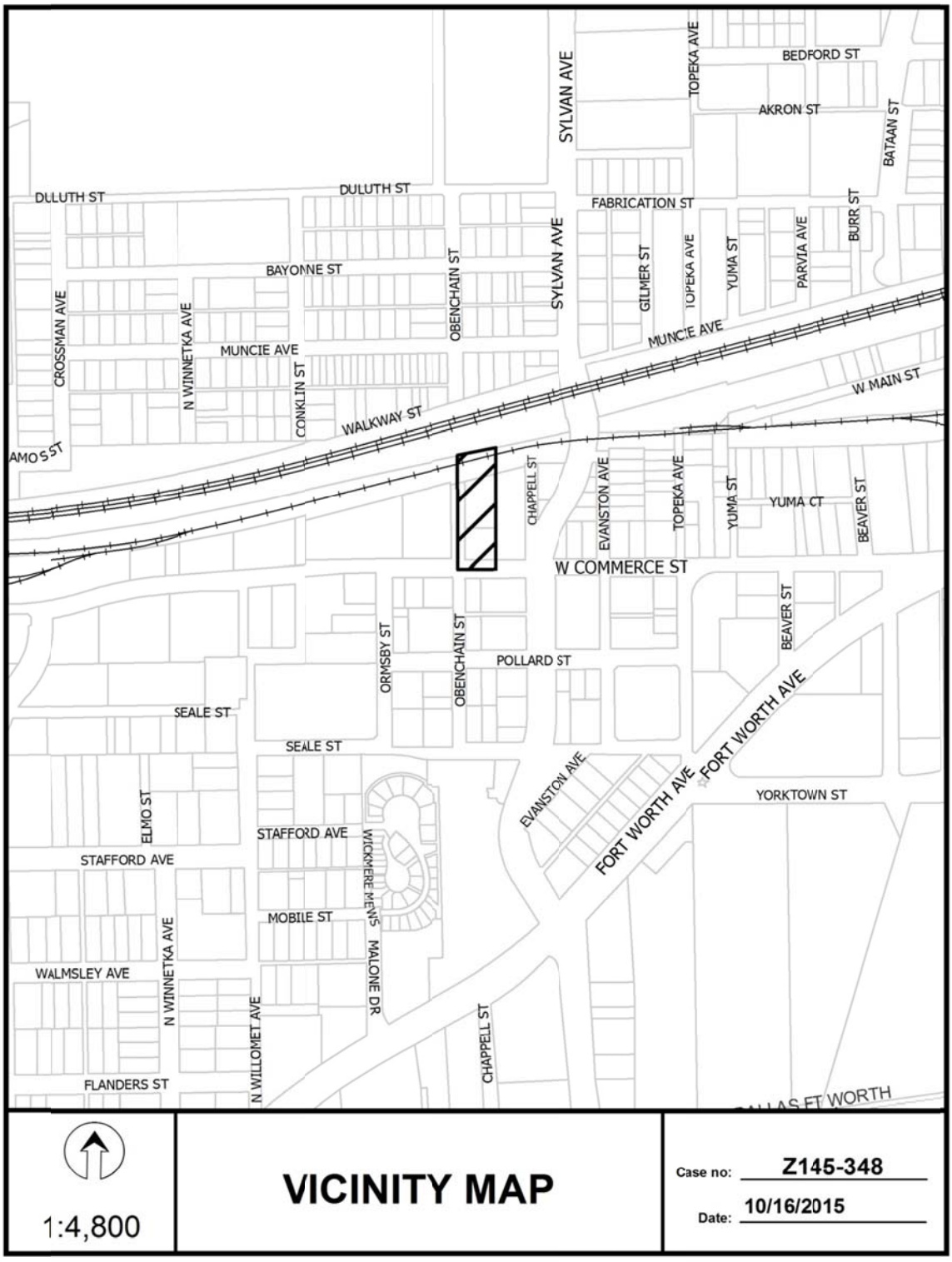
9. PARKING: Parking must be located as shown on the attached site plan.

10. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

11. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

Proposed Site Plan



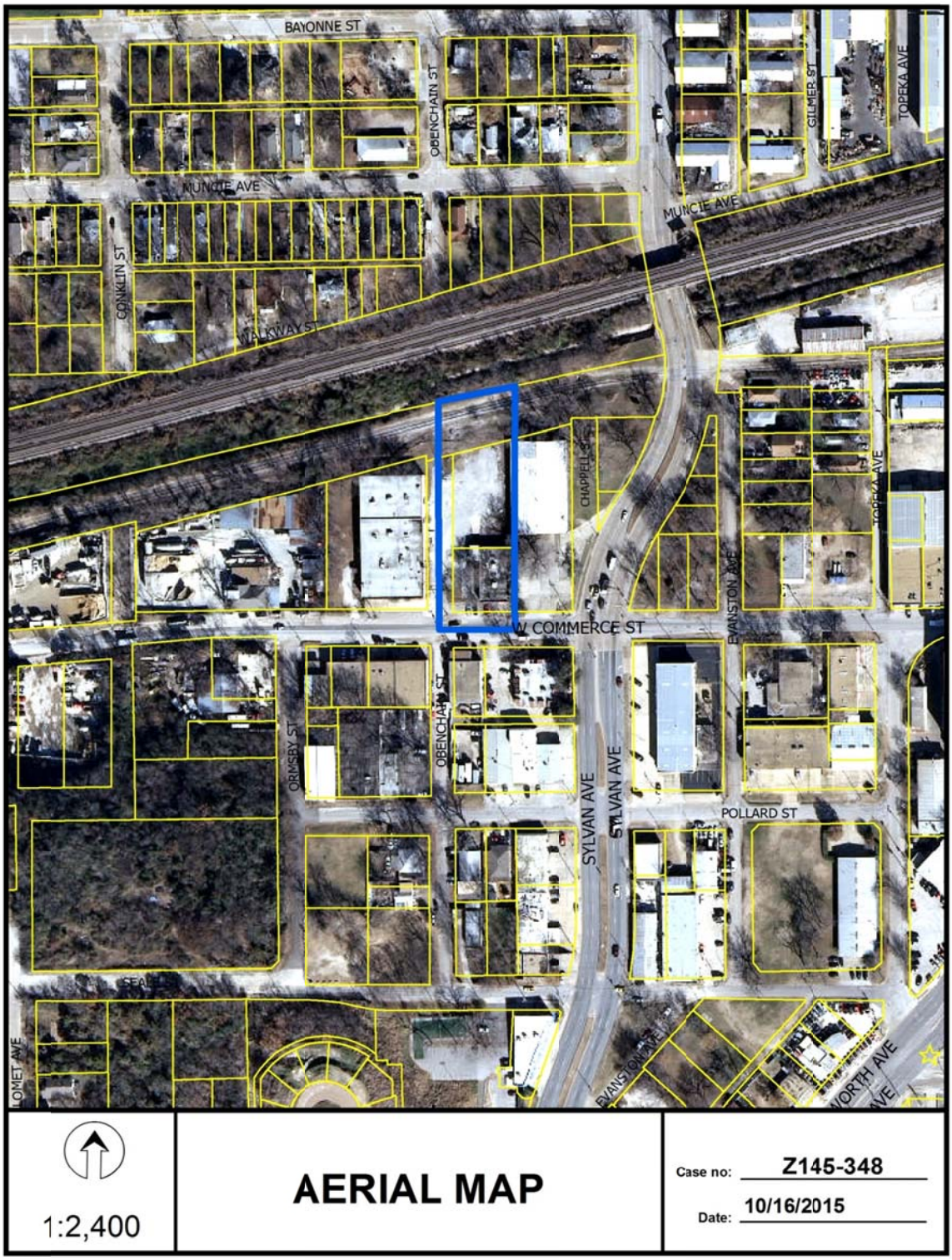


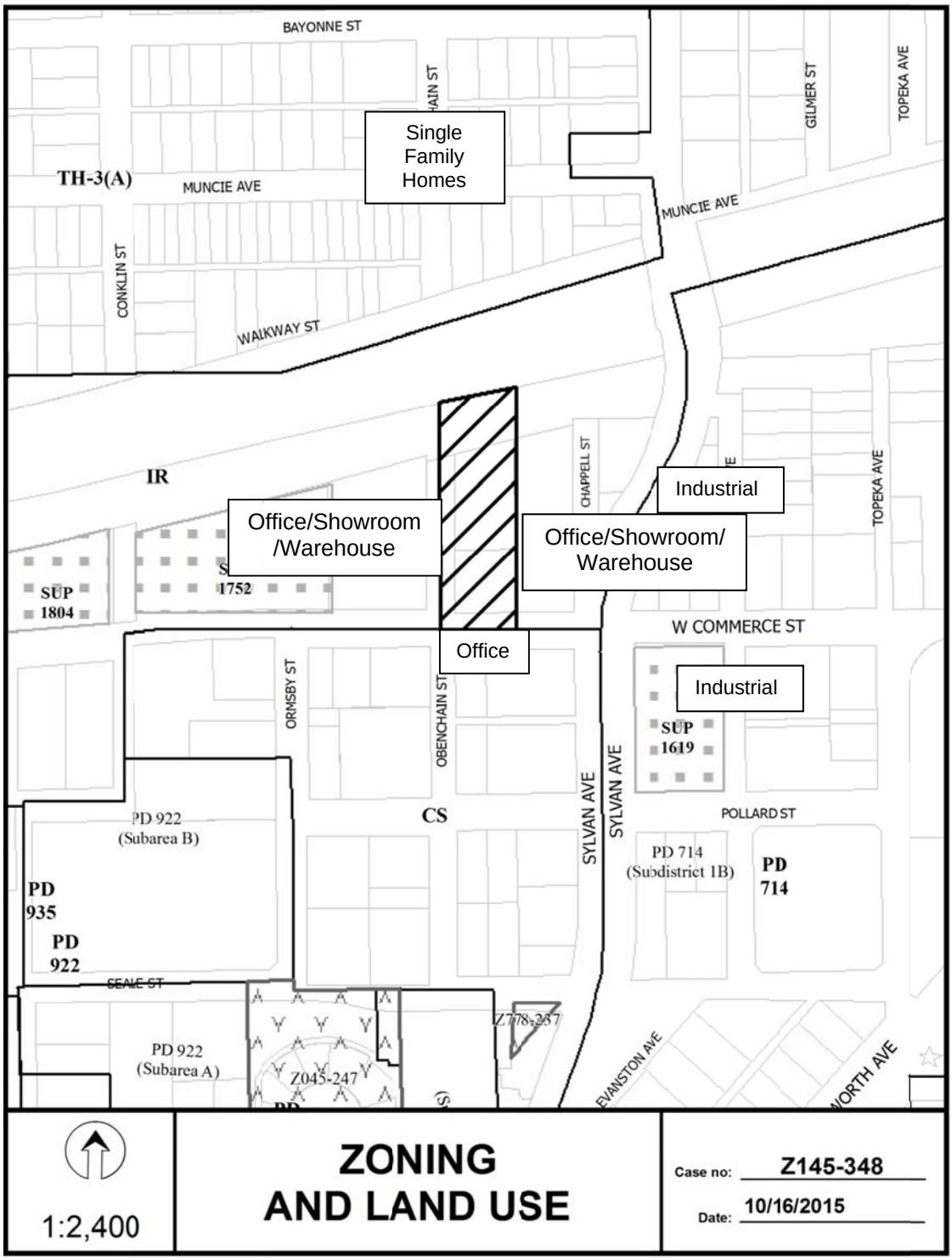
1:4,800

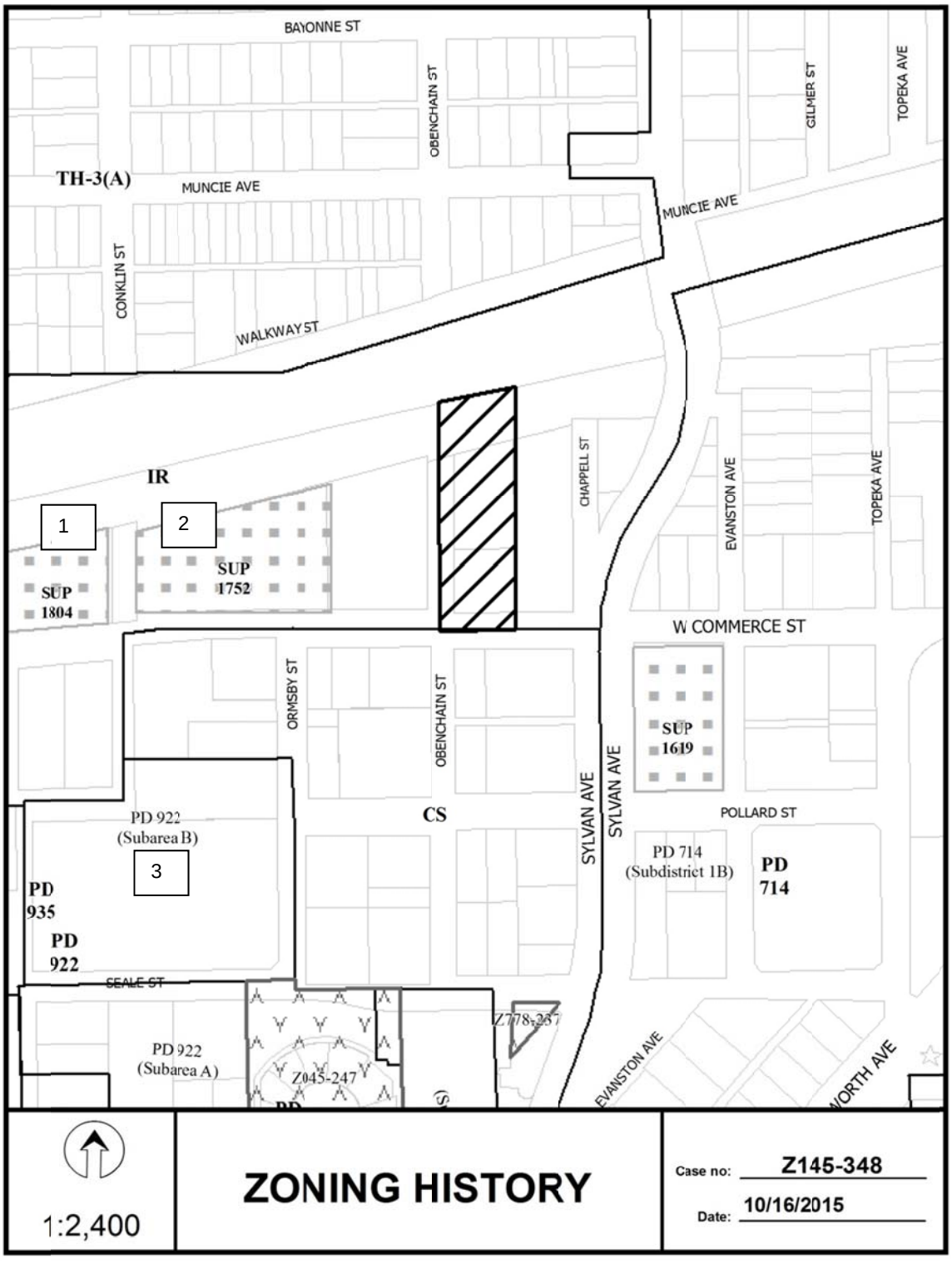
VICINITY MAP

Case no: Z145-348

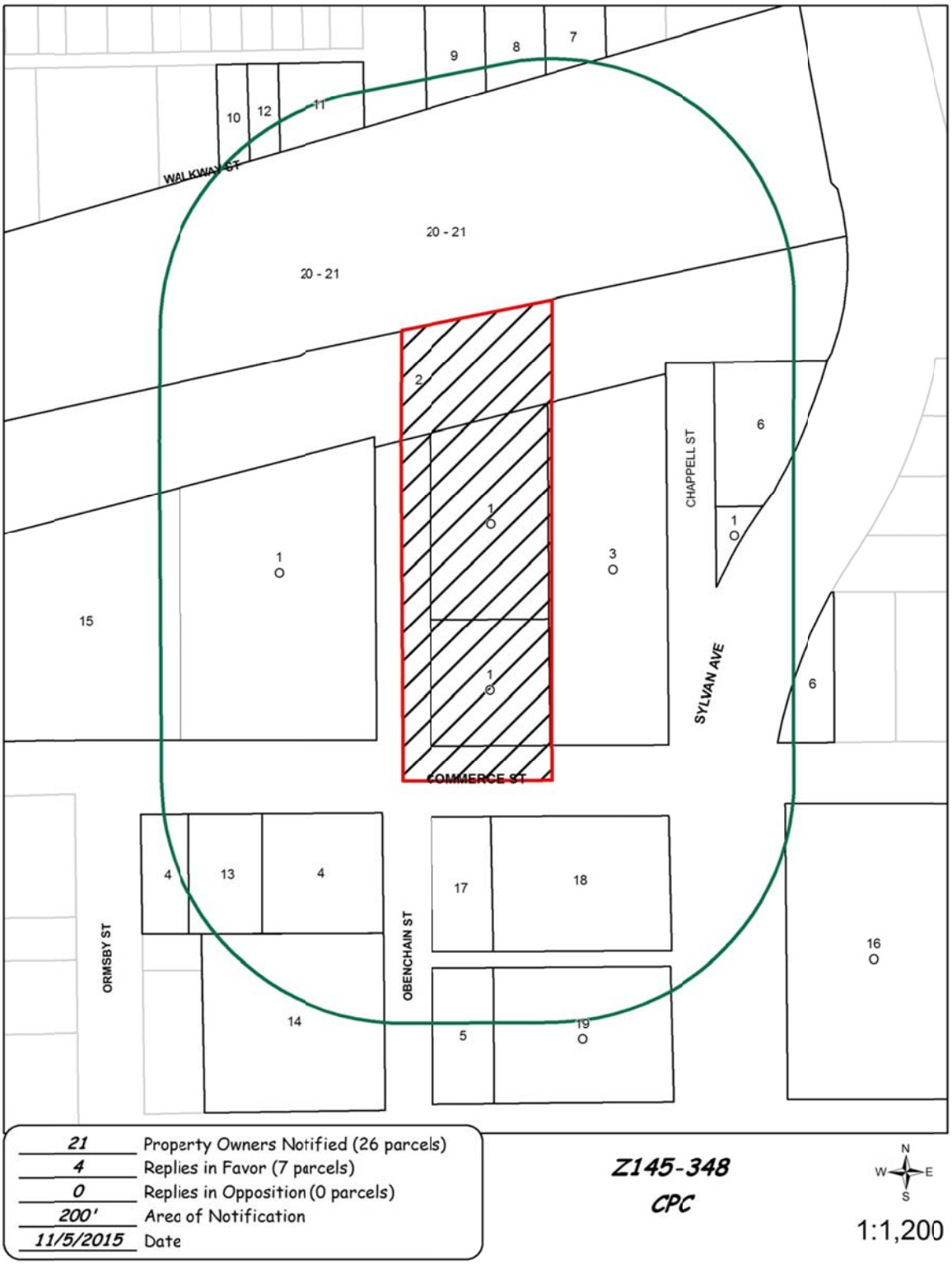
Date: 10/16/2015


BAYONNE ST
OBENCHAIN ST
MUNCIE AVE
CONKLIN ST
NAKWAY ST
GILMER ST
TOPEKA AVE
CHAPPELL ST
W COMMERCE ST
EVANSTON AVE
ORMSBY ST
SYLVAN AVE
POLLARD ST
LOMET AVE
1:2,400
AERIAL MAP
Case no: Z145-348
Date: 10/16/2015


BAYONNE ST
Single Family Homes
TH-3(A)
MUNCIE AVE
MUNCIE AVE
GILMER ST
TOPEKA AVE
CONKLIN ST
WALKWAY ST
IR
Office/Showroom /Warehouse
Office/Showroom/ Warehouse
Industrial
CHAPPELL ST
TOPEKA AVE
SUP 1804
1752
W COMMERCE ST
Office
Industrial
ORMSBY ST
OBENCHAIN ST
SUP 1619
SYLVAN AVE
SYLVAN AVE
POLLARD ST
CS
PD 922 (Subarea B)
PD 714 (Subdistrict 1B)
PD 714
PD 935
PD 922
SEALE ST
Z778-287
PD 922 (Subarea A)
Z045-247
EVANSTON AVE
NORTH AVE
1:2,400
ZONING AND LAND USE
Case no: Z145-348
Date: 10/16/2015


BAYONNE ST
OBENCHAIN ST
GILMER ST
TOPEKA AVE
TH-3(A)
MUNCIE AVE
MUNCIE AVE
CONKLIN ST
WALKWAY ST
IR
CHAPPELL ST
EVANSTON AVE
TOPEKA AVE
1
2
SUP 1804
SUP 1752
W COMMERCE ST
ORMSBY ST
OBENCHAIN ST
SUP 1619
CS
SYLVAN AVE
SYLVAN AVE
POLLARD ST
PD 922 (Subarea B)
3
PD 714 (Subdistrict 1B)
PD 714
PD 935
PD 922
SEALE ST
Z778-267
PD 922 (Subarea A)
Z045-247
EVANSTON AVE
WORTH AVE
1:2,400
ZONING HISTORY
Case no: Z145-348
Date: 10/16/2015

CPC Responses



11/04/2015

Reply List of Property Owners

Z145-348

21 Property Owners Notified ***4 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
O	1	921	COMMERCE ST	DABOUB REALTY LTD
	2	2300	GRAND AVE	BNSF RAILWAY
O	3	901	COMMERCE ST	DABOUB REALTY LTD
	4	934	COMMERCE ST	JLK IRREVOCABLE TRUST &
	5	915	POLLARD ST	SAUCEDO ABEL &
	6	811	COMMERCE ST	HMK LTD
	7	812	MUNCIE AVE	MORENO VICTOR &
	8	818	MUNCIE AVE	FISHER CHARLES H &
	9	822	MUNCIE AVE	HAGGERTY TERA
	10	909	WALKWAY ST	ATTAWAY EVA M
	11	2403	OBENCHAIN ST	BRADFIELD MINNIE B
	12	907	WALKWAY ST	CHOYCE MYZELLA
	13	930	COMMERCE ST	JLK IRREVOCABLE TRUST &
	14	2203	OBENCHAIN ST	ARRINGTON ROFFING COMPANY INC
	15	1001	COMMERCE ST	MARTINEZ DIONICIO
O	16	2222	SYLVAN AVE	WADE TRANSMISSION & GEAR
	17	914	COMMERCE ST	SAUCEDO ABEL JR
	18	902	COMMERCE ST	GUERRERO EVELYN M TRUSTEE
O	19	907	POLLARD ST	WADE WAYNE
	20	4401	LINFIELD RD	ST LOUIS S W RAILWAY CO
	21	9999	NO NAME ST	UNION PACIFIC RR CO

AGENDA ITEM # 54

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 14

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 45 B

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development Subdistrict for GR General Retail Subdistrict and an outdoor dining area uses on property zoned a GR General Retail Subdistrict within Planned Development District No. 193, the Oak Lawn Special Purpose District on the southwest line of Fairmount Street, west of Cedar Springs Road
Recommendation of Staff: Denial
Recommendation of CPC: Approval, subject to a development plan and conditions
Z134-353(WE)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z134-353(WE) **DATE FILED:** September 30, 2014

LOCATION: Southwest line of Fairmount Street, west of Cedar Springs Road

COUNCIL DISTRICT: 14 **MAPSCO:** 45B

SIZE OF REQUEST: Approx. 15,450 sq. ft. **CENSUS TRACT:** 18.0

APPLICANT: TCT Uptown, LLC

OWNER: Calabaza Holdings, LLC

REPRESENTATIVE: Robert Baldwin

REQUEST: An application for a Planned Development Subdistrict for GR General Retail Subdistrict and an outdoor dining area uses on property zoned a GR General Retail Subdistrict within Planned Development District No. 193, the Oak Lawn Special Purpose District.

SUMMARY: The purpose of this request is to create a separate, main use for "outdoor dining area" to be utilized for an existing patio on the northern lot. The patio structure was constructed without building permits and encroaches in the front yard setback and in the visibility triangle. It serves as an extension of the restaurant [The Common Table] on the adjoining lot to the south, which is also included in this request. Because the patio is located on a separate lot, it requires a separate Certificate of Occupancy, which requires a main use. The inclusion of the restaurant in this request is not necessary (from staff's perspective), but has been submitted.

CPC RECOMMENDATION: **Approval**, subject to a development plan and conditions.

STAFF RECOMMENDATION: **Denial**

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends denial based upon:

1. *Performance impacts upon surrounding property* – Reducing the front yard setbacks to solely accommodate a structure that was constructed without permits interrupts the established building form on the block. Furthermore, the applicant has provided no justification as to why parking should not be required for the outdoor dining area. A parking deficiency could create a nuisance for surrounding property.

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has determined that the proposed use [outdoor dining area] will have no impact on the street system because the development shows a one-way driveway approach. However, if the parking lot changes to two-way approach, then the encroachment into the visibility triangle will become a major concern.

3. *Comprehensive Plan or Area Plan Conformance* – The *forwardDallas! Comprehensive Plan* shows that the request site in located in an Urban Neighborhood Building Block and is not in compliance with the Comprehensive Plan. The difference in the front yard setback midblock to accommodate the outdoor dining and patio area is not consistent with the development pattern in the area.

4. *Justification for PDS Planned Development Subdistrict Zoning* – The applicant has submitted this request to: 1) circumvent replatting the two lots into one lot (the patio or "outdoor dining area" serves as an accessory use to the restaurant); 2) legalize a structure that was constructed in the front yard setback and the visibility triangle without permits; and 3) require no parking for the outdoor dining area. Staff does not believe that these are reasons to justify a Planned Development Subdistrict.

BACKGROUND INFORMATION:

- Between 1980 and 2010, the Building Official has issued several CO's certificate of occupancy for a restaurant without drive-in service. However, a CO has not been issued for the patio (proposed outdoor dining area).

Zoning History: There are two recent zoning cases requested in the area within the last five years.

1. Z134-301 A Planned Development Subdistrict for GR General Retail Subdistrict and mixed uses property zoned a Planned Development District No. 9 and a GR General Retail Subdistrict with a D Liquor Control Overlay within Planned Development District No. 193, the Oak Lawn Special

Purpose District in an area generally bounded by Cedar Springs Road, Routh Street, Howell Street and Fairmount Street. A City Plan Commission hearing date has not been scheduled at this time.

2. Z145-190 A PDS for GR Subdistrict Uses on property zoned a GR Subdistrict within PDD No. 193, the Oak Lawn Special Purpose District on the southwest line of Fairmount Street at Cedar Springs Road. A City Plan Commission hearing date has not been scheduled at this time

Land Use:

	Zoning within PDD No. 193	Land Use
Site	GR	Restaurant, outside dining area
Northeast	GR	Office, parking structure
Southeast	GR	Office
Northwest	GR	Office
Southwest	LC	Office

COMPREHENSIVE PLAN: The *forwardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *forwardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site as being in an Urban Neighborhood Building Block. The encroachments of the outdoor dining and patio area in the front yard setbacks in midblock are not consistent with the development pattern in the area. The proposed zoning is not in compliance with the *forwardDallas! Comprehensive Plan.*

Urban Neighborhoods, including Oak Lawn, the Grand Avenue area in South Dallas, the area near Jefferson Boulevard and the Vickery Meadow area, are predominately residential but are distinguished from other neighborhoods by the wide variety of housing options they provide and easy access to public transit. Housing choices should include single-family detached dwellings, townhomes and low- to midrise condominiums or apartments. These neighborhoods will have concentrations of shops and offices along key corridors or at key intersections, providing important services and job opportunities within walking distance of residences. These areas may have mixed-use buildings with ground floor shops. Areas currently developed with single-family or duplex uses should generally be maintained unless redevelopment is addressed through an Area Planning process. Urban Neighborhood streets will be very pedestrian friendly, providing excellent connectivity to shopping, schools and other community services. Emphasis should be placed on slowing traffic through use of on-street parking and other similar traffic calming measures. Public investments in these areas will focus on parks, pathways, transit stops, pedestrian-oriented landscaping and road improvements.

Area Plans:

The Oak Lawn Special Purpose District and the Oak Lawn Plan include the following objectives:

(1) To achieve buildings more urban in form.

(2) To promote and protect an attractive street level pedestrian environment with continuous street frontage activities in retail areas.

(3) To encourage the placement of off-street parking underground or within buildings similar in appearance to non-parking buildings.

(4) To promote development appropriate to the character of nearby neighborhood uses by imposing standards sensitive to scale and adjacency issues.

(5) To use existing zoned development densities as a base from which to plan, while providing bonuses to encourage residential development in commercial areas.

(6) To discourage variances or zoning changes which would erode the quantity or quality of single-family neighborhoods, or would fail to adhere to the standards for multiple-family neighborhoods and commercial areas.

(7) To promote landscape/streetscape quality and appearance.

The front yard setback encroachment and request for no parking are inconsistent with Objectives 6 and 7. The main issue is that the proposed new main use and patio area encroaches into the required front yard setbacks. Even though there are Planned Development Subdistricts that modify the established setbacks, it typically does not occur midblock or on such a small parcel to be noticeable.There are no other developments within the block where the setbacks have been reduced.

STAFF ANALYSIS:

Land Use Compatibility: The surrounding land uses consist of office uses.

A restaurant without drive-in service use is permitted by right in a GR General Retail Subdistrict. The proposed use will be defined in the PDS conditions and will receive a separate certificate of occupancy. Staff believes that the best use for this site is to replat the lot into one; thus, eliminating the need for a Planned Development Subdistrict. The outdoor dining area will become an accessory use to the main use.

However, the applicant constructed the outdoor dining area without a building permit and was given a citation to bring the structure into conformance. The restaurant use was converted from a single family dwelling and records show that the Building Official have issued several certificate of occupancy's for a restaurant without a drive-in service

since 1970s. In 2011, the outdoor dining area was constructed and is currently being used by the restaurant.

Development Standards:

DISTRICT	SETBACKS		Density	Height	Lot Coverage	Special Standards	PRIMARY Uses
	Front	Side/Rear					
GR General Retail	10'	0/0'	2:1 FAR	120'	80%	None	Residential uses, Bar & Restaurant uses, Office
PDS General Retail	0'	0/0'	2:1 FAR	120'	80%	None	Residential uses, Bar & Restaurant uses, Office, Outdoor Dining area

Landscaping:

The request site will also have to comply with Part I of the landscaping requirements in PDD No. 193 because the portion of the impermeable surface (patio area) exceeds 2,000 square feet.

Currently, the Building Official has not issued any permits for the improvement made by the restaurant as it relates to the impermeable surface (patio area) in front yard and the outdoor patio.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW	Proposed ROW
Fairmount Street	Local Street	50 ft.	50 ft.

Traffic: The Engineering Section of the Department Sustainable Development and Construction has reviewed the request and determined that it will not have a detrimental impact on the surrounding street system.

Parking: There are several outstanding issues the applicant will have to resolve with the Building Official Office before issuing a permit for the proposed use. The issues are parking agreements, possible delta credits and parking the proposed use. The applicant will have to comply with the parking regulations. The off-street parking requirement for a restaurant without drive-in service is 1 space per 100 square feet of floor area.

CPC Action – November 5, 2015

Z134-353(WE) Planner: Warren Ellis

Motion: It was moved to recommend **approval** of a Planned Development Subdistrict for GR General Retail Subdistrict uses and an outdoor dining area, subject to a development plan and conditions on property zoned a GR General Retail Subdistrict within Planned Development District No. 193, the Oak Lawn Special Purpose District on the southwest line of Fairmount Street, west of Cedar Springs Road.

Maker: Ridley
Second: Murphy
Result: Carried: 11 to 0

For: 11 - Anglin, Houston, Davis, Shidid, Abtahi, Haney, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 4 - Emmons, Anantasomboon, Jung, Housewright
Vacancy: 0

Notices: Area: 500 Mailed: 70
Replies: For: 0 Against: 2

Speakers: For: Rob Baldwin, 3904 Elm St., Dallas, TX, 75226
Against: None

LIST OF OFFICERS

Calabaza Holdings, LLC

Margaret Hancock, member
Barry Hancock, member

TCT Uptown, LLC

Keith Camp, member
Scott Siers, member
Latham Capital Partners
- Jess B. Latham, III, Member
- Jess B. Latham IV, Member

Ponds Free House
- Corey Pond, member
- Hilary Ferguson Pond, member

Twomey Concepts, LLC
- Brian Twomey, member
- Mark Hearl, member
- Michael Yeatman, member
- Mick Twomey, member

CPC PROPOSED PDD CONDITIONS

SEC. S-___.___. LEGISLATIVE HISTORY.

PD Subdistrict ___ was established by Ordinance No. ___, passed by the Dallas City Council on ____.

SEC. S-___.102. PROPERTY LOCATION AND SIZE.

PD Subdistrict ___ is established on property located on the southwest side of Fairmount Street, south of Wolf Street. The size of PD Subdistrict ___is 0.35 acres.

SEC. S-___.103. DEFINITIONS AND INTERPRETATIONS.

(a) Unless otherwise stated, the definitions and interpretations in Chapter 51 and Part I of this article apply to this division. If there is a conflict, this division controls. If there is a conflict between Chapter 51 and Part I of this article, Part I of this article controls.

(b) In this division, SUBDISTRICT means a subdistrict of PD 193.

(c) Unless otherwise stated, all references to articles, divisions, or sections in this division are to articles, divisions, or sections in Chapter 51.

(d) OUTDOOR DINING means a facility for the consumption of food and beverages in a structure that is not fully enclosed and is considered within the bar and restaurant uses category 51P-193.107(i) in this subdistrict.

(e) This subdistrict is considered to be a nonresidential zoning district.

SEC. S-___.104. EXHIBIT.

The following exhibit is incorporated into this division: Exhibit S-101A: development plan.

SEC. S-___.105. DEVELOPMENT PLAN.

For uses within the bar and restaurant uses category 51P-193.107(i) and a commercial parking lot, development and use of the Property must comply with the development plan (Exhibit ___). If there is a conflict between the text of this article and the development plan, the text of this article controls. For all other uses, no development plan is required.

SEC. S-___.106. MAIN USES PERMITTED.

(a) Except as provided, the only main uses permitted in this subdistrict are those main uses permitted in the GR General Retail Subdistrict, subject to the same conditions applicable in the GR General Retail Subdistrict, as set out in Part I of this article. For example, a use permitted in the GR General Retail Subdistrict only by specific use permit (SUP) is permitted in this subdistrict only by SUP; a use subject to development impact review (DIR) in the GR General Retail Subdistrict is subject to DIR in this subdistrict; etc.

(b) Outdoor dining is permitted in the area shown on the development plan.

SEC. S-___.107. ACCESSORY USES AND STRUCTURES.

(a) As a general rule, an accessory use is permitted in any subdistrict in which the main use is permitted. Some specific accessory uses, however, due to their unique nature, are subject to additional regulations in Section 51P-193.108. For more information regarding accessory uses, consult Section 51P-193.108.

(b) The following accessory uses are not permitted:

-- Amateur communication tower.
-- Open storage.
-- Private stable.

SEC. S-___.108. YARD, LOT, AND SPACE REGULATIONS.

(a) Except as provided, the yard, lot, and space regulations for the GR General Retail Subdistrict apply.

(b) No front yard setback is required for the outdoor dining structure shown on the development plan.

SEC. S-___.109. OFF-STREET PARKING AND LOADING.

(a) Consult Part I of this article for the specific off-street parking and loading requirements for each use.

(b) For outdoor dining, no minimum parking is required.

SEC. S-___.110. ENVIRONMENTAL PERFORMANCE STANDARDS.

See Article VI.

SEC. S-___.111. LANDSCAPING.

(a) Except as provided, landscaping must comply with Part I.

(b) For uses within the bar and restaurant uses category 51P-193.107(i) and a commercial parking lot, sidewalk location is as shown on the development plan. All other uses must provide a sidewalk in the location required in Part I.

(c) Plant materials must be maintained in a healthy, growing condition.

SEC. S-___.112. SIGNS.

Signs must comply with the provisions for business zoning districts in Article VII.

SEC. S-___.113. ADDITIONAL PROVISIONS.

(a) The only visibility triangle obstruction permitted is limited to the accessory structures shown on the development plan.

(b) The Property must be properly maintained in a state of good repair and neat appearance.

(c) Development and use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the city.

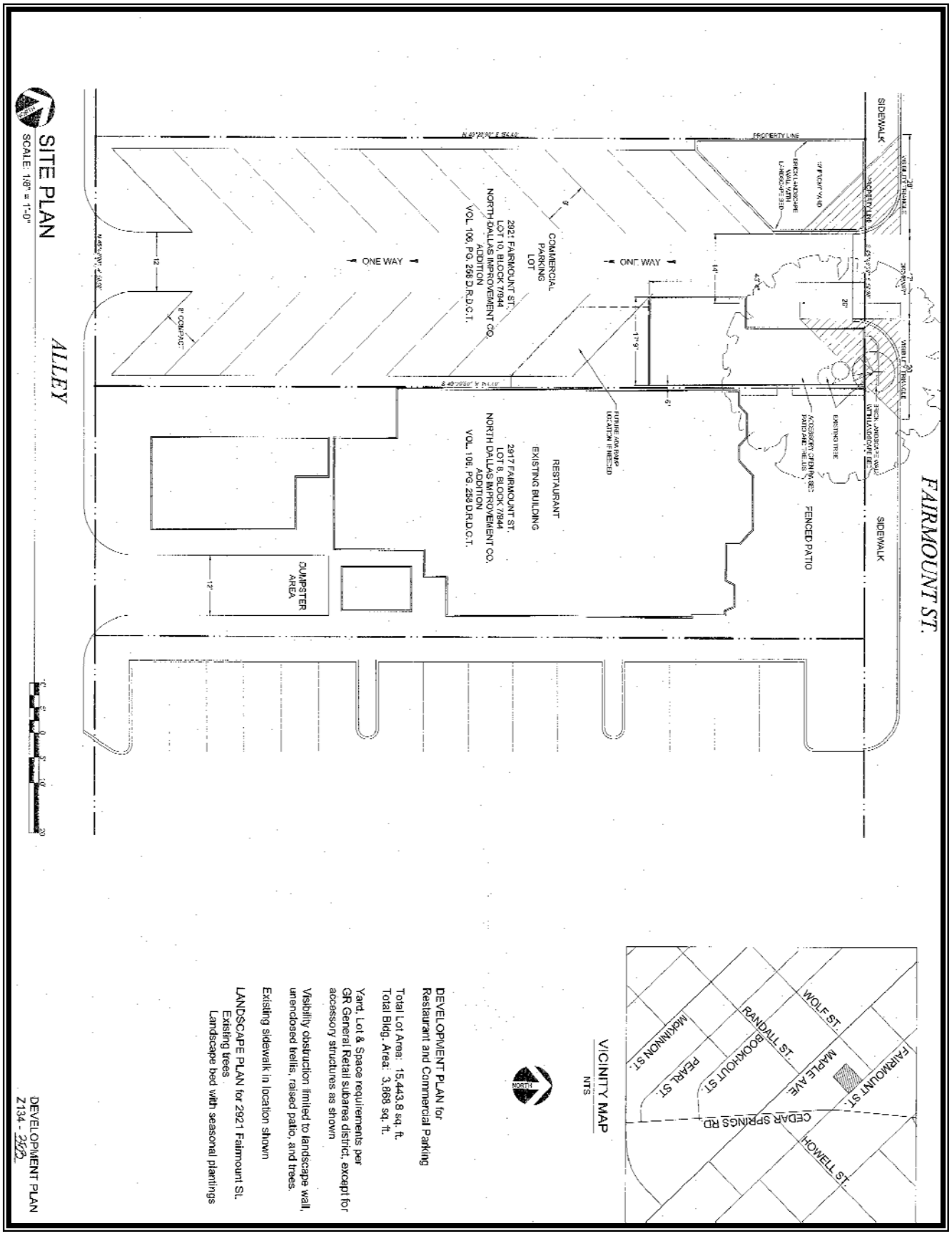
(d) Development and use of the Property must comply with Part I of this article.

SEC. S-___.114. COMPLIANCE WITH CONDITIONS.

(a) All paved areas, permanent drives, streets, and drainage structures, if any, must be constructed in accordance with standard city specifications, and completed to the satisfaction of the city.

(b) The building official shall not issue a building permit to authorize work, or a certificate of occupancy to authorize the operation of a use, in this subdistrict until there has been full compliance with this division, the Dallas Development Code, the construction codes, and all other ordinances, rules, and regulations of the city.

PROPOSED DEVELOPMENT PLAN



DEVELOPMENT PLAN for
Restaurant and Commercial Parking

Total Lot Area: 15,443.8 sq. ft.
Total Bldg. Area: 3,868 sq. ft.

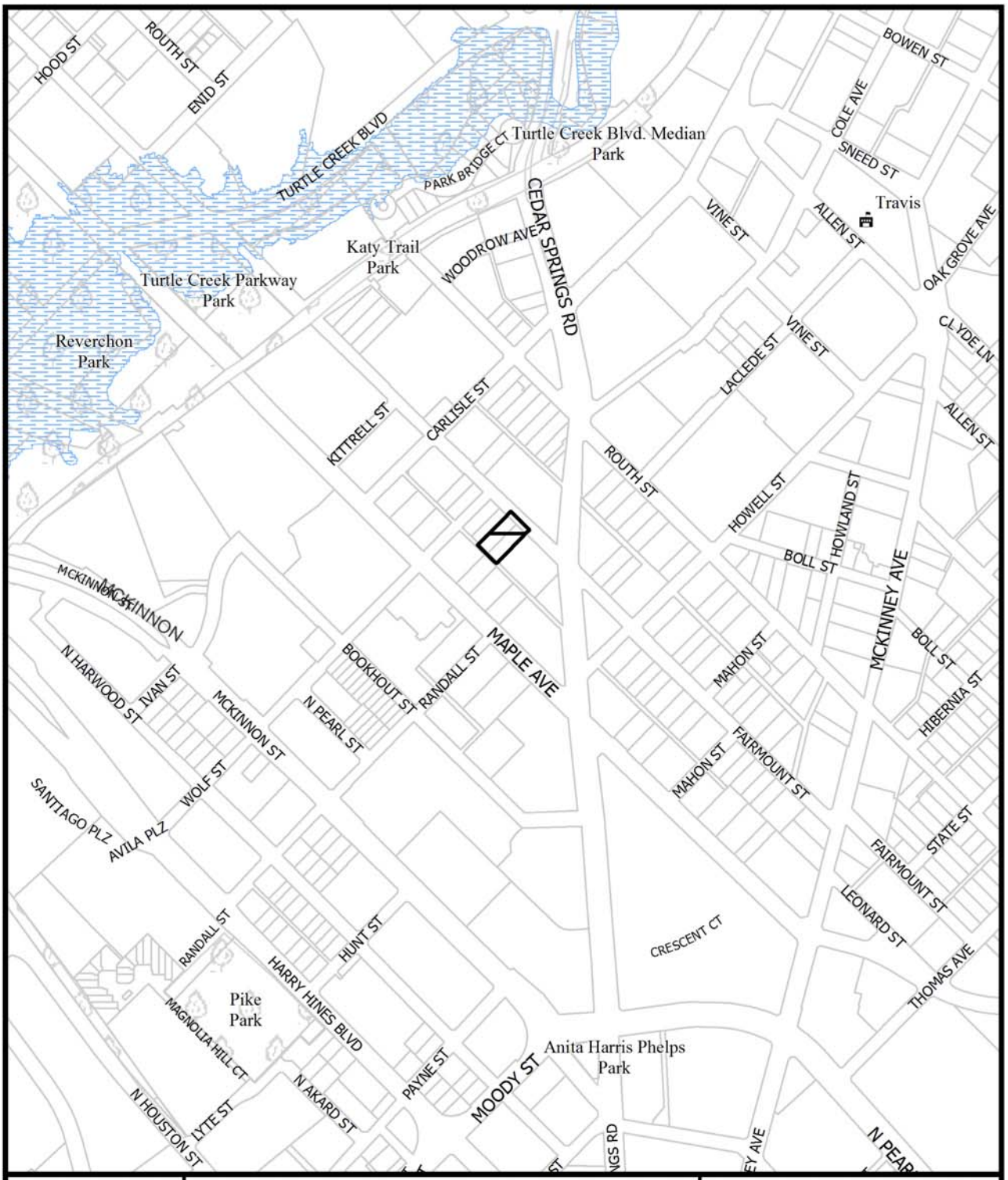
Yard, Lot & Space requirements per GR General Retail subarea district, except for accessory structures as shown

Visibility obstruction limited to landscape wall, unenclosed trellis, raised patio, and trees.

Existing sidewalk in location shown

LANDSCAPE PLAN for 2921 Fairmount St.
Existing trees
Landscape bed with seasonal plantings

DEVELOPMENT PLAN
Z134 - 253

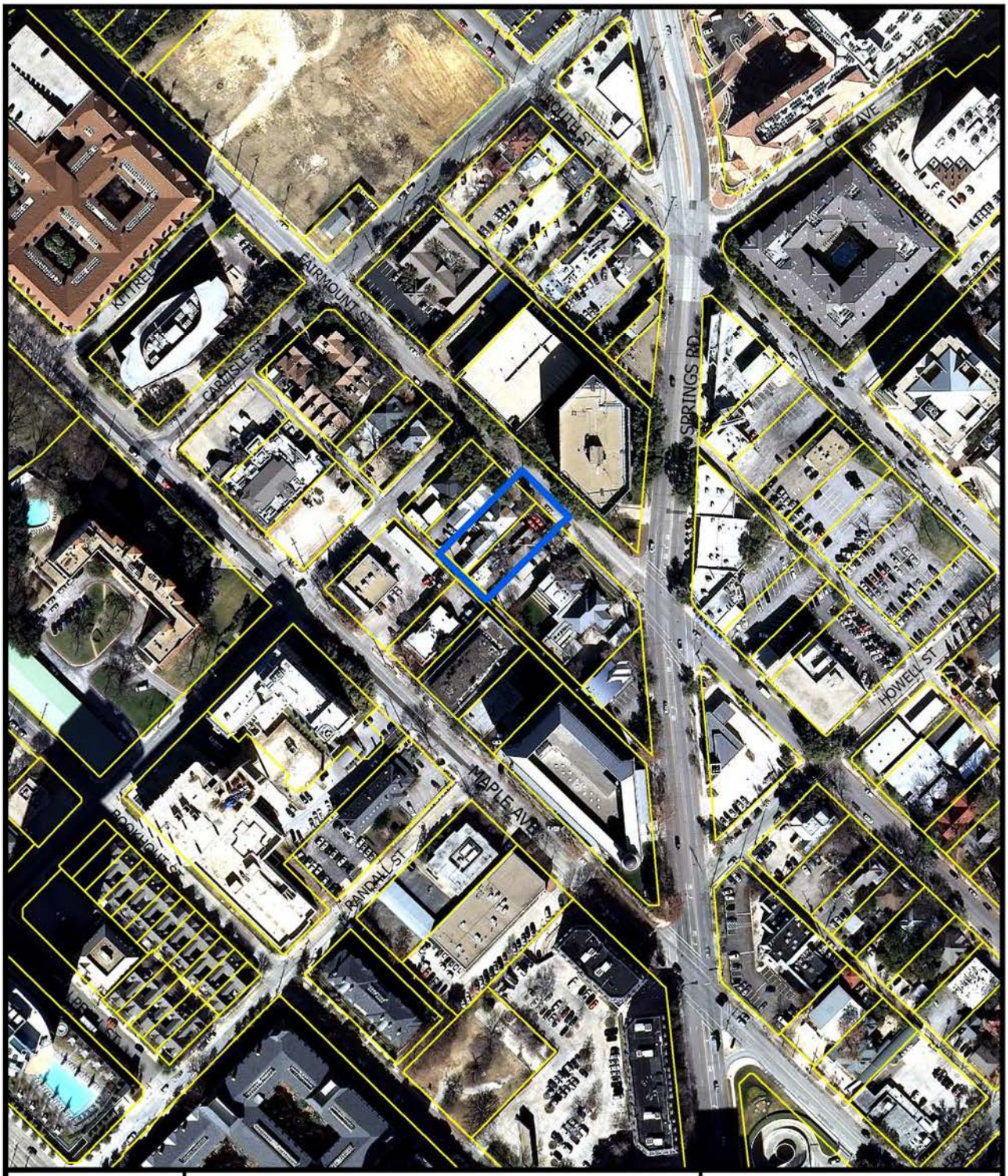


1:6,000

VICINITY MAP

Case no: Z134-353

Date: 10/29/2014



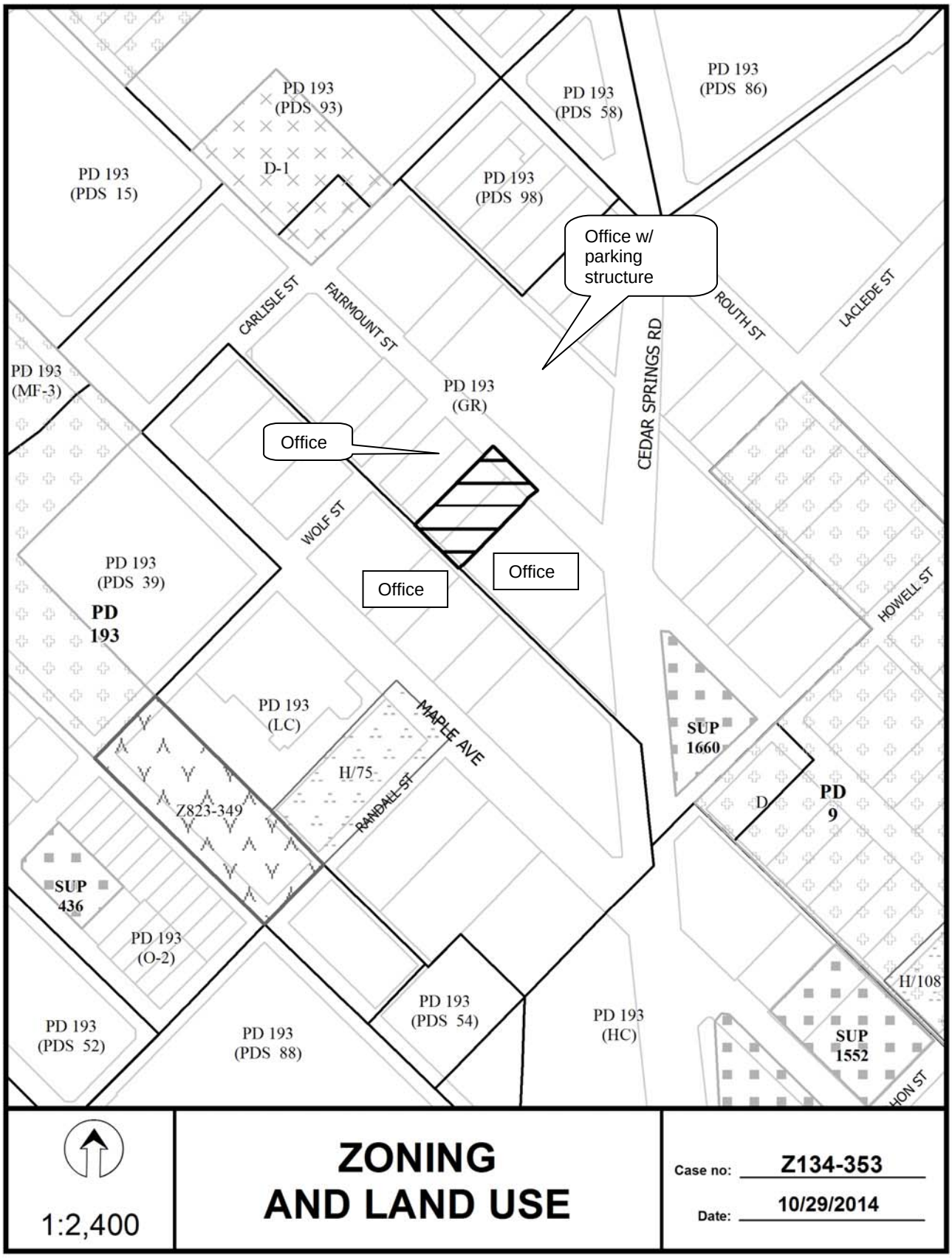
1:2,400

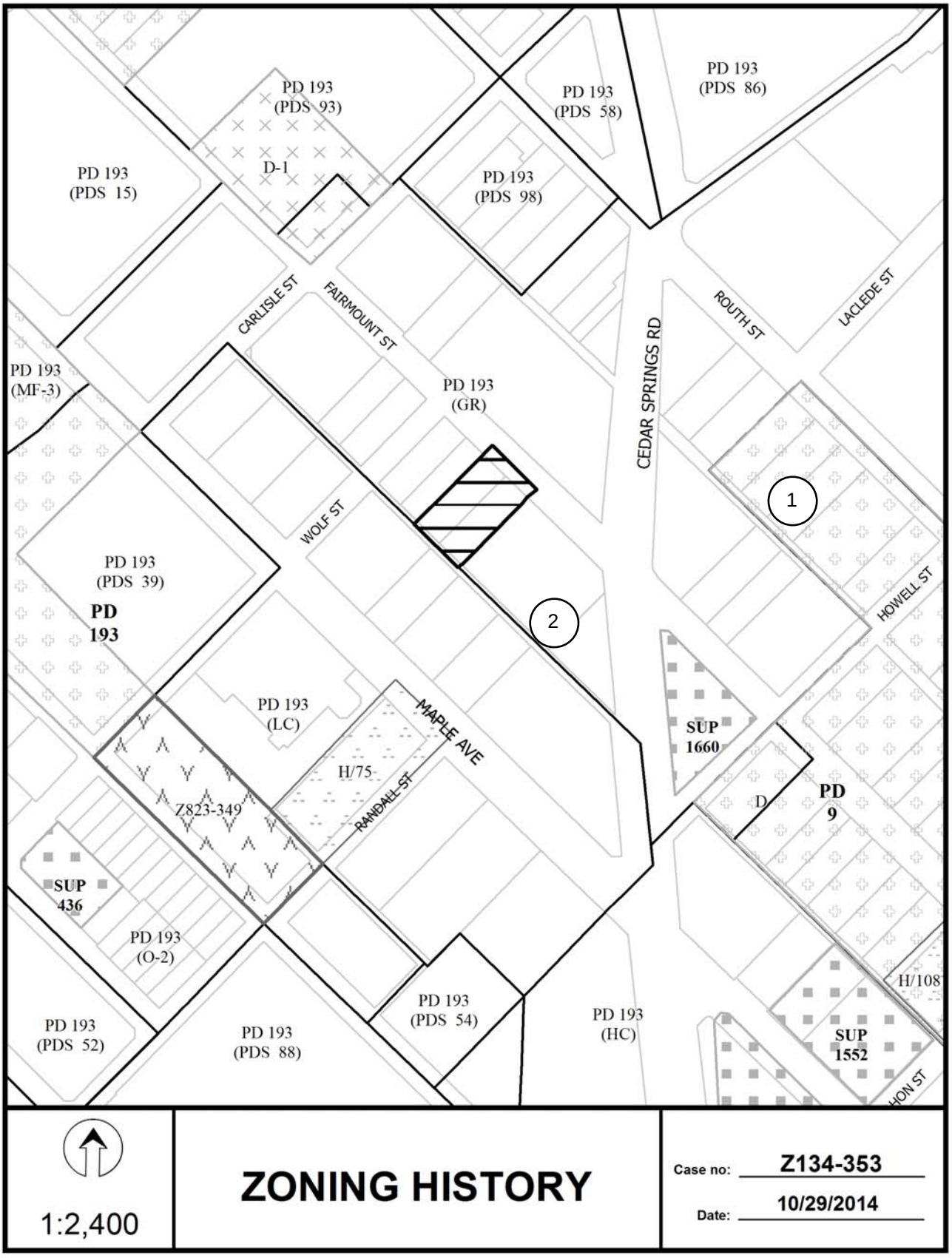
AERIAL MAP

Case no: Z134-353

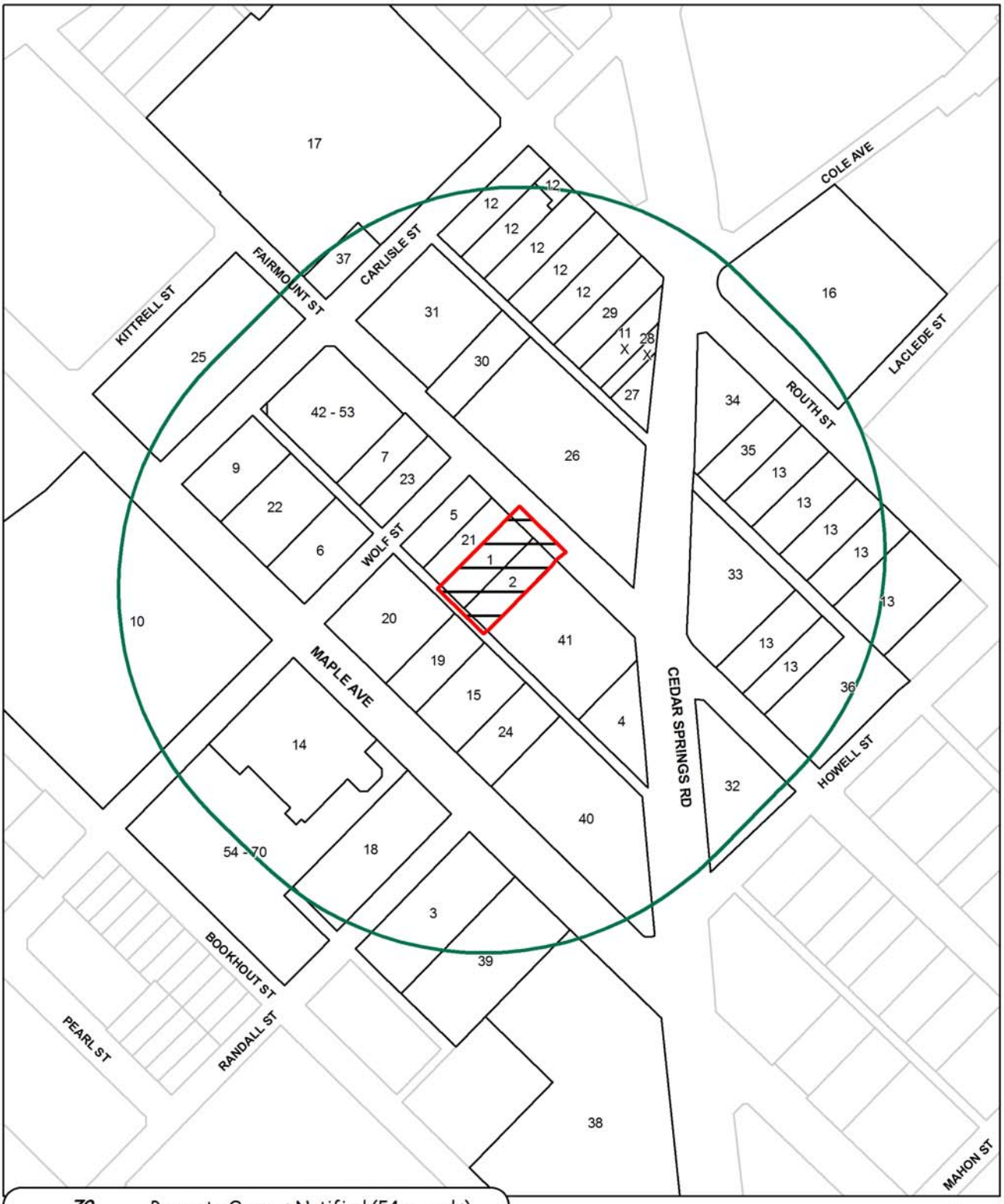
Date: 10/29/2014

Office


PD 193 (PDS 93)
D-1
PD 193 (PDS 58)
PD 193 (PDS 86)
PD 193 (PDS 15)
PD 193 (PDS 98)
Office w/ parking structure
CARLISLE ST
FAIRMOUNT ST
ROUTH ST
LACLEDE ST
CEDAR SPRINGS RD
PD 193 (MF-3)
PD 193 (GR)
Office
WOLF ST
Office
Office
PD 193 (PDS 39)
PD 193
HOWELL ST
PD 193 (LC)
MAPLE AVE
SUP 1660
H/75
RANDALL ST
D
PD 9
Z823-349
SUP 436
PD 193 (O-2)
H/108
PD 193 (PDS 52)
PD 193 (PDS 88)
PD 193 (PDS 54)
PD 193 (HC)
SUP 1552
HON ST
1:2,400
ZONING AND LAND USE
Case no: Z134-353
Date: 10/29/2014


PD 193
(PDS 93)
D-1
PD 193
(PDS 15)
PD 193
(PDS 58)
PD 193
(PDS 86)
PD 193
(PDS 98)
CARLISLE ST
FAIRMOUNT ST
ROUTH ST
LACLEDE ST
CEDAR SPRINGS RD
PD 193
(MF-3)
PD 193
(GR)
1
WOLF ST
PD 193
(PDS 39)
PD
193
2
HOWELL ST
PD 193
(LC)
MAPLE AVE
SUP
1660
H/75
RANDALL ST
D
PD
9
Z823-349
SUP
436
PD 193
(O-2)
H/108
PD 193
(PDS 52)
PD 193
(PDS 88)
PD 193
(PDS 54)
PD 193
(HC)
SUP
1552
HON ST
1:2,400
ZONING HISTORY
Case no: Z134-353
Date: 10/29/2014

CPC RESPONSES



70	Property Owners Notified (54 parcels)
0	Replies in Favor (0 parcels)
2	Replies in Opposition (2 parcels)
500'	Area of Notification
11/5/2015	Date

Z134-353
CPC

N
W E
S

1:2,400

Notification List of Property Owners

Z134-353

70 Property Owners Notified ***0 Property Owners in Favor*** ***2 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
	1	2921	FAIRMOUNT ST	CALABAZA HOLDINGS LLC
	2	2917	FAIRMOUNT ST	CALABAZA HOLDINGS LLC
	3	2817	MAPLE AVE	HIGHLAND CAPITAL MANGT LP
	4	2425	CEDAR SPRINGS RD	MDB CAPITAL GROUP LLC
	5	2925	FAIRMOUNT ST	REILLY PARKWAY LTD PTNS
	6	3000	MAPLE AVE	GREENWAY 3000 MAPLE LTD
	7	3005	FAIRMOUNT ST	COVINGTON TERRIE I
	8	3000	FAIRMOUNT ST	SLOCUM PROPERTIES INC
	9	3012	MAPLE AVE	MAPLE TREE PARTNERS LTD
	10	3001	MAPLE AVE	KENSINGTON MAPLE LLC
X	11	2537	CEDAR SPRINGS RD	SPURGIN ROBERT B & SALLY
	12	3011	ROUTH ST	ALAMO MANHATTAN ROUTH STREET LLC
	13	2812	FAIRMOUNT ST	GREENWAY CEDAR SPRINGS LP
	14	2927	MAPLE AVE	HEI STONELEIGH HOTEL LLC
	15	2906	MAPLE AVE	2906 MAPLE AVE LLC
	16	2600	COLE AVE	GABLES REALTY LTD PS
	17	2525	CARLISLE ST	FAIRMOUNT G/ U LLC
	18	2905	MAPLE AVE	2905 MAPLE LLC
	19	2912	MAPLE AVE	2912 MAPLE LLC
	20	2926	MAPLE AVE	SHIELDS LTD PS
	21	2923	FAIRMOUNT ST	CALABAZA HOLDINGS LLC
	22	3008	MAPLE AVE	MAPLE TREE PARTNERS LTD
	23	3001	FAIRMOUNT ST	FRENCH JAMES F &
	24	2902	MAPLE AVE	2902 MAPLE LP
	25	3102	MAPLE AVE	MAPLE COUNTRY LTD
	26	2501	CEDAR SPRINGS RD	GH CEDAR SPRINGS INC

11/04/2015

Reply	*Label #*		*Address*	*Owner*
	27	2521	CEDAR SPRINGS RD	THORNTON LAURIE L &
X	28	2535	CEDAR SPRINGS RD	SPURGIN ROBERT B
	29	3005	ROUTH ST	JEH FAMILY TRUST
	30	3004	FAIRMOUNT ST	3004 FAIRMOUNT LP
	31	3012	FAIRMOUNT ST	MAVINA FAIRMOUNT LLC
	32	2408	CEDAR SPRINGS RD	GREENWAY MAPLE LP
	33	2816	FAIRMOUNT ST	GREENWAY CEDAR SPRINGS LP
	34	2911	ROUTH ST	GREENWAY CEDAR SPRINGS LP
	35	2907	ROUTH ST	GREENWAY CEDAR SPRINGS LP
	36	2808	FAIRMOUNT ST	GREENWAY CEDAR SPRINGS LP
	37	3104	FAIRMOUNT ST	RIDDELL ROYD L & CONNIE J
	38	2305	CEDAR SPRINGS RD	GPI CEDAR MAPLE LP
	39	2811	MAPLE AVE	GUIDESTONE FINANCIAL RESOURCES
	40	2401	CEDAR SPRINGS RD	GUIDESTONE FINANCIAL RES
	41	2913	FAIRMOUNT ST	GUIDESTONE FINANCIAL RESOURCES OF THE SOUT
	42	3033	FAIRMOUNT ST	GIANCASPERO WALDEMAR N
	43	3011	FAIRMOUNT ST	KAMINER MARC
	44	3013	FAIRMOUNT ST	NAGESH KONANUR
	45	3015	FAIRMOUNT ST	BURNELL JEREMY
	46	3017	FAIRMOUNT ST	SARMA SATYAM
	47	3019	FAIRMOUNT ST	BAKER JENNIFER ANNE
	48	3021	FAIRMOUNT ST	MEDINA LANA
	49	3023	FAIRMOUNT ST	HIRZEL JEFF L & CAROL A
	50	3025	FAIRMOUNT ST	GARNER KATHERINE
	51	3027	FAIRMOUNT ST	SIMPSON THOMAS A &
	52	3029	FAIRMOUNT ST	LEUNG KEVIN
	53	3031	FAIRMOUNT ST	MOORE CAROL A
	54	2919	MAPLE AVE	CRESCENT ESTATES CUSTOM HOMES LP
	55	2919	MAPLE AVE	CRESENT ESTATES CUSTOM HOMES LP
	56	2919	MAPLE AVE	MAPLE WOLF STONELEIGH LLC
	57	2919	MAPLE AVE	CRESCENT ESTATES

11/04/2015

Reply	*Label #*		*Address*	*Owner*
	58	2919	MAPLE AVE	ELLENBOGEN PAUL H &
	59	2919	MAPLE AVE	CRESCENT ESTATES CUSTOM HOMES LP
	60	2919	MAPLE AVE	COLE THOMAS B
	61	2919	MAPLE AVE	CRESCENT ESTATES CUSTOM HOMES LP
	62	2919	MAPLE AVE	CRESCENT ESTATE CUTOME HOMES LP
	63	2919	MAPLE AVE	CRESCENT ESTATE CUSTOM HOMES LP
	64	2919	MAPLE AVE	MAPLE WOLF STONELEIGH LLC
	65	2919	MAPLE AVE	REDFIELD VANCE & SUSAN
	66	2919	MAPLE AVE	EAST JOHN WAYNE
	67	2919	MAPLE AVE	ETTER TODD F
	68	2919	MAPLE AVE	MASSAD GENE F & BARBARA J
	69	2919	MAPLE AVE	GREER CHARLES SCOTT & LINDA L
	70	2919	MAPLE AVE	MONTGOMERY WILLIAM A &

AGENDA ITEM # 55

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 3

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 61B H; 62 E; J

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for A(A) Agricultural District and camp recreation center uses and an ordinance repealing Specific Use Permit No. 928 for a community welfare or health center on property zoned an A(A) Agricultural District, generally on the west line of Whispering Cedars Drive and on the east and west lines of Cedar Ridge Drive, north of West Red Bird Lane and Ranchero Lane
Recommendation of Staff and CPC: Approval, subject to a development/landscape plan and conditions
Z145-240(SM)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z145-240(SM) **DATE FILED:** April 10, 2015

LOCATION: West line of Whispering Cedars Drive and on the east and west lines of Cedar Ridge Drive, north of West Red Bird Lane and Ranchero Lane

COUNCIL DISTRICT: 3 **MAPSCO:** 61B-H, 62E, 62J

SIZE OF REQUEST: Approx. 86.85 acres **CENSUS TRACT:** 165.20

APPLICANT / OWNER: Girl Scouts of Northeast Texas

REPRESENTATIVE: Robert Reeves & Associates, Inc.

REQUEST: An application for a Planned Development District for A(A) Agricultural District and camp recreation center uses and to repeal Specific Use Permit No. 928 for a community welfare or health center on property zoned an A(A) Agricultural District.

SUMMARY: The applicant proposes to maintain the existing improvements and allowances in Specific Use Permit No. 928 and to make allowances for future expansions and modifications for the Girl Scouts of Northeast Texas Camp Whispering Cedars. Some of these modifications include creating tree preservation areas where mature canopy trees would be maintained in their natural state, and allowances for observation decks and zip line towers that comply with residential proximity slope for future long-term improvements to the camp.

CPC RECOMMENDATION: **Approval**, subject to a development/landscape plan and conditions.

STAFF RECOMMENDATION: **Approval**, subject to a development/landscape plan and conditions.

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommendation for approval is based upon:

1. *Performance impacts upon surrounding property* – The request makes special efforts to identify tree preservation areas in order to ensure that the site maintains a natural state and does not impose upon surrounding properties, particularly the residential zoning to the north. Therefore, the impacts on surrounding properties are lessened.

2. *Traffic impact* – It is not foreseen that the modifications proposed would have a negative impact on traffic.

3. *Comprehensive Plan or Area Plan Conformance* – The request area is located in the Residential Neighborhood Building Block. The screening and limited buildable areas make it generally in consistent with this building block.

4. *Justification for PD Planned Development District Zoning as opposed to a straight zoning district* – The use is required to obtain a specific use permit under straight zoning. Specific Use Permit No. 928 was previously granted for the camp. However, straight zoning cannot permit modifications to allow for taller recreational structures without opening the door to less desirable uses for the area.

BACKGROUND INFORMATION:

- On December 4, 1985, City Council unanimously adopted Specific Use Permit No. 928 for a "community, welfare or health center" for a permanent time period by Ordinance No. 18964 that allowed 20,687 square feet of structures.

- Since the 1985 approval, the facility constructed 15,212 square feet of structures then requested a minor amendment to the original SUP to construct additions totaling 6,335 square feet.

- On February 6, 2014, the City Plan Commission approved a minor amendment that is shown on page 6 of this report to remove and recapture floor area to construct a 1,777 square foot welcome center and a 4,558 square foot girl program center as summarized on page 7 of this report.

Zoning History: There have been no recent zoning changes in the vicinity within the last five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Designation
Ledbetter Drive	Principal Arterial	Standard-6 lanes-Divided, 100 feet R.O.W.*
Cedar Ridge Road	Minor Arterial	Minimum-6 lanes-Divided, 100 feet R.O.W.*
Whispering Cedar Drive	Local	Undetermined

*Not built to Thoroughfare Plan designation

Comprehensive Plan: The request site is located in an area considered a Residential Neighborhood Building Block. This Building Block represents the life-blood of Dallas, the traditional neighborhood of single-family detached homes. Dallas has many neighborhoods that match this description, including Winnetka Heights, Preston Hollow, Lakewood and Wheatley Place. Single-family dwellings are the dominate land use in these areas. Some shops, restaurants or institutional land uses such as schools and religious centers that serve neighborhood residents may be located at the edges or at key intersections.

Land Use:

	Zoning	Land Use
Site	A(A) and SUP 928	Camp recreation facility
North	R-7.5(A)	Single family
South	A(A) and R-10(A)	Undeveloped and single family
East	MF-2(A), TH-3(A) and R-10(A)	Undeveloped and single family
West	PD 725 and A(A)	Undeveloped and single family

Land Use Compatibility:

The land uses surrounding the request site consist primarily of single family, undeveloped land and flood plain.

Although there are many “future development areas” shown on the development plan, in relation to the overall proposed district, these areas are constrained so that future

development will be of a recreational nature and will comply with residential proximity slope in the event a taller observation deck or zip line tower is erected.

The proposed planned development district also adds residential proximity slope height restrictions (RPS). When a site is subject to residential proximity slope requirements, structures that exceed 26 feet in height and are adjacent to single family districts must comply with a height plane, also known as RPS, that projects upward and outward from low-density residential districts at a slope of one foot in height for each foot in distance. For example, a 100-foot tall tower must be placed 300 feet away from the nearest site of origination, or low-density residential district—in this instance, the boundaries of the proposed district—in order to comply with the one to three residential proximity slope height requirement. This sloping height restriction allows for tall structures but requires that they are distanced from adjoining properties to prevent looming.

Parking: The request includes a special parking requirement for the new use, *camp recreation facility*, which is similar to lodging uses as it requires one space for each cabin or dwelling unit and one space per 200 square feet of welcome center complex. A hotel requires one space per suite and one space per 200 square feet of meeting room or conference room.

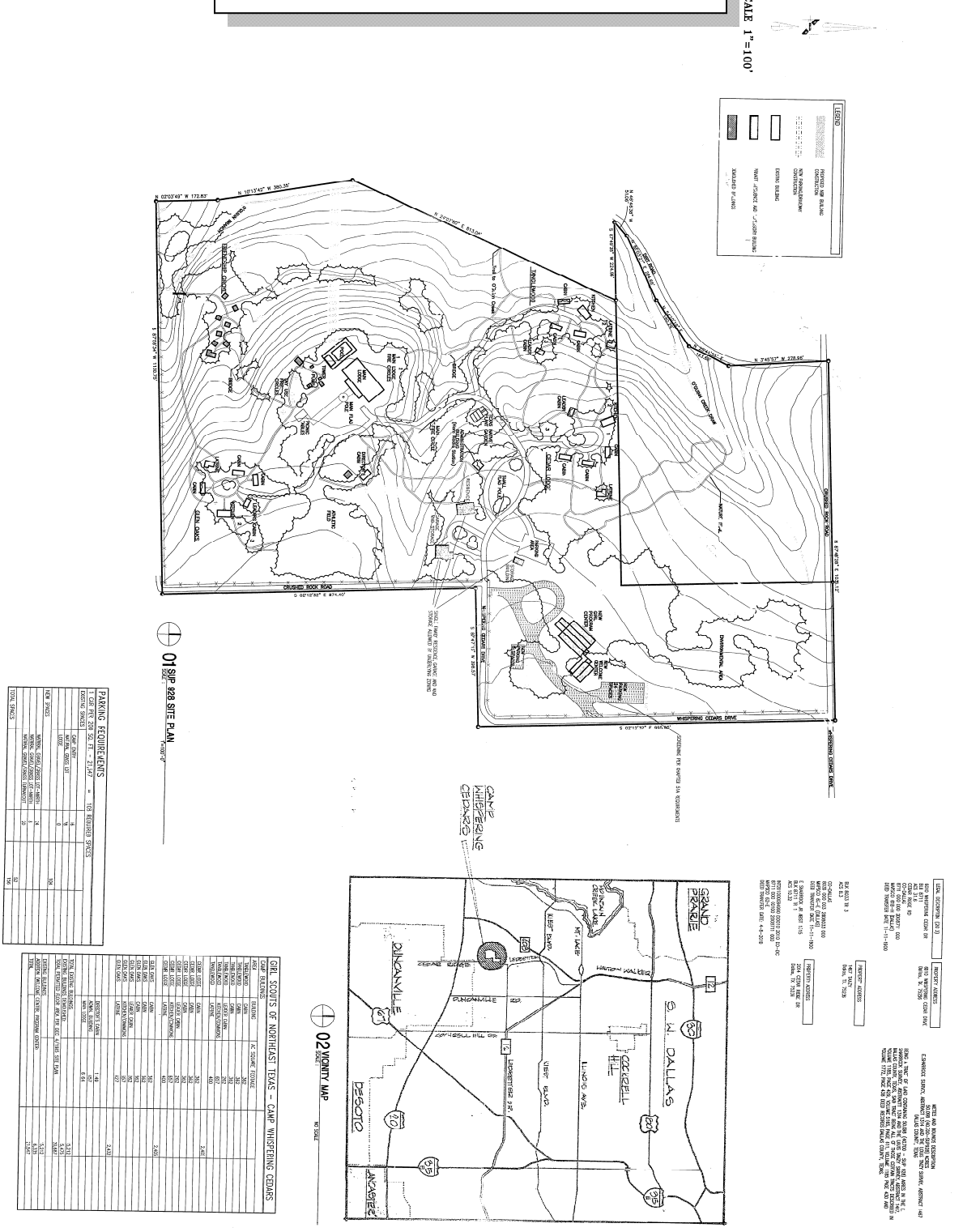
Landscaping: The request generally requires that any other permitted main use comply with Article X of the landscaping regulations. However, a camp recreation facility must comply instead with the attached development and landscaping plan. The purpose of the alternate landscaping requirements is to maintain and preserve the natural landscape that exists on the property to protect and enhance the “irreplaceable natural environment”.

Paving: The request proposes to allow alternate paving materials similar to the Dallas Arboretum. However, staff does not support this modification because additional alternate paving materials have been allowed most recently, as shown in the table on page 6, and if the camp recreation facility discovers a new and better paving technology, Building Inspection has an organization that specifically considers requests for alternate paving materials and evaluates their effectiveness for the particular purpose that is proposed. Staff’s recommendation for denial for alternate paving materials is because the process to get alternative paving materials approved is a good system that will protect the visitors and users of the district in order to allow vehicles, emergency and nonemergency, to traverse the property safely.

Non-Standard Material for Off-Street Parking Surface

	Alternate Parking Request - proposed materials	Recommendation
1	**Gravelpave system** as specified by manufacturer	Approved
2	**Gravelpave system** as specified by manufacturer	Approved
3	**Interlocking pavestone system** as specified by the manufacturer	Approved
4	**Interlocking brick pavers** as specified by the manufacturer	Approved
5	**GravelPave 2 System** as specified by the manufacturer	Approved
6	**Enviro-Crete, a permeable concrete system**. The parking lot will consist of native soil compacted to 90-92% proctor, covered by 8 ounce filter fabric (non-woven) , 10 inch thick layer of 3/4-inch crushed rock, and 6-inch of Enviro-Crete to be installed per manufacturer guidelines	Approved
7	**Bomanite concrete paving system.** The parking lot will consist of a compacted native soil subbase proof rolled flat, covered by a filter fabric, 6 inch thick layer of compacted well graded granular stone (1 1/2 inch minus the material), and 5 1/2 inch of Bomanite concrete paving system using Portland Cement Type I/II to be installed per manufacturer guidelines.	Approved
8	**Crushed Granite,** for parking lot and drive aisles, but reinforced concrete should be used for fire lanes. it is recommended the subgrade in these areas be ripped to a depth of 6 inches and compacted to a minimum of 95% of the maximum dry unit weight as determined by ASTM D 698. Moisture contents should be at or above optimum moisture content, as determined by ASTM D 698. A woven, biaxial geo-grid should then be placed over the prepared subgrade. Once the grid is in place, it is recommended a minimum of 2 inches of crushed granite be placed over the geo-grid and compacted using a vibrating plate or vibratory smooth drum roller. Compaction should continue until no further consolidate of the material is visible. Consideration should also be given to placing an open web, expanded geo-grid over the biaxial fabric to aid in retaining the crushed granite in place, prior to spreading and compacting the granular material.	Approved

Existing SUP Site Plan



CPC Action – November 19, 2015

Z145-240(SM) Planner: Sarah May

Motion: It was moved to recommend **approval** of a Planned Development District for A(A) Agricultural District and camp recreation center uses and to repeal Specific Use Permit No. 928 for a community welfare or health center, subject to a development/landscape plan and staff's recommended conditions on property zoned an A(A) Agricultural District, generally on the west line of Whispering Cedars Drive and on the east and west lines of Cedar Ridge Drive, north of West Red Bird Lane and Ranchero Lane.

Maker: Houston
Second: Abtahi
Result: Carried: 14 to 0

For: 14 - Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 1 - Anglin
Vacancy: 0

Notices: Area: 500 Mailed: 106
Replies: For: 1 Against: 2

Speakers: For: Robert Reeves, 900 Jackson St., Dallas, TX, 75229
Debbie Rolling, 12512 Cedar Bend Dr., Dallas, TX, 752
Against: None

CPC Recommended Conditions

ARTICLE _____.

PD _____.

SEC. 51P-____.101. LEGISLATIVE HISTORY.

PD _____ was established by Ordinance No._____, passed by the Dallas City Council on _____.

SEC. 51P- ____.102. PROPERTY LOCATION AND SIZE.

PD _____ is established on property located at the western terminus of Whispering Cedars Drive. The size of PD _____ is approximately 86.85 acres.

SEC. 51P- ____.103. PURPOSE.

The purpose of this article is to meet the needs of Camp Whispering Cedars for the Girl Scouts of Northeast Texas, while protecting and enhancing an irreplaceable natural environment by incorporating the following in this district:

(a) Allow minimal improvements in protected large tree canopy areas.

(b) Preserve tree canopy areas adjacent to the escarpment.

(c) Restrict future expansions of a camp recreation center to designated low impact areas.

(d) Protect existing trees in areas designated for future development.

(e) Allow alternate paving materials in order to minimize any increase in impermeable surfaces.

(f) Aid in the environment's ecological balance by contributing to the processes of air purification, oxygen regeneration, and groundwater recharge.

(g) Conserve energy and water.

(h) Enhance the beautification of the city.

SEC. 51P- ____.104. DEFINITIONS AND INTERPRETATIONS.

(a) Unless otherwise stated, the definitions and interpretations in Chapter 51A apply to this article. In this article:

(1) CAMP RECREATION CENTER means an area providing recreational facilities to include, but not limited to, playgrounds, parks, game courts, camp grounds including cabins and tents, swimming pools, private stable, patron lodging, resident, staff, and caretaker lodging, playing fields, program areas, and facilities to accommodate camping participants. This use may include facilities for the care and maintenance of grounds, animals, structures, and machinery.

(2) EXISTING IMPROVEMENTS means a building or structure in existence on the Property on _____.

(3) NEW CONSTRUCTION means a building or structure erected after _____.

(4) PATRON LODGING means a lodging facility that provides room and board to persons using a camp recreation center and private stable on the Property. This use may include facilities that negotiate sleeping arrangements for any period of time not to exceed 30 consecutive days.

(5) RESIDENT, STAFF, AND CARETAKER LODGING means a facility that provides room and board to persons assisting in the operation of a recreation center and private stable on the Property. This use may include dwelling units or suites that are exclusively restricted to the members of the staff.

(6) SIMULATED LOT means an area within the building site that is delineated by the owner or its representative for the sole purpose of satisfying the requirements of the landscape provisions of this article and meets the following criteria:

(A) wholly includes the area on which the construction work is to be done;

(B) does not have an area, which exceeds 10 percent of the area of the building site; and

(C) does not require platting; however, it must be delineated on the plans approved by the building official prior to the issuance of a building permit.

(b) Unless otherwise stated, all references to articles, divisions, or sections in this article are to articles, divisions, or sections in Chapter 51A.

(c) This district is considered to be a residential zoning district.

SEC. 51P- _____.105. EXHIBITS.

The following exhibit is incorporated into this article: Exhibit ___A: development and landscape plan.

SEC. 51P- _____.106. DEVELOPMENT AND LANDSCAPE PLAN.

(a) Except as provided in this section, no development plan is required, and the provisions of Section 51A-4.702 regarding submission of or amendments to a development plan, site analysis plan, conceptual plan, development schedule, and landscape plan do not apply.

(b) For a camp recreation center, development and use of the Property must comply with the development and landscape plan (Exhibit ___A). If there is a conflict between the text of this article and the development and landscape plan, the text of this article controls.

SEC. 51P- _____.107. MAIN USES PERMITTED.

(a) Except as provided in this section, the only main uses permitted are those main uses permitted in the A(A) Agricultural District, subject to the same conditions applicable in the A(A) Agricultural District, as set out in Chapter 51A. For example, a use permitted in the A(A) Agricultural District only by specific use permit (SUP) is permitted in this district only by SUP; a use subject to development impact review (DIR) in the A(A) Agricultural District is subject to DIR in this district; etc.

(b) The following additional main use is permitted:

-- Camp recreation center.

SEC. 51P-_____.108. ACCESSORY USES.

As a general rule, an accessory use is permitted in any district in which the main use is permitted. Some specific accessory uses, however, due to their unique nature, are subject to additional regulations in Section 51A-4.217. For more information regarding accessory uses, consult Section 51A-4.217.

SEC. 51P-_____.109. YARD, LOT, AND SPACE REGULATIONS.

(Note: The yard, lot, and space regulations in this section must be read together with the yard, lot, and space regulations in Division 51A-4.400. If there is a conflict between this section and Division 51A-4.400, this section controls.)

(a) Except as provided in this section, the yard, lot, and space regulations for the A(A) Agricultural District apply.

(b) Height.

(1) Residential proximity slope. If any portion of a structure is over 26 feet in height, that portion may not be located above a residential proximity slope. Exception: Except for chimneys, structures listed in Section 51A-4.408(a)(2) may project through the slope to a height not to exceed the maximum structure height, or 12 feet above the slope, whichever is less. Chimneys may project through the slope to a height 12 feet above the slope and 12 feet above the maximum structure height.

(2) Maximum height. Unless further restricted under Subparagraph (1), maximum structure height is:

(A) 110 feet for zip line towers and similar recreational structures for a camp recreation facility,

(B) 65 feet for a maximum of three observation towers,

(C) 36 feet for all other structures.

SEC. 51P- ____.110. OFF-STREET PARKING AND LOADING.

(a) Except as provided, consult the use regulations in Division 51A-4.200 for the specific off-street parking and loading requirements for each use.

(b) Camp recreation center.

(1) Off-street parking: One space for each cabin or dwelling unit plus 24 spaces for the welcome center complex.

(2) Off-street loading: None required.

SEC. 51P- ____.111. ENVIRONMENTAL PERFORMANCE STANDARDS.

See Article VI.

SEC. 51P-____.112. FENCES.

A fence may not exceed 8 feet above grade in a required front yard.

SEC. 51P-____.113. LANDSCAPING AND TREE REPLACEMENT.

(a) In general. Landscaping and tree replacement must be provided in accordance with Article X.

(b) Camp recreation center.

(1) In general. The mandatory landscaping requirements and design standards of Article X do not apply to a camp recreation center. Landscaping must be provided as shown on the development and landscape plan. If there is a conflict between the text of this article and the development and landscape plan, the text of this article controls.

(2) Tree replacement. Except as provided in this paragraph, Section 51A-10.134 applies. Protected trees may count as credit on an inch for inch basis for replacement tree credits being requested provided all the trees are located on the same simulated lot as defined in this article. These trees must be identified on the building permit application. Protected trees may only be counted once toward replacement tree credits.

(3) Forested areas.

(A) Except as provided in this subsection, forested areas must remain in a natural state.

(A) Roadways, pathways, utilities, structures less than 1,000 square feet, and primitive campgrounds are allowed in forested areas.

(c) Maintenance. Plant materials must be maintained in a healthy, growing condition.

SEC. 51P- ____.114. SIGNS.

(a) In general. Except as provided in this section, signs must comply with the provisions for non-business zoning districts in Article VII.

(b) Detached premise signs.

(1) A maximum of three detached premise signs are allowed on the Property.

(2) Each detached premise sign may not exceed 100 square feet in effective area and 25 feet in height

(3) No setback is required for a detached premise sign.

SEC. 51P- ____.115. ADDITIONAL PROVISIONS.

(a) The Property must be properly maintained in a state of good repair and neat appearance.

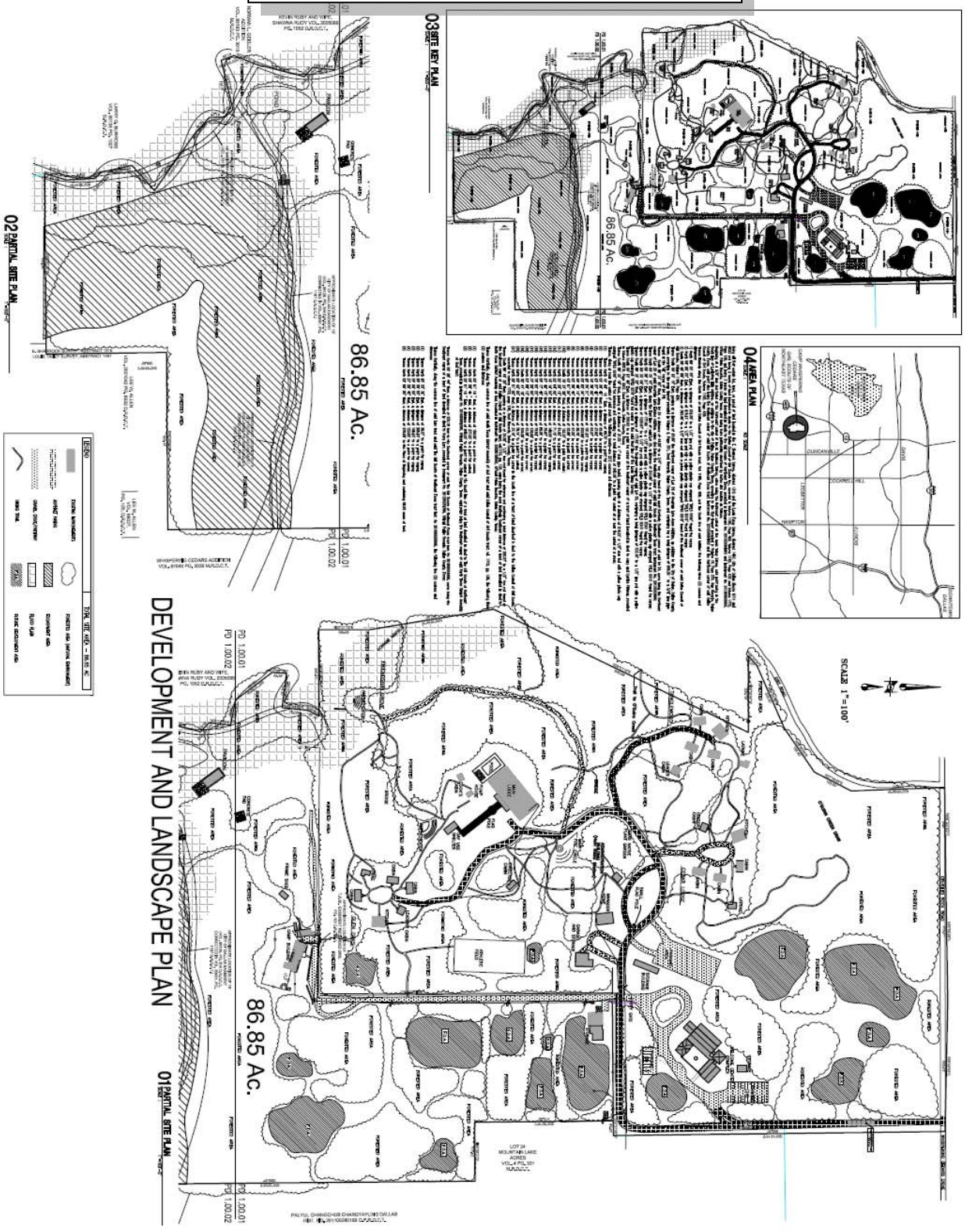
(b) Development and use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the city.

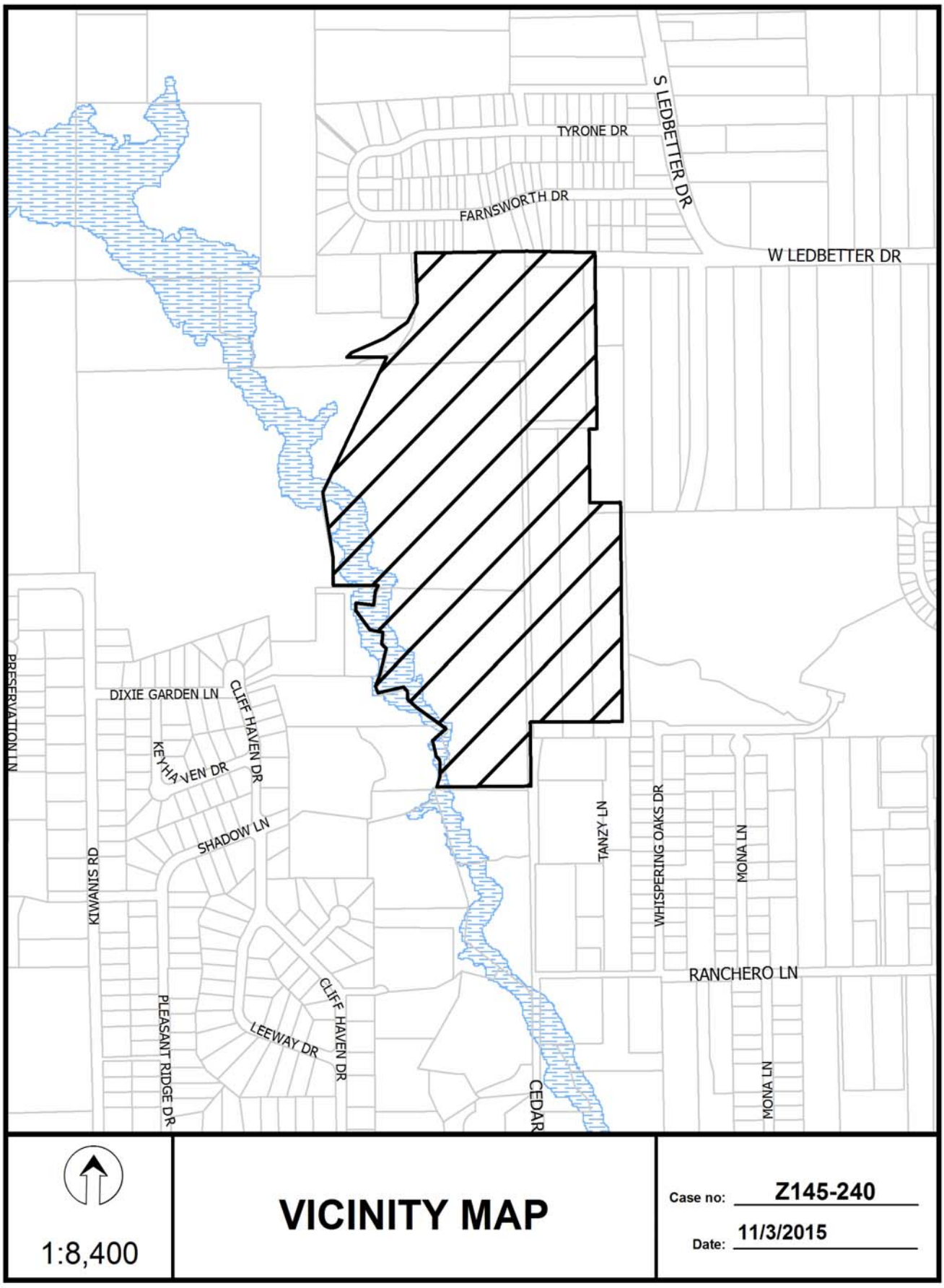
SEC. 51P-____.116. COMPLIANCE WITH CONDITIONS.

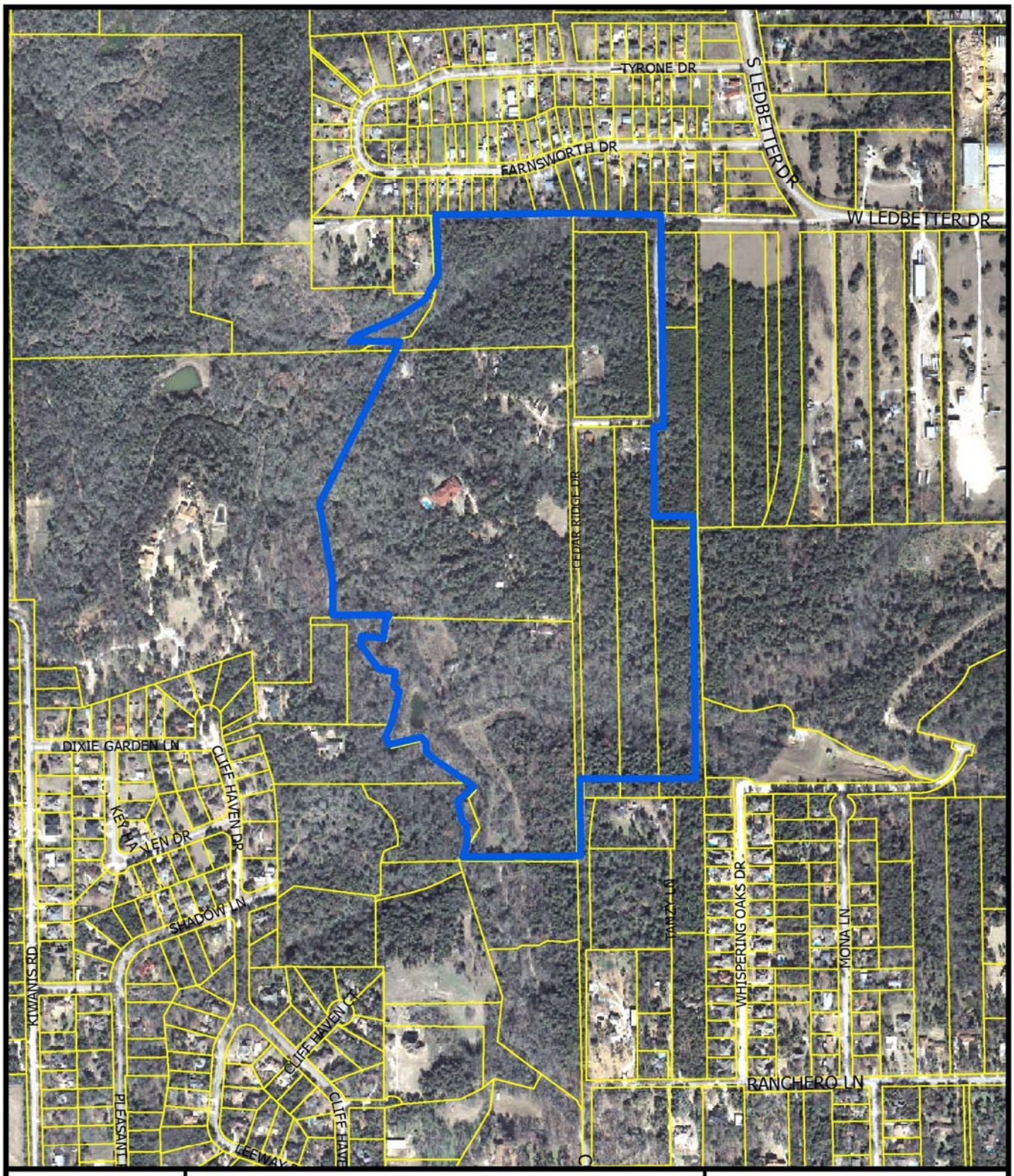
(a) All paved areas, permanent drives, streets, and drainage structures, if any, must be constructed in accordance with standard city specifications, and completed to the satisfaction of the city.

(b) The building official shall not issue a building permit to authorize work, or a certificate of occupancy to authorize the operation of a use, until there has been full compliance with this article, the Dallas Development Code, the construction codes, and all other ordinances, rules, and regulations of the city."

Proposed Development/Landscape Plan




S LEDBETTER DR
TYRONE DR
FARNSWORTH DR
W LEDBETTER DR
PRESERVATION LN
DIXIE GARDEN LN
CLIFF HAVEN DR
KEYHAVEN DR
SHADOW LN
KIWANIS RD
PLEASANT RIDGE DR
LEEWAY DR
CLIFF HAVEN DR
CEDAR
TANZY LN
WHISPERING OAKS DR
MONA LN
RANCHERO LN
MONA LN
1:8,400
VICINITY MAP
Case no: Z145-240
Date: 11/3/2015

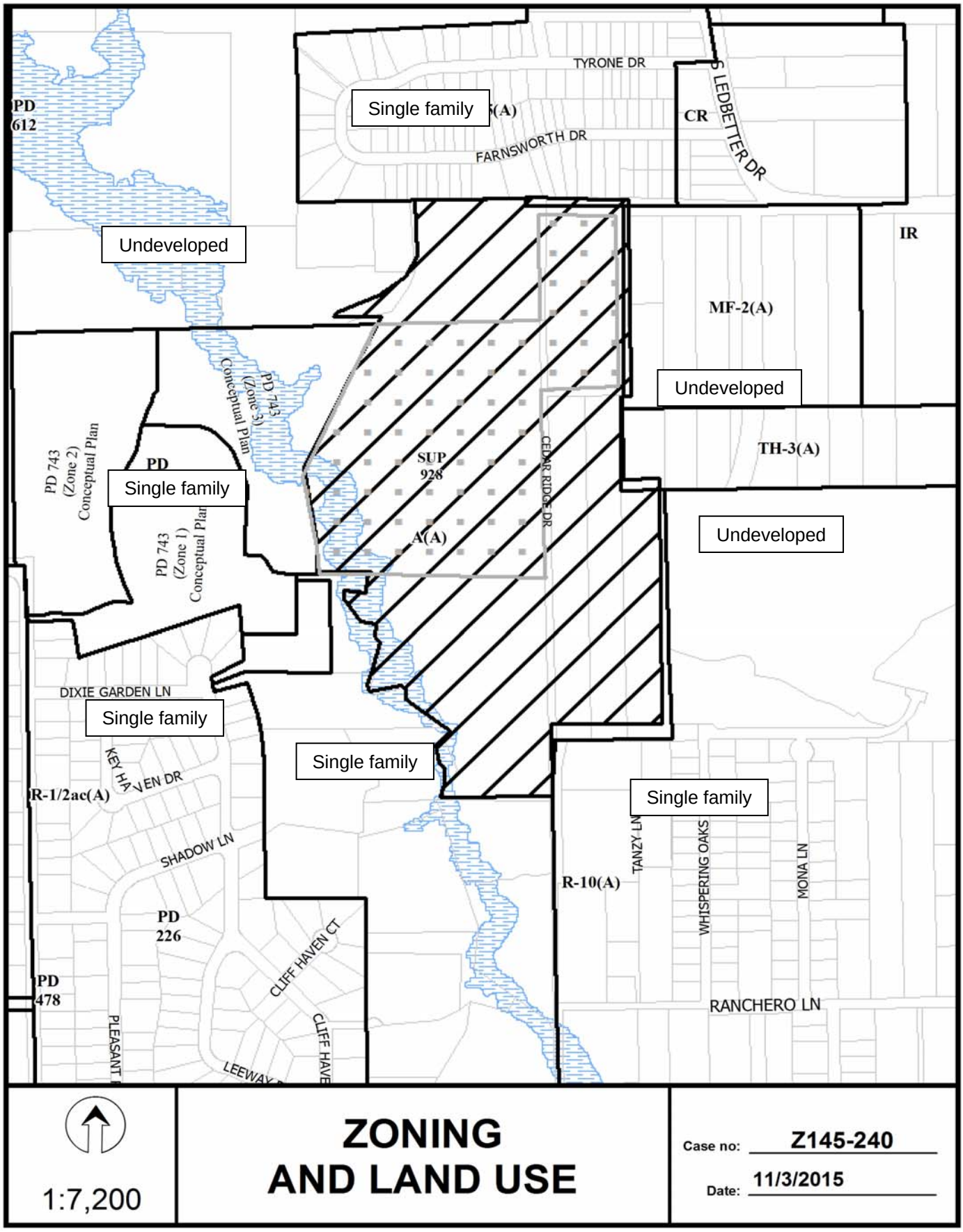


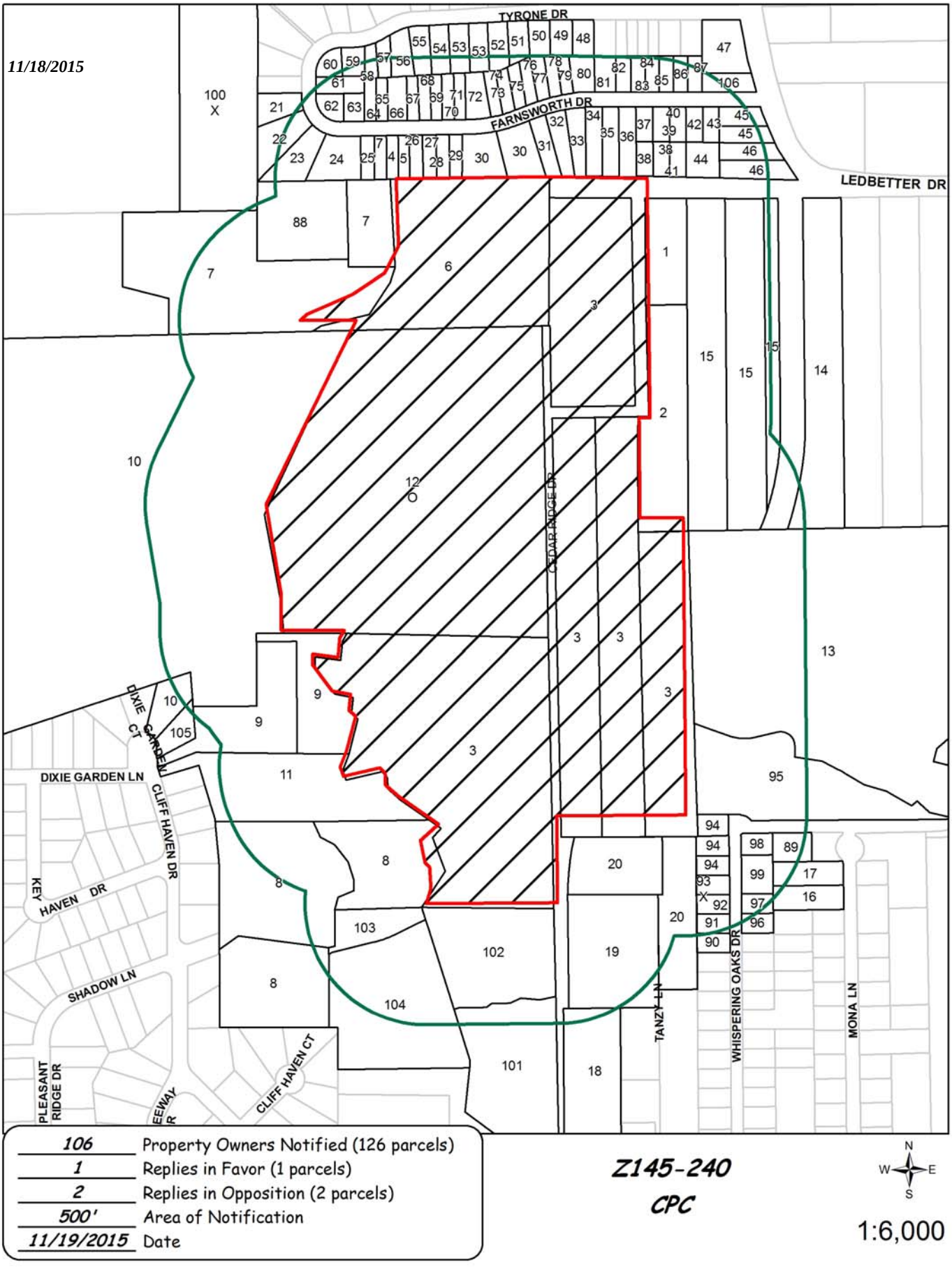
1:7,200

AERIAL MAP

Case no: Z145-240

Date: 11/3/2015


Single family
TYRONE DR
FARNSWORTH DR
S LEDBETTER DR
CR
PD 612
Undeveloped
IR
MF-2(A)
Undeveloped
PD 743 (Zone 3) Conceptual Plan
PD 743 (Zone 2) Conceptual Plan
PD
Single family
SUP 928
CEDAR RIDGE DR
TH-3(A)
PD 743 (Zone 1) Conceptual Plan
A(A)
Undeveloped
DIXIE GARDEN LN
Single family
Single family
KEY HAVEN DR
R-1/2ac(A)
Single family
SHADOW LN
TANZY LN
WHISPERING OAKS
MONA LN
R-10(A)
PD 226
CLIFF HAVEN CT
PD 478
RANCHERO LN
PLEASANT
CLIFF HAVE
LEEWAY
1:7,200
ZONING AND LAND USE
Case no: Z145-240
Date: 11/3/2015


11/18/2015
TYRONE DR
FARNSWORTH DR
LEDBETTER DR
CEDAR RIDGE DR
DIXIE CT
DIXIE GARDEN LN
CLIFF HAVEN DR
KEY HAVEN DR
SHADOW LN
PLEASANT RIDGE DR
CLIFF HAVEN CT
TANZY LN
WHISPERING OAKS DR
MONA LN
106 Property Owners Notified (126 parcels)
1 Replies in Favor (1 parcels)
2 Replies in Opposition (2 parcels)
500' Area of Notification
11/19/2015 Date
Z145-240
CPC
N
W
E
S
1:6,000

Reply List of Property Owners

Z145-240

106 Property Owners Notified 1Property Owners in Favor 2 Property Owners Opposed

Reply	*Label #*	*Address*		*Owner*
	1	5938	WHISPERING CEDAR DR	LOMAS JOEL
	2	1	WHISPERING CEDAR DR	TURNER JACK R
	3	6006	WHISPERING CEDAR DR	GIRL SCOUTS OF NORTHEAST TEXAS
	4	6158	FARNSWORTH DR	BOUTSABOUABANE KATHY &
	5	6154	FARNSWORTH DR	KEOMALITHONG SONE
	6	2014	CEDAR RIDGE DR	GIRLS SCOUTS OF NORTHEAST TEXAS
	7	6162	FARNSWORTH DR	LAM MUNG
	8	6300	SHADOW LN	BURROSS LARRY G
	9	6900	DIXIE GARDEN CT	RUDY KEVIN & SHAWNA
	10	6600	GRADY NIBLO RD	NORTH TEXAS DISTRICT ASSEMBLY OF GOD
	11	5102	CLIFF HAVEN DR	ROSS PATRICIA LYNN TR
O	12	6010	WHISPERING CEDAR DR	GIRL SCOUTS OF NORTHEAST TEXAS
	13	4679	DUNCANVILLE RD	PALYUL CHANGCHUB DHARGYAYLING DALLAS INC
	14	5812	WHISPERING CEDAR DR	DIAZ ELFEGO VALDEZ &
	15	5800	WHISPERING CEDAR DR	DUNCANVILLE I S D
	16	5131	MONA LN	BRAUDAWAY TRAVIS
	17	5121	MONA LN	COCHRAN MICHAEL P &
	18	6065	RANCHERO LN	WOODHOUSE MICHAEL IAN &
	19	6021	TANZY LN	WOODHOUSE MICHAEL I
	20	6031	TANZY LN	ALLEN LEE W
	21	6188	FARNSWORTH DR	MORIN CRUZ & MARIA IDALIA
	22	6182	FARNSWORTH DR	BOUNTHAHEUANGSY BOUNTHAVY
	23	6178	FARNSWORTH DR	SOURIYONG DA &
	24	6170	FARNSWORTH DR	LAM MUNG
	25	6166	FARNSWORTH DR	SKAGGS WILLARD & ROGJAN
	26	6150	FARNSWORTH DR	JARA JESUS JAVIER &

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	27	6146	FARNSWORTH DR	LOPEZ MANUEL J &
	28	6140	FARNSWORTH DR	TURNER NORMAN L & JANIE C
	29	6136	FARNSWORTH DR	FAWKS KEVIN R ETAL
	30	6130	FARNSWORTH DR	WHALING ROBERT
	31	6120	FARNSWORTH DR	RUIZ RICARDO M & ROBERTA
	32	6104	FARNSWORTH DR	RUIZ RICARDO M & ROBERTA
	33	6102	FARNSWORTH DR	TURNER JAMES H & JUDITH
	34	6062	FARNSWORTH DR	BOUTSABOUABANE KITTI RIYAS & MANIBOTH
	35	6056	FARNSWORTH DR	BOUTSABOUABANE K R ET AL
	36	6050	FARNSWORTH DR	MANIVANH PHOUVIENG ET AL
	37	6028	FARNSWORTH DR	KEOHAVONG KHAMSOUK &
	38	5937	WHISPERING CEDAR DR	DUNSTON DOUGLAS D
	39	6026	FARNSWORTH DR	CAMACHO HECTOR B
	40	6020	FARNSWORTH DR	GARZA JOSE ANGEL
	41	5929	WHISPERING CEDAR DR	DUNSTON DOUGLAS
	42	6016	FARNSWORTH DR	GARZA JOSE A
	43	6014	FARNSWORTH DR	PHASAVATH KENNETH
	44	5915	WHISPERING CEDAR DR	PALACIO ARTEMIO J
	45	4207	LEDBETTER DR	KIM IN TAE
	46	4223	LEDBETTER DR	MARTINEZ RAYMUNDO
	47	4109	LEDBETTER DR	WAT LAO SIRIMOUNGKHOUN OF DALLAS INC
	48	6060	TYRONE DR	SOUVANANNARATH BOUNTHONG
	49	6068	TYRONE DR	KHENG JIMMY & OUANE
	50	6104	TYRONE DR	SAYSOMBATH THONGBAY
	51	6110	TYRONE DR	GARCIA ANNA
	52	6116	TYRONE DR	CASTILLO JUAN FLORES &
	53	6122	TYRONE DR	TEMPLO CRISTO DE PODER SEPTIMO DIA
	54	6134	TYRONE DR	TEMPLO CRISTO DE PODER SEPTIMO DIA
	55	6142	TYRONE DR	TORRES ANGELA VASQUEZ DE &
	56	6148	TYRONE DR	CONTRERAS CATALINA
	57	6156	TYRONE DR	VEOPASEUTH INPANH

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	58	6166	TYRONE DR	GARZA ANA LAURA
	59	6170	TYRONE DR	SENESOURY P E
	60	6174	TYRONE DR	RAJPHOUMY DONALD
	61	6187	FARNSWORTH DR	RICHMOND SPENCER C ET AL
	62	6181	FARNSWORTH DR	CATALAN GUADALUPE
	63	6171	FARNSWORTH DR	SHEARIN CHARLES BUCK
	64	6163	FARNSWORTH DR	CRABTREE PATRICIA ANN N
	65	6167	FARNSWORTH DR	SHEARIN CHARLES &
	66	6159	FARNSWORTH DR	KHOUNPHANYA PHOEBE &
	67	6155	FARNSWORTH DR	GONZALES SARA DEE
	68	6151	FARNSWORTH DR	HEAD MARGIE
	69	6147	FARNSWORTH DR	TAYS MARY
	70	6143	FARNSWORTH DR	KHAMTHONG VANMANY B
	71	6139	FARNSWORTH DR	KHAMTHONG VANMANY B &
	72	6133	FARNSWORTH DR	SIPHAKONGVISETH BOUNLAP &
	73	6127	FARNSWORTH DR	BOUATAVETH CRISTO
	74	6123	FARNSWORTH DR	BRADSHAW DEBRA K
	75	6119	FARNSWORTH DR	TURNER NORMAN
	76	6115	FARNSWORTH DR	NARVAEZ JUDY A
	77	6111	FARNSWORTH DR	KAOMALITHONG TONY
	78	6107	FARNSWORTH DR	ZAVALA MARIA JESUS
	79	6061	FARNSWORTH DR	SAIYASITH BOUNMA & TOME
	80	6067	FARNSWORTH DR	VANHNARATH KHANTRY
	81	6059	FARNSWORTH DR	PHAPHOVAN BOUNPINH &
	82	6035	FARNSWORTH DR	SIMPRASEUTH PHOUVANE LIFE ESTATE
	83	6031	FARNSWORTH DR	SIPHAKONGVISETH LATSAMY
	84	6027	FARNSWORTH DR	GAMEZ ATANACIO G &
	85	6023	FARNSWORTH DR	SYTHEUN SYTHUEN
	86	6019	FARNSWORTH DR	KHOUNPHANYA PHOEBE
	87	6015	FARNSWORTH DR	MADRID JOSE ERNEST
	88	5937	WHISPERING CEDAR DR	THOMAS FORREST D &

11/18/2015

Reply	*Label #*	*Address*		*Owner*
	89	31	RANCHERO LN	BLACKMON BARRY CARROLL
	90	5211	WHISPERING OAKS DR	GIBSON ANDREW JR &
	91	5151	WHISPERING OAKS DR	SHEELEY RICHARD MARK &
	92	5141	WHISPERING OAKS DR	BOLTON TERRELL D &
X	93	5131	WHISPERING OAKS DR	VANCE ALBERT T
	94	1	WHISPERING OAKS DR	KNIGHT RICHARD FAM PTNR,
	95	1	WHISPERING OAKS DR	CHANG FANG D
	96	5162	WHISPERING OAKS DR	DUNN PAUL &
	97	5152	WHISPERING OAKS DR	GARCIA ROLANDO
	98	5122	WHISPERING OAKS DR	GRIFFIN BRADFORD L
	99	5142	WHISPERING OAKS DR	ARIEN SABIHUDDIN & YUSMIDA
X	100	3410	SPUR 408	JOHNSTON ZELDA FAY ETAL
	101	5405	CEDAR RIDGE RD	PITTMAN JERRY &
	102	5409	CEDAR RIDGE RD	PITTMAN JERRY & CYNTHIA
	103	5400	CEDAR RIDGE RD	BURROSS LARRY G &
	104	5400	CLIFF HAVEN CT	MARLIN JOHN D & DANA L
	105	10	DIXIE GARDEN CT	RUDY KEVIN C
	106	4117	LEDBETTER DR	WILDER THAD

AGENDA ITEM # 56

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 2

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 37 X

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Planned Development District for multifamily uses on property zoned an MF-2(A) Multifamily District on the southwest line of Coronado Avenue, east of East Grand Avenue

Recommendation of Staff and CPC: Approval, subject to a development plan and conditions

Z145-273(WE)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z145-273(WE) **DATE FILED:** June 1, 2015

LOCATION: Southwest line of Coronado Avenue, east of East Grand Avenue

COUNCIL DISTRICT: 2 **MAPSCO:** 37X

SIZE OF REQUEST: Approx. 1.5721 acres **CENSUS TRACT:** 12.02

APPLICANT / OWNER: KN Capital partners, LLC

REPRESENTATIVE: Robert Baldwin, Baldwin Associates

REQUEST: An application for a Planned Development District for multifamily uses on property zoned an MF-2(A) Multifamily District.

SUMMARY: The purpose of this request is to allow for the construction of a 100-unit multifamily development. The applicant is proposing several height zones within the development to accommodate a maximum structure height of 78 feet. The MF-2(A) Multifamily District allows for a maximum structure height of 36 feet. In addition, the applicant is requesting to reduce yard, lot and space regulations.

CPC RECOMMENDATION: **Approval**, subject to a development plan and conditions.

STAFF RECOMMENDATION: **Approval**, subject to a development plan and conditions.

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR STAFF RECOMMENDATION:

Staff recommendation for approval is based upon:

1. *Performance impacts upon surrounding property* – The performance impact the proposed rezoning will have on the surrounding properties is dependent upon maintaining a density, lot coverage and structure height that is consistent with the surrounding area. In addition, design standards promoting a pedestrian-friendly environment is paramount, in particular for those areas where additional height and/or density are requested. Therefore, staff supports an increase in the structure height and lot coverage of the property.

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has determined that the request will not have a negative impact on the street system.

3. *Comprehensive Plan or Area Plan Conformance* – The *forwardDallas! Comprehensive Plan* shows that the request site is located in an Urban Neighborhood Building Block. The request is consistent with this building block.

4. *Justification for PD Planned Development District Zoning as opposed to a straight zoning district* – A straight MF-2(A) District on the entire property will not permit: 1) a reduction in the yard setbacks from 15 feet to 10 feet, 2) increase in the structure height from 36 feet to 78 feet (the development will have several height zones from 48 ft., to a maximum of 78 ft.); 3) increase in lot coverage from 60 percent to 80 percent, and 3) encroachment of specific design elements in the front yard setbacks. Staff is supportive of these changes as previously noted in the "Performance impacts" criteria above.

Zoning History: There have not been any zoning cases in the area over the past five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW	Proposed ROW
Coronado Avenue	Local	50 ft.	50 ft.

Traffic: A traffic impact analysis was required. The Engineering Section of the Department of Sustainable and Construction has determined that the request will not have a negative impact on the street system.

COMPREHENSIVE PLAN: The *forwardDallas! Vision Illustration*, adopted June 2006, is comprised of a series of Building Blocks that depict general land use patterns. Building Blocks are generalized patterns without well-defined boundaries that indicate where certain types and densities of development might logically occur.

The request site is identified as being within an Urban Neighborhood Building Block on the *forwardDallas!* Vision Illustration, adopted June 2006. Urban Neighborhoods, including Oak Lawn, the Grand Avenue area in South Dallas, the area near Jefferson Boulevard and the Vickery Meadow area, are predominately residential but are distinguished from other neighborhoods by the wide variety of housing options they provide and easy access to public transit. Housing choices should include single-family detached dwellings, townhomes and low- to midrise condominiums or apartments. These neighborhoods will have concentrations of shops and offices along key corridors or at key intersections, providing important services and job opportunities within walking distance of residences. These areas may have mixed-use buildings with ground floor shops. Areas currently developed with single-family or duplex uses should generally be maintained unless redevelopment is addressed through an Area Planning process. Urban Neighborhood streets will be very pedestrian friendly, providing excellent connectivity to shopping, schools and other community services. Emphasis should be placed on slowing traffic through use of on-street parking and other similar traffic calming measures. Public investments in these areas will focus on parks, pathways, transit stops, pedestrian-oriented landscaping and road improvements.

The proposed zoning is consistent with the Urban Neighborhood Building Block. The applicant is proposing to construct a 100-unit multifamily development that will have an underground parking structure. The proposed development will provide a least two pedestrian amenities, and install a 5-foot sidewalk to promote walkability. The site will be landscaped pursuant to Article X. The surrounding area is with a mix of single family and low to medium density multifamily and an elementary school [PDD No. 440].

Land Use:

	Zoning	Land Use
Site	MF-2(A)	Multifamily
Northeast	MF-2(A)	Multifamily, Single Family
Northwest	PDD No. 770, MF-2(A)	Multifamily, Single Family
Southwest	PDD No. 770	Multifamily
Southeast	PDD No. 770	Multifamily

Land Use Compatibility: The 1.721 acre site is rectangular in shape and is adjacent to single family uses in MF-2(A) zoning to the northeast and northwest, across Coronado Avenue. It is contiguous to a multifamily development to the northwest, southeast and southwest [PDD No. 770].

The applicant proposes to develop the site with a 100-unit multifamily development. With respect to the maximum structure height in the MF-2(A) District, the applicant wanted to be sensitive to the adjacent structure height of the existing single family and multifamily uses and established three height zones. These height zones are 42 feet, 66 feet and 78 feet. The height of the multifamily development will increase in height as the development approaches the eastern property line. Planned Development District No. 770 which is south and east of the proposed development is developed with multifamily uses and permits a maximum structure height 70 feet or 6 stories. The maximum height in a MF-2(A) district is 36 feet.

The applicant is requesting to reduce the following yard, lot and space requirements in the proposed Planned Development District: 1) a reduction in the yard setbacks from 15 feet to 10 feet, 2) increase in the lot coverage from 60 percent to 80 percent, 3) increase in structure height from 36 feet to 78 feet and 4) encroachment in the front yard. The proposed development will have several height zones from 48 feet to 78 feet. The reduction in the front yard will allow for additional right-of-way dedication on Coronado Avenue which will accommodate a loading zone for 11 parallel parking spaces. The development plan shows a 10-foot front yard setback from the future right-of-row, which will be dedicated during the platting process. In addition, the applicant is proposing a minimum 5-foot sidewalk and provides at least two pedestrian amenities on Coronado Avenue in order to promote walkability. The pedestrian amenities include benches, trash receptacles and bike racks. Staff is supportive of the applicant's request because the proposed development is consistent with the development in the area.

	MF-2(A) District	**Proposed PD for multifamily uses**
Front yard	15 ft.	10 ft.
Side and rear yards	15 ft. / 15 ft.	10 ft. / 10 ft.
Height	36 ft.	42 ft. to 78 ft. [1]
Stories	No maximum	6
Lot Coverage	60%	80%
Dwelling unit density	No maximum per code	63.60 dwelling units per acre
Minimum lot area per dwelling unit	800 sq. ft. – No separate bedroom; 1,000 sq. ft. – 1 BR; 1,200 sq. ft. – 2 BR; Add 150 sq. ft. for each bedroom over 2	No minimum lot area required.
Landscape	Per Article X	Per Article X
Sidewalks	Minimum 4 ft.	Minimum 5 ft.
Signage	Non-business regulations	Non-business regulations
Pedestrian amenities	None required	Benches, bike racks, trash receptacles
Off-street parking	Per code	Per code

Parking: The parking regulations require one space for each bedroom with a minimum of one space per dwelling unit. An additional one-quarter space per dwelling unit must be provided for guest parking if the required parking is restricted to resident parking only.

The applicant is proposing a minimum of one off-street parking space for each dwelling unit must be provided on the building site. The required off-street parking will be located within an underground garage parking structure and will have two driveway approaches on Coronado Avenue.

The applicant anticipates that of the 100 units, approximately 75% will be one bedroom and 25% will be two bedrooms. It is noted that this unit mix was provided by the applicant for informational purposes but is not a required by the PDD conditions. All required parking will be provided onsite. The applicant will meet the required off-street parking requirements for the proposed multifamily development.

CPC Action – November 19, 2015

Z145-273(WE) Planner: Warren Ellis

Motion: It was moved to recommend **approval** of a Planned Development District for multifamily uses, subject to a development plan and conditions on property zoned an MF-2(A) Multifamily District on the southwest line of Coronado Avenue, east of East Grand Avenue.

Maker: Emmons
Second: Ridley
Result: Carried: 15 to 0

For: 15 - Anglin, Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi*, Haney, Jung, Housewright, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 0
Vacancy: 0

*out of the room, shown voting in favor

Notices: Area: 500 Mailed: 103
Replies: For: 2 Against: 1

Speakers: For: Rob Baldwin, 3904 Elm St., Dallas, TX, 75226
Against: None

LIST OF OFFICERS
KN Capital Partners, LLC

- Neil J. F. Blanchard, Managing member
- Kelly Scott Walker, Managing member

PROPOSED PDD CONDITIONS

SEC. 51P-____.101. LEGISLATIVE HISTORY.

PD ____ was established by Ordinance No.____, passed by the Dallas City Council on _____.

SEC. 51P- ____.102. PROPERTY LOCATION AND SIZE.

PD _____ is established on property located on the south side of Coronado Avenue, east of East Grand Avenue. The size of PD _____ is approximately 1.5721 acres.

SEC. 51P- ____.103. DEFINITIONS AND INTERPRETATIONS.

(a) Unless otherwise stated, the definitions and interpretations in Chapter 51A apply to this article.

(b) Unless otherwise stated, all references to articles, divisions, or sections in this article are to articles, divisions, or sections in Chapter 51A.

(c) This district is considered to be a residential zoning district.

SEC. 51P- ____.104. EXHIBITS.

The following exhibits are incorporated into this article:

(1) Exhibit ___A: development plan.

SEC. 51P- ____.105. DEVELOPMENT PLAN.

Development and use of the Property must comply with the development plan (Exhibit ___). If there is a conflict between the text of this article and the development plan, the text of this article controls.

SEC. 51P- ____.106. MAIN USES PERMITTED.

The only main uses permitted are those main uses permitted in the MF-2(A) Multifamily District, subject to the same conditions applicable in the MF-2(A) Multifamily District, as set out in Chapter 51A. For example, a use permitted in the MF-2(A) Multifamily District only by specific use permit (SUP) is permitted in this district only by SUP; a use subject to development impact review (DIR) in the MF-2(A) Multifamily District is subject to DIR in this district; etc.

SEC. 51P-____.107. ACCESSORY USES.

As a general rule, an accessory use is permitted in any district in which the main use is permitted. Some specific accessory uses, however, due to their unique nature, are subject to additional regulations in Section 51A-4.217. For more information regarding accessory uses, consult Section 51A-4.217.

SEC. 51P-____.108. YARD, LOT, AND SPACE REGULATIONS.

(Note: The yard, lot, and space regulations in this section must be read together with the yard, lot, and space regulations in Division 51A-4.400. If there is a conflict between this section and Division 51A-4.400, this section controls.)

(a) In general. Except as provided in this section, the yard, lot, and space regulations for the MF-2(A) Multifamily District apply.

(b) Front yard. Minimum front yard is 10 feet.

(i) Encroachments of stairs, steps, stoops, unenclosed balconies and porches, awnings, canopies may project up to five feet into the required front yard.

(c) Side and rear yard. Minimum side and rear yard is 10 feet.

(d) Tower spacing. No tower spacing setback is required along the eastern property line.

(e) Density. Maximum number of dwelling units is 100.

(f) Height.

(1) Area A. Maximum height is 42 feet.

(2) Area B. Maximum Height is 66 feet.

(3) Area C. Maximum height is 78 feet.

(2) The following structures may project a maximum of 12 feet above the maximum structure height:

(A) Elevator penthouse or bulkhead.
(B) Mechanical equipment room.
(C) Cooling tower.
(D) Tank designed to hold liquids.
(E) Skylights.
(F) Clerestory.
(G) Visual screens that surround roof mounted mechanical equipment.

(H) Chimney and vent stacks.
(I) Parapet wall limited to four feet in height.

(3) The residential proximity slope in Section 51A-4.412 does not apply.

(h) Lot coverage. Maximum lot coverage is 80 percent. Aboveground parking structures are included in lot coverage calculations; surface parking lots and underground parking structures are not.

(i) Stories. Maximum number of stories above grade is seven.

SEC. 51P- ____.109. OFF-STREET PARKING AND LOADING.

(a) Except as provided in this section, consult the use regulations in Division 51A-4.200 for the specific off-street parking and loading requirements for each use.

(b) For a multifamily use, one space per bedroom is required up to a maximum of two spaces per dwelling unit. An additional 0.25 parking space per dwelling unit must be provided for guest parking.

(c) Parking structure screening.

(1) Street-facing facades for parking structures must be similar in appearance to the facade of the main structure or the adjacent structure, except that breaks in the exterior parking structure facade not exceeding 40 feet in width are permitted at driveway and entryway locations. Cable guard strands and chain link fencing on the street-facing facade of the parking structure are prohibited.

(2) Openings in a street-facing parking structure facade may not exceed 60 percent of the total parking structure facade area. The facade of an aboveground parking structure that faces the street must have solid screening at least 42 inches in height from each floor level within the parking structure to screen vehicles and vehicle headlights.

(3) This subsection does not apply to individual garages attached to a single dwelling unit.

SEC. 51P- ____.110. ENVIRONMENTAL PERFORMANCE STANDARDS.

See Article VI.

SEC. 51P-____.111. LANDSCAPING.

(a) Landscaping must be provided in accordance with Article X.

(b) Plant materials must be maintained in a healthy, growing condition.

SEC. 51P- ____.112. SIGNS.

Signs must comply with the provisions for non-business zoning districts in Article VII.

SEC. 51P-___.113. STREETS AND PEDESTRIAN AMENITIES.

(a) Coronado Avenue. Coronado Avenue must have a minimum right-of-way width of 53 feet.

(b) Sidewalk. The minimum width for a sidewalk is five feet.

(c) Pedestrian amenities. A minimum of two of the following pedestrian amenities must be provided along the street frontage.

(1) Bench.

(2) Trash receptacle.

(3) Publicly accessible bicycle rack.

(f) Pedestrian-scale lighting. Light standards located in pedestrian areas may not be less than nine feet or more than 15 feet in height above a sidewalk or pathway. Pedestrian light standards must have a maximum spacing of 50 feet along all public rights-of-way.

SEC. 51P- ____.114. ADDITIONAL PROVISIONS.

(a) The Property must be properly maintained in a state of good repair and neat appearance.

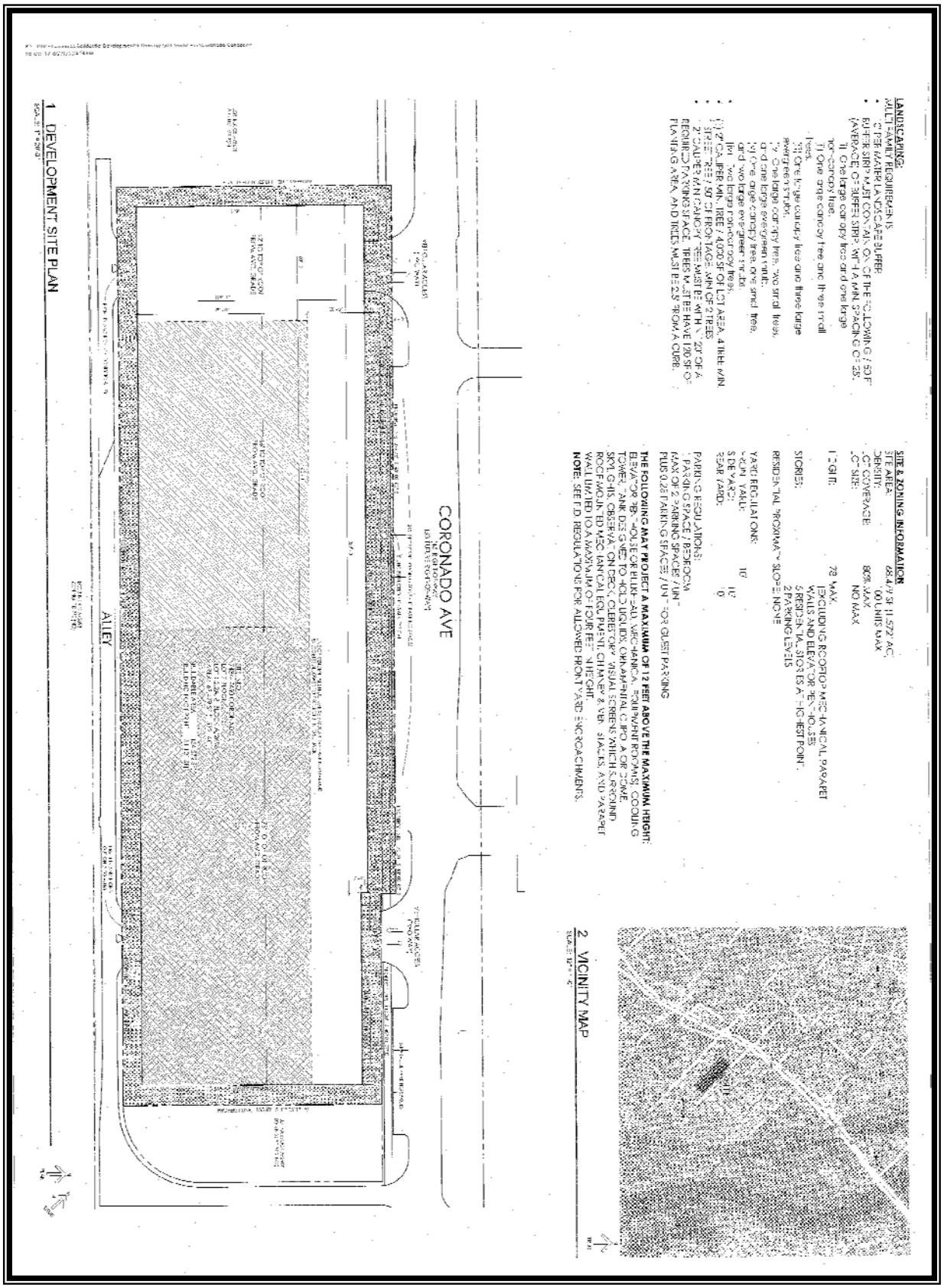
(b) Development and use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the city.

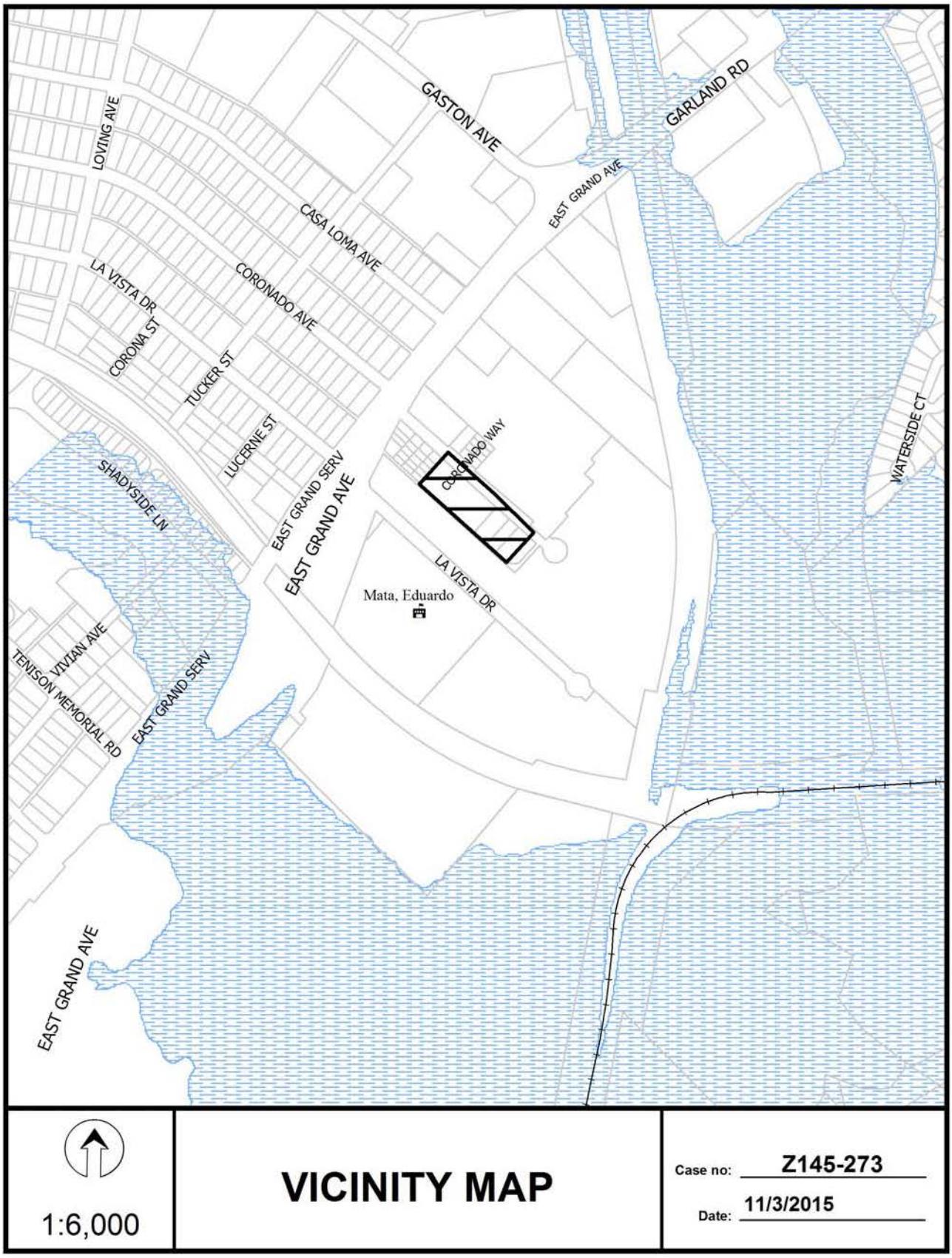
SEC. 51P-____.115. COMPLIANCE WITH CONDITIONS.

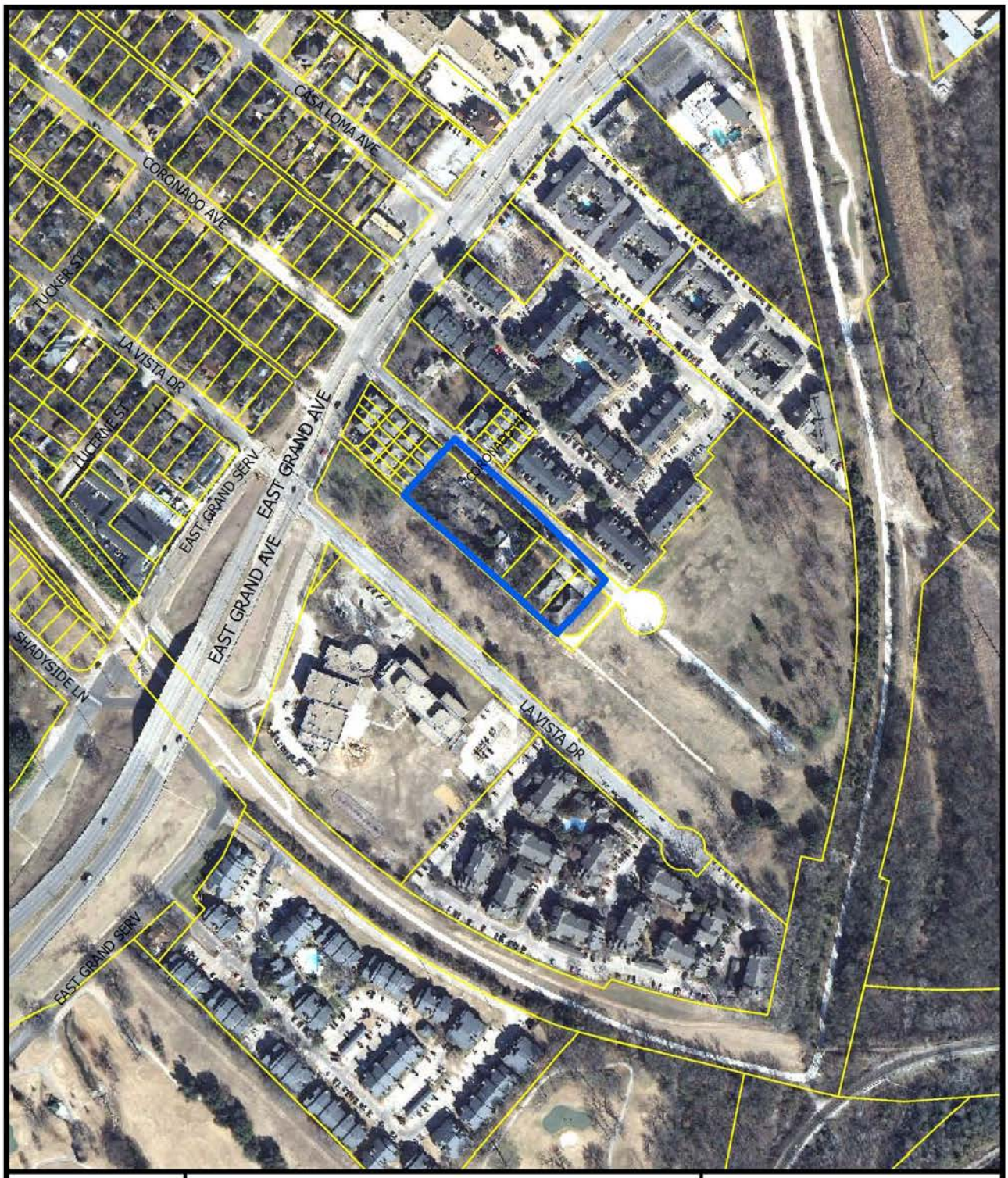
(a) All paved areas, permanent drives, streets, and drainage structures, if any, must be constructed in accordance with standard city specifications, and completed to the satisfaction of the city.

(b) The building official shall not issue a building permit to authorize work, or a certificate of occupancy to authorize the operation of a use, until there has been full compliance with this article, the Dallas Development Code, the construction codes, and all other ordinances, rules, and regulations of the city.

PROPOSED DEVELOPMENT PLAN




GASTON AVE
GARLAND RD
LOVING AVE
EAST GRAND AVE
CASA LOMA AVE
LA VISTA DR
CORONADO AVE
CORONA ST
TUCKER ST
LUCERNE ST
CORONADO WAY
WATERSIDE CT
SHADYSIDE LN
EAST GRAND SERV
EAST GRAND AVE
Mata, Eduardo
LA VISTA DR
VIVIAN AVE
TENISON MEMORIAL RD
EAST GRAND SERV
EAST GRAND AVE
1:6,000
VICINITY MAP
Case no: Z145-273
Date: 11/3/2015

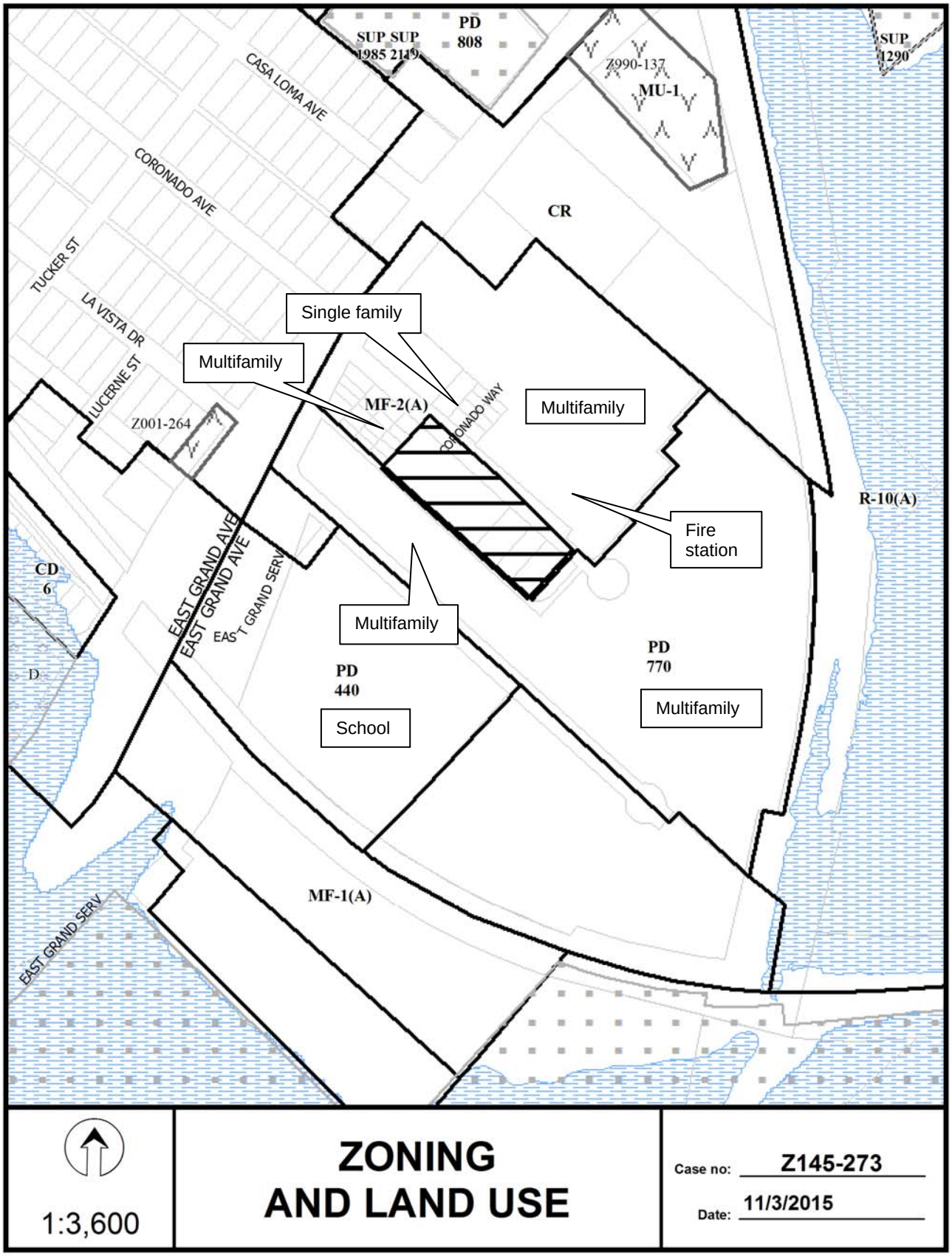


1:3,600

AERIAL MAP

Case no: Z145-273

Date: 11/3/2015


PD 808
SUP SUP 1985 2149
SUP 1290
Z990-137
MU-1
CASA LOMA AVE
CORONADO AVE
CR
TUCKER ST
LA VISTA DR
LUCERNE ST
Single family
Multifamily
MF-2(A)
Z001-264
CORONADO WAY
Multifamily
R-10(A)
Fire station
CD 6
EAST GRAND AVE
EAST GRAND AVE
EAST GRAND SERV
Multifamily
PD 770
PD 440
Multifamily
School
MF-1(A)
EAST GRAND SERV
1:3,600
ZONING AND LAND USE
Case no: Z145-273
Date: 11/3/2015

CPC RESPONSES



103	Property Owners Notified (56 parcels)
2	Replies in Favor (2 parcels)
1	Replies in Opposition (1 parcels)
500'	Area of Notification
11/19/2015	Date

Z145-273
CPC

N
W E
S

1:3,600

Notification List of Property Owners

Z145-273

103 Property Owners Notified 2 Property Owners in Favor 1 Property Owners Opposed

Reply	Label #		Address	Owner
	1	7434	CORONADO AVE	HICKMAN DAVID B &LINDA
	2	7438	CORONADO AVE	HICKMAN DAVID B &
	3	7448	CORONADO AVE	MCGLASHAN MATTHEW
	4	7444	CORONADO AVE	HICKMAN DAVID B &
	5	7260	EAST GRAND AVE	Dallas ISD
	6	7427	CORONADO AVE	MILLS SARA Z
	7	7446	EAST GRAND AVE	J & K INVESTMENTS LLC
	8	7414	EAST GRAND AVE	WHITE ROCK CORONADO
	9	7335	LA VISTA DR	SELF RICKEY LYNN &
	10	7334	LA VISTA DR	RAMSEY TERRI L
	11	7338	LA VISTA DR	FINLAN PAMELA & RICHARD E
	12	7342	LA VISTA DR	RUIBAL FARMS LP
	13	7330	CORONADO AVE	M & D EMPIRE HOLDINGS LLC
	14	7334	CORONADO AVE	KRONING JOEL &
	15	7338	CORONADO AVE	WALTON JOE E &
	16	7331	CORONADO AVE	CHANG ROBIN RAY-LONG
	17	7335	CORONADO AVE	GUYNES LINDSAY
	18	7339	CORONADO AVE	VONDERHAAR JOSEPH III
	19	7334	CASA LOMA AVE	C WASH INC
	20	7440	LA VISTA DR	GREENBRIDGE AT WILLIAMS
	21	7416	CORONADO AVE	ZITOUN JORDAN O & ERIN LEIGH
	22	7416	CORONADO AVE	POLK MARY J
	23	7416	CORONADO AVE	ENGLISH JONATHAN W
	24	7416	CORONADO AVE	HORTON MICHAEL R
	25	7416	CORONADO AVE	CRONE KENDELL & WILMA
O	26	7416	CORONADO AVE	THEISS JULIE M

11/18/2015

Reply	*Label #*		*Address*	*Owner*
	27	7416	CORONADO AVE	CLEMETSON JONATHAN
	28	7416	CORONADO AVE	BUTLER KACIE
	29	7416	CORONADO AVE	HOFFMAN DAVID J &
	30	7416	CORONADO AVE	BRYANT DAVID C JR
	31	7416	CORONADO AVE	FLOTTMAN CARL E &
	32	7416	CORONADO AVE	SATTAR WASIF
	33	7416	CORONADO AVE	JIMENEZ JESSICA M
	34	7416	CORONADO AVE	LINDER TOBY R
	35	7416	CORONADO AVE	BURNS SHERRI M
	36	7416	CORONADO AVE	BENNETT CHARLOTTE
	37	7416	CORONADO AVE	ANASTASE ALEXANDRU
	38	7416	CORONADO AVE	TRASTER MELANIE L
O	39	7416	CORONADO AVE	CHEEK ROBERT CLAY
	40	7460	CORONADO AVE	WGS LAKEWOOD MF VI LP
	41	7419	CORONADO AVE	BYERS D SHEA
	42	7403	CORONADO AVE	CORONADO TOWNHOMES LLC
	43	7510	EAST GRAND AVE	FLW BLUFFS LTD
	44	7343	LA VISTA DR	WENGIERSKI DAVID
X	45	7339	LA VISTA DR	MACK JOHN O & ROSE MARY
	46	7219	EAST GRAND AVE	RUIBAL FARMS LP
	47	7510	EAST GRAND AVE	FLW BLUFFS LTD
	48	7510	EAST GRAND AVE	ALVAREZ BEATRICE
	49	7510	EAST GRAND AVE	WILSON MAYDAY LLC
	50	7510	EAST GRAND AVE	KOPSA DAVID & JACKLYN
	51	7510	EAST GRAND AVE	ALLEN WALTER
	52	7510	EAST GRAND AVE	GUY DARRELL
	53	7510	EAST GRAND AVE	CATES JASON & SIDNEY CATES
	54	7510	EAST GRAND AVE	WATSON LAWRENCE E
	55	7510	EAST GRAND AVE	HARTMANN MELANIE TRUSTEE
	56	7510	EAST GRAND AVE	WILSON CECILIA
	57	7510	EAST GRAND AVE	OFFUTT MARVIN & GEORGIA

11/18/2015

Reply	*Label #*		*Address*	*Owner*
	58	7510	EAST GRAND AVE	ROGAN ELIZABETH S &
	59	7510	EAST GRAND AVE	AMOY LLC
	60	7510	EAST GRAND AVE	SPRADLING CHERYL
	61	7510	EAST GRAND AVE	OFFUTT MARVIN & GEORGIA
	62	7510	EAST GRAND AVE	BRENING JOHN E
	63	7510	EAST GRAND AVE	HICKEY DARLENE
	64	7510	EAST GRAND AVE	ROHRMAN ELIZABETH
	65	7510	EAST GRAND AVE	CHUA AY HUA
	66	7510	EAST GRAND AVE	BOGAN GARY M
	67	7510	EAST GRAND AVE	WHITE MARLO Y
	68	7510	EAST GRAND AVE	COX RAYMOND F
	69	7510	EAST GRAND AVE	HILDRETH ALLEN
	70	7510	EAST GRAND AVE	ARDON RUTH J
	71	7510	EAST GRAND AVE	KING K MICHAEL
	72	7510	EAST GRAND AVE	SPRADLING CHERYL
	73	7510	EAST GRAND AVE	KING MARK ANDREW
	74	7510	EAST GRAND AVE	CARLTON ROBERT MARK
	75	7510	EAST GRAND AVE	SHAKERI SHABRIKII
	76	7510	EAST GRAND AVE	GONZALEZ FERNANDO &
	77	7510	EAST GRAND AVE	DELAY ROY E III
	78	7510	EAST GRAND AVE	BORN MARK W &
	79	7510	EAST GRAND AVE	HARTMAN ROBERT
	80	7510	EAST GRAND AVE	HARRIS JAMES B & DIANE B
	81	7510	EAST GRAND AVE	BORRETT BRUCE
	82	7510	EAST GRAND AVE	MORENO BARBARA
	83	7510	EAST GRAND AVE	MURAD SHADI &
	84	7510	EAST GRAND AVE	JAGOTA BRAHM D
	85	7510	EAST GRAND AVE	BADER GREG
	86	7510	EAST GRAND AVE	HENRY LOUIS W
	87	7510	EAST GRAND AVE	ADRIAN LEWIS G
	88	7510	EAST GRAND AVE	MOREHOUSE JON S

11/18/2015

Reply	*Label #*		*Address*	*Owner*
	89	7510	EAST GRAND AVE	BLW BLUFFS LTD
	90	7510	EAST GRAND AVE	BONDS ROBERT ALIN
	91	7510	EAST GRAND AVE	GRAY NANCY E
	92	7510	EAST GRAND AVE	BONDS ROBERT & JEAN
	93	7510	EAST GRAND AVE	HERNANDEZ EDELMIRO C &
	94	7510	EAST GRAND AVE	HOWARD JOHN
	95	7510	EAST GRAND AVE	GULENG EMERSON E JR
	96	7510	EAST GRAND AVE	MEYERS KAREN
	97	7510	EAST GRAND AVE	CHAO LANCE L & ELLEN A TR
	98	7510	EAST GRAND AVE	CHUA AY HUA
	99	7510	EAST GRAND AVE	CAREENAS ALEJANDRO
	100	7510	EAST GRAND AVE	RATLIFFE HARVEY LOCKE &
	101	7510	EAST GRAND AVE	DEAN ROGER
	102	7510	EAST GRAND AVE	SILVA MICHAEL R
	103	7510	EAST GRAND AVE	FLW BLUFFS LTD

AGENDA ITEM # 57

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 14

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 45 G

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District on the north corner of North Hall Street and Roseland Avenue
Recommendation of Staff and CPC: Approval, subject to a height map overlay
Z145-340(WE)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER:	Z145-340(WE)	**DATE FILED:**	August 28, 2015
LOCATION:	North corner of North Hall Street and Roseland Avenue		
COUNCIL DISTRICT:	14	**MAPSCO:**	45G
SIZE OF REQUEST:	Approx. 0.292 acres	**CENSUS TRACT:**	16.00

APPLICANT: MCRT Investments, LLC

OWNER: Moxie Investments Ltd.

REPRESENTATIVE: Susan Mead, Jackson Walker LLP

REQUEST: An application for a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District.

SUMMARY: The subject site adjoins an identical request that City Council approved in September. The purpose of this request is to allow for a multifamily development to increase the height and to create a form district. In addition, the proposed development can be developed closer to the street's edge as opposed to what is permitted in PDD No. 466. PDD No. 466 permits a maximum structure height of 54 feet and a minimum/maximum front yard setback of 5/15 feet. The development types permitted in a WR-5 District are an apartment, townhouse, and manor house. The applicant has provided a height zone overlay plan to limit the maximum height to 5 stories or 70 feet (WR-5 permits 80 feet) on the site.

CPC RECOMMENDATION: **Approval**, subject to a height map overlay.

STAFF RECOMMENDATION: **Approval**, subject to a height map overlay.

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends approval based upon:

1. *Performance impacts upon surrounding property* – The height map overlay will reduce the structure height of the proposed multifamily development to a height that is more compatible with the adjacent multifamily developments, which are located in PDD No. 298 and PDD No. 466. The rezoning of the site to a form district will provide a mixed housing option in a pedestrian friendly environment.

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has determined that the request will not have a negative impact on the street system.

3. *Comprehensive Plan or Area Plan Conformance* – The proposed request is in compliance with the *forwardDallas! Comprehensive Plan*. The request site is located within the Downtown Building Block.

BACKGROUND INFORMATION:

- The request site is currently developed with a retail use.

- In December 1964, the City Council approved Specific Use Permit No. 23 for a billiard hall for a permanent time period. SUP No. 23 will remain on the property.

- In February 2009, the City Council approved Article XIII, which created the form based zoning districts. The Form Based Districts provides an additional tool for the implementation of *ForwardDallas!* and to create walkable urban neighborhoods where higher density mixed uses and mixed housing types promote less dependence on the automobiles.

Zoning History: There has been two recent zoning request in the area over the past 5 years.

1. Z134-103 On February 26, 2014, the City Council approved a new subdistrict in Planned Development District 466, the Hall Street Special Purpose District on the east side of North Central Expressway, north of Cochran Street.

2. Z145-272 On September 22, 2015, the City Council approved a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District on the north corner of North Hall Street and Roseland Avenue.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW	Proposed ROW
Hall Street	Collector	40 ft.	40 ft.
Munger Avenue	Local	40 ft.	40 ft.
Roseland Avenue	Local	Variable lane widths	Variable lane widths

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the proposed development will not have a negative impact on the surrounding street system.

COMPREHENSIVE PLAN: The *fowardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *fowardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site being within the Downtown Building Block.

The Downtown is a centrally located hub that provides high intensity, concentrated regional job and commercial activity supported by high-density housing. A Downtown includes pedestrian-oriented and mixed-use development and offers multiple transportation options. Ground floors of tall buildings feature shops with many windows for visual interest and safety while the streetscape incorporates trees for shade, wide sidewalks and easy-to-use signs for finding points of interest. Civic and open spaces provide an inviting atmosphere for pedestrians as well as a diversity of uses, generating activity throughout the day and evening.

The Downtown Building Block is an important transit hub for commuter rail, light rail, bus and local systems. This area warrants significant public investment to sustain itself as the signature address in the North Central Texas region and to continually reinvent itself to maintain its competitive advantage.

LAND USE ELEMENT

GOAL 1.2 PROMOTE DESIRED DEVELOPMENT

Policy 1.2.1 Use Vision Building Blocks as a general guide for desired development patterns.

URBAN DESIGN ELEMENT

GOAL 5.1 PROMOTE A SENSE OF PLACE, SAFETY AND WALKABILITY

Policy 5.1.1 Promote pedestrian-friendly streetscapes.

GOAL 5.3 ESTABLISHING WALK-TO CONVENIENCE

Policy 5.3.1: Encourage a balance of land uses within walking distance of each other.

NEIGHBORHOOD ELEMENT

GOAL 7.1: PROMOTE VIBRANT AND VIABLE NEIGHBORHOODS

Policy 7.1.3 Encourage a sense of community and identity.

STAFF ANALYSIS:

Land Use:

	Zoning	Land Use
Site	PDD No. 456, MF-2(A), SUP No. 23	Retail
Northeast	MF-2(A)	Undeveloped
Southeast	Subarea 1 of PDD No. 298, SUP No. 1073	Undeveloped, Retail, Multifamily, Cellular tower
Northwest	MF-2(A), PDD No. 466	Undeveloped Retail
Southwest	PDD No. 466, Subarea 1 of PDD No. 298	Undeveloped, Multifamily

Land Use Compatibility:

The WR-5 Walkable Urban Residential District with a Height Map Overlay is intended to provide and meet the following criteria:

- The Walkable Urban Residential (WR) districts are intended to create residential neighborhoods with mixed housing options in a pedestrian environment.

- The WR district s are divided in three intensities: low (WR-3, 5), medium (WR-8, 12), and high (WR-20, 40).

- The WR districts are intended to accommodate a limited set of development types (Apartment, Townhouse, and Manor House).

- Parcels of any size are eligible for a WR district. There are no minimum acreage required for an application for WR district. The WR districts are intended for locations where sufficient critical mass of dense, walkable urban mixed use development exists or is definitely planned.

- The WR districts are intended for use in the vicinity of rail transit station, immediately adjacent to the Central Business District, and in the 23 study areas of the Trinity River Comprehensive Plan. These districts are also appropriate for major job centers and concentrations of multifamily housing where an area plan pursuant to *fowardDallas!* has been adopted. The WR-5 District permits a maximum height of 5 stories or 80 feet and the applicant is proposing to limit the maximum height to 5 stories or 70 feet.

Development Standards:

DISTRICT	SETBACKS		Density	Height	Lot Coverage	Special Standards	PRIMARY Uses
	Front	Side/Rear					
PDD No. 466-Existing	10' min. 15' max.	20' adj. to res. Other: no min.	No max.	54'	80'	RPS	Retail and personal service, office, residential
MF-2(A) -Existing Multifamily	15'	15'	Min lot 1,000 sq. ft. 800 sq ft – E 1,000 sq. ft – 1 BR 1,200 sq ft – 2 BR +150 sq ft each add BR	36'	60%	Proximity Slope	Multifamily, duplex, single family

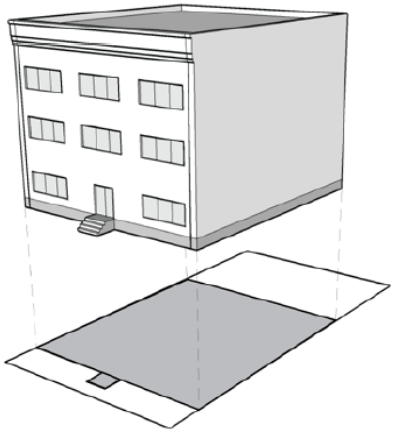
The regulations on the following page apply to WR-5 development types by districts; Apartment, Townhouse, and Manor House.

Apt

apartment

(e) Apartment.

(1) Definition.



A development type containing three or more dwelling units consolidated into a single structure.

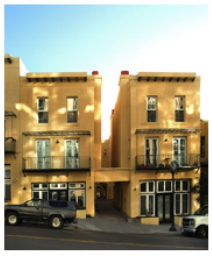
An apartment contains common walls. Dwelling units within a building may be situated either wholly or partially over or under other dwelling units. The building must be pulled up to the street. No on-site surface parking is permitted between the building and the street. On-site surface parking must be located to the rear of the building. The building often shares a common entrance. Primary entrances must be prominent and street-facing. An elevated ground floor for residential uses is recommended to ensure privacy.

(2) Character Examples.

Character examples are provided below for illustrative purposes only and are intended to be character examples of the development type and not the streetscape.







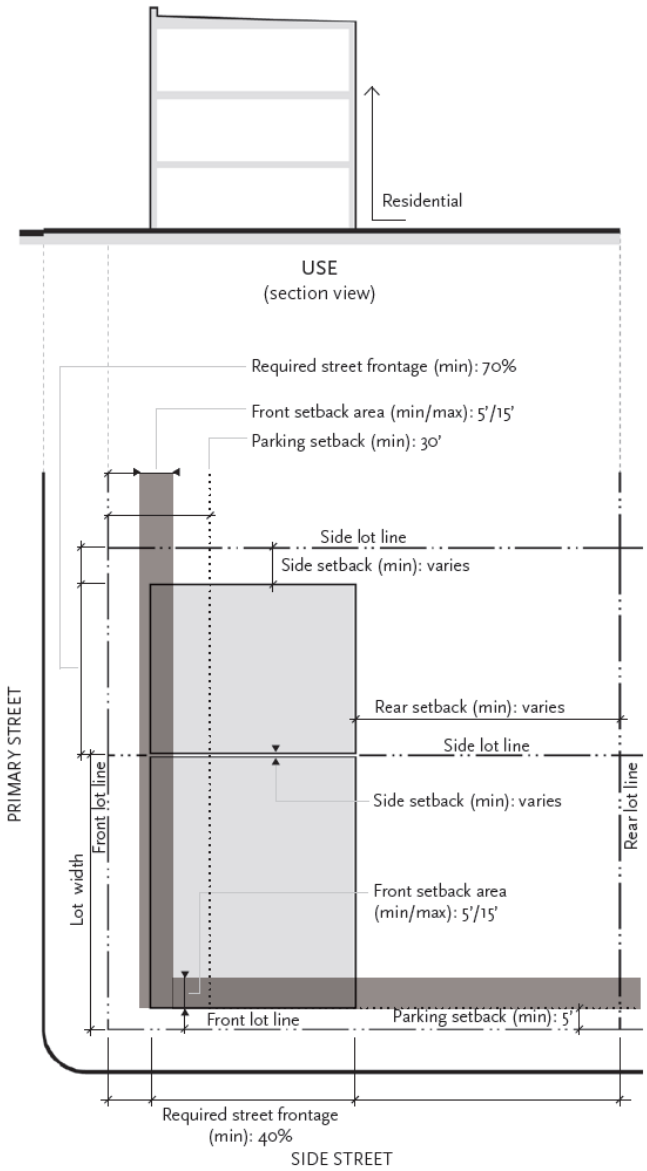


(3) Districts Permitted.

LOW:	WMU-3, WMU-5	WR-3, WR-5
MEDIUM:	WMU-8, WMU-12	WR-8, WR-12
HIGH:	WMU-20, WMU-40	WR-20, WR-40

Apt
apartment

(4) Use and Placement.



BUILDING USE

A summary of permitted uses is shown on the left. For a complete list of permitted uses, see Section 51A-13.306, "Uses."

BUILDING PLACEMENT

LOT	
Area (min sf)	none
Area (max sf)	none
Width (min ft)	none
Width (max ft)	none
Lot coverage (max)	80%

FRONT SETBACK AREA	
Primary street (min/max ft)	5/15
Side street (min/max ft)	5/15
Service street (min/max ft)	none

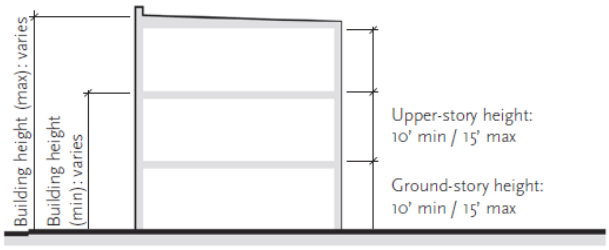
REQUIRED STREET FRONTAGE	
Primary street (min)	70%
Side street (min)	40%
Service street (min)	none

PARKING SETBACK	
From primary street (min ft)	30
From side street (min ft)	5
From service street (min ft)	5
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district or alley (min ft)	5

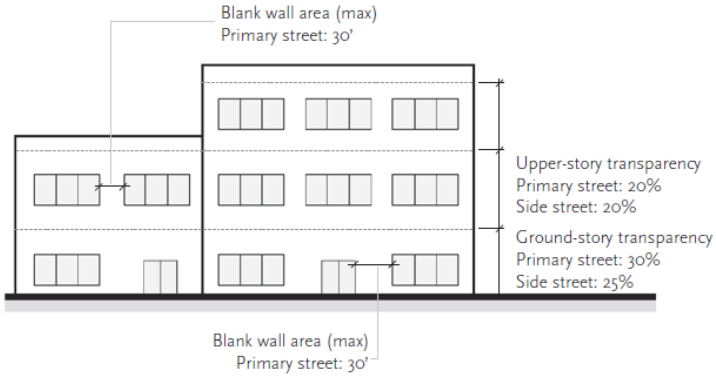
SIDE SETBACK	
Abutting single-family district (min ft)	15
Abutting multifamily or nonresidential district (min ft)	0 or 5
Abutting alley (min ft)	5

REAR SETBACK	
Abutting single-family district (min ft)	15
Abutting multifamily or nonresidential district (min ft)	5
Abutting alley (min ft)	5
Abutting service street (min ft)	10

(5) Height and Elements.



HEIGHT
(section view)



ELEMENTS
(elevation view)

BUILDING HEIGHT

HEIGHT	
Building height (max stories/ft)	See Section 51A-13.302, "Height"
Building height (min stories)	
WMU-3, -5 , -8, -12 WR-3, -5, -8, -12	2
WMU-20 WR-20	4
WMU-40 WR-40	5

STORY HEIGHT	
Ground story (min/max ft)	10/15
Upper story (min/max ft)	10/15

BUILDING FACADE

GROUND-STORY TRANSPARENCY	
Primary street facade (min)	30%
Side street facade (min)	25%
Service street facade (min)	none
Measured from floor to floor.	

UPPER-STORY TRANSPARENCY	
Primary street facade (min)	20%
Side street facade (min)	20%
Service street facade (min)	none
Measured from floor to floor.	

BUILDING ENTRANCE	
Primary street	required
Entrance spacing (max linear ft)	none
Side street	allowed
Service street	allowed

BLANK WALL AREA	
Primary street (max linear ft)	30
Side street (max linear ft)	none
Service street (max linear ft)	none

(6) Landscaping.

(A) General landscaping standards are set forth in Section 51A-13.304(a)(2), "Landscaping."

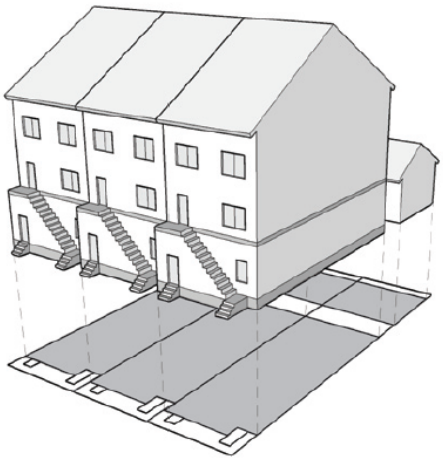
(B) One site tree must be provided for every 4,000 square feet of lot area, or portion thereof, or a minimum of four site trees must be provided, whichever is greater.

(C) Site trees must be evenly distributed throughout the development.

(D) Required landscaping may be provided aboveground when configured as on-site open space in accordance with Section 51A-13.303, "Open Space."

(f) Townhouse Stacked.

(1) Definition.



A development type with six or more attached units consolidated into a single structure that creates separate ground-story units for residential or office purposes.

Each unit shares a common side wall and a common floor or ceiling. Units are stacked vertically, however, no more than one unit is permitted above another unit. Each building must contain at least three units horizontally (six units total). Each unit typically has its own external entrance. No on-site surface parking is permitted between the building and the street. Garages facing the primary street are not permitted. An elevated ground floor for residential uses is recommended to ensure privacy.

(2) Character Examples.

Character examples are provided below for illustrative purposes only and are intended to be character examples of the development type and not the streetscape.







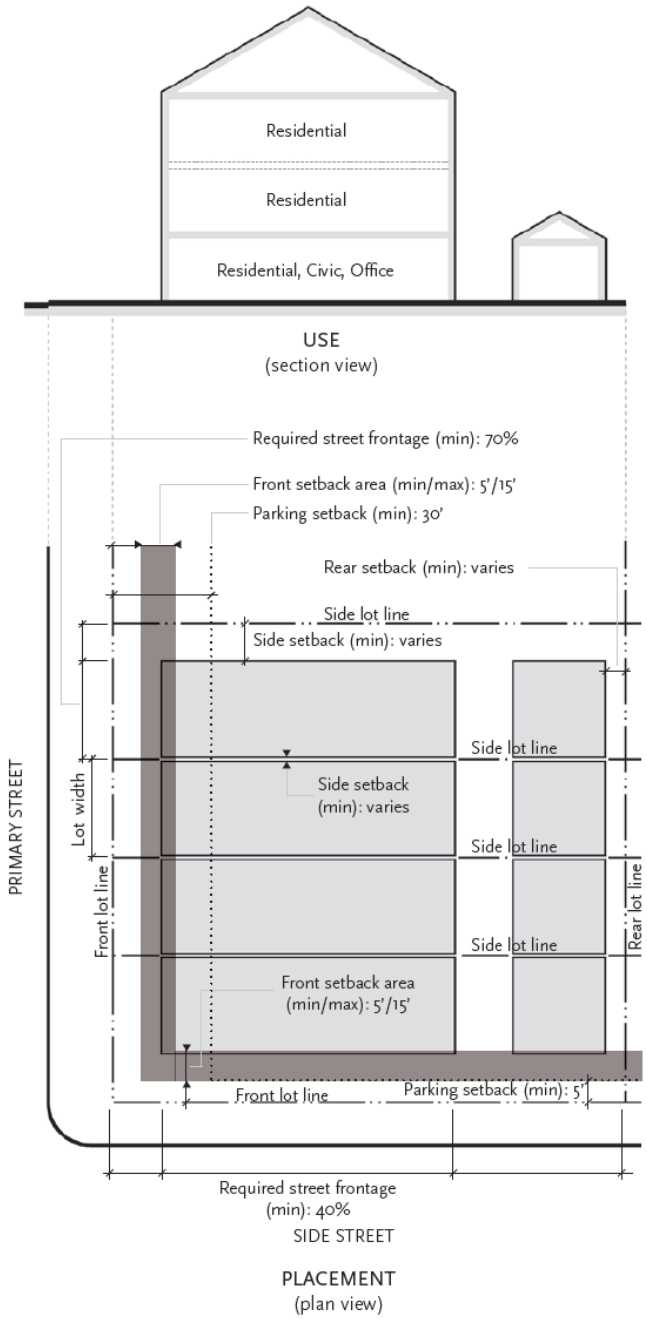

(3) Districts Permitted.

LOW:	WMU-3, WMU-5	WR-3, WR-5
MEDIUM:	WMU-8, WMU-12	WR-8, WR-12

Ts

townhouse stacked

(4) Use and Placement.



BUILDING USE

A summary of permitted uses by story is shown on the left. For a complete list of permitted uses, see Section 51A-13.306, "Uses."

BUILDING PLACEMENT

LOT	
Area (min sf)	1,200
Area (max sf)	none
Width (min ft)	16
Width (max ft)	none
Lot coverage (max)	80%

FRONT SETBACK AREA	
Primary street (min/max ft)	5/15
Side street (min/max ft)	5/15
Service street (min/max ft)	none

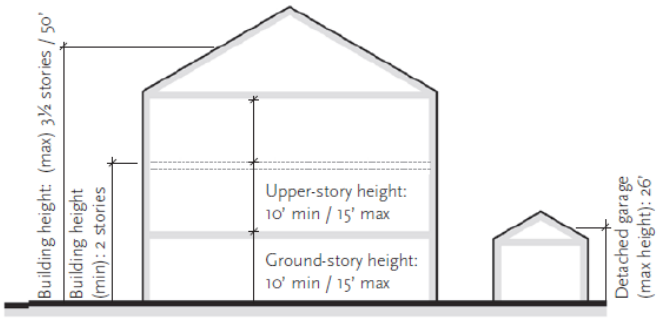
REQUIRED STREET FRONTAGE	
Primary street (min)	70%
Side street (min)	40%
Service street (min)	none

PARKING SETBACK	
From primary street (min ft)	30
From side street (min ft)	5
From service street (min ft)	5
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district or alley (min ft)	5

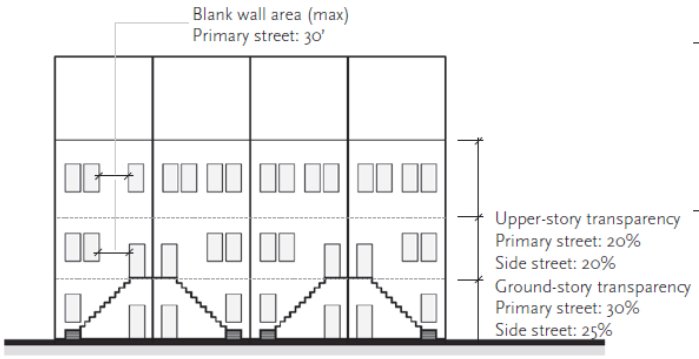
SIDE SETBACK	
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district (min ft)	0 or 5
Abutting alley (min ft)	5

REAR SETBACK	
Abutting single-family district (min ft)	24
Abutting multifamily or nonresidential district (min ft)	24
Abutting alley (ft)	3 or 20 or more
Abutting service street (ft)	3 or 20 or more

(5) Height and Elements.



HEIGHT
(section view)



ELEMENTS
(elevation view)

BUILDING HEIGHT

HEIGHT	
Building height (max stories/ft)	
WMU-3, -5 , -8, -12 WR-3, -5, -8, -12	3½ / 50
Building height (min stories)	
WMU-3, -5 , -8, -12 WR-3, -5, -8, -12	2
Detached garage (max ft)	26

STORY HEIGHT	
Ground story (min/max ft)	10/15
Upper story (min/max ft)	10/15

BUILDING FACADE

GROUND-STORY TRANSPARENCY	
Primary street facade (min)	30%
Side street facade (min)	25%
Service street facade (min)	none
Measured from floor to floor.	

UPPER-STORY TRANSPARENCY	
Primary street facade (min)	20%
Side street facade (min)	20%
Service street facade (min)	none
Measured from floor to floor.	

BUILDING ENTRANCE	
Primary street	required
Entrance spacing (max linear ft)	none
Side street	allowed
Service street	allowed

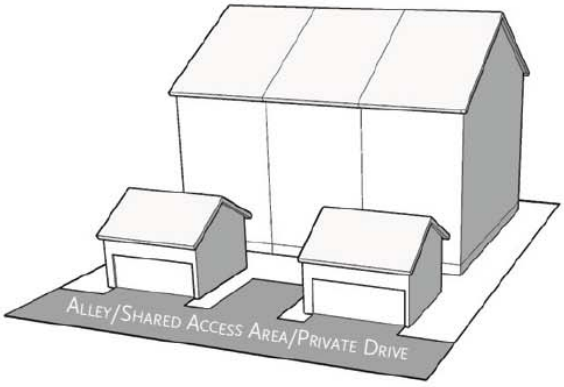
BLANK WALL AREA	
Primary street (max linear ft)	30
Side street (max linear ft)	none
Service street (max linear ft)	none

(6) Garage Placement.

(A) Except for an alley, no garage access is permitted from a public street.

(B) All vehicular access must be to the rear of the building.

(C) Where the garage is less than 20 feet from the alley, an automatic garage door opener is required.



(7) Landscaping.

(A) General landscaping standards are set forth in Section 51A-13.304(a)(2), "Landscaping."

(B) One site tree must be provided in the front yard for each two units stacked vertically on an individually platted lot.

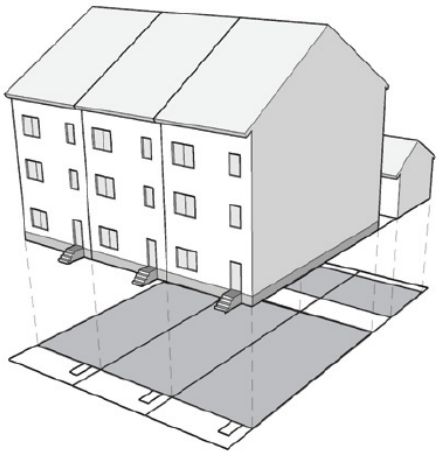
(C) If more than two units stacked vertically are located on the same lot, the following requirements apply:

(i) One site tree must be provided for every 4,000 square feet of lot area, or portion thereof, or a minimum of one site tree must be provided for each set of two units stacked vertically, whichever is greater.

(ii) Site trees must be evenly distributed throughout the development.

(g) Townhouse.

(1) Definition.



A development type with three or more attached dwelling units consolidated into a single structure.

Each unit must be separated by a common side wall. A townhouse unit must be more than one story in height, however, units must not be vertically mixed. Each unit must have its own external entrance. No on-site surface parking is permitted between the building and the street. Garages facing the primary street are prohibited. In the RTN district, only one unit per lot is permitted. An elevated ground floor for residential uses is recommended to ensure privacy.

(2) Character Examples.

Character examples are provided below for illustrative purposes only and are intended to be character examples of the development type and not the streetscape.







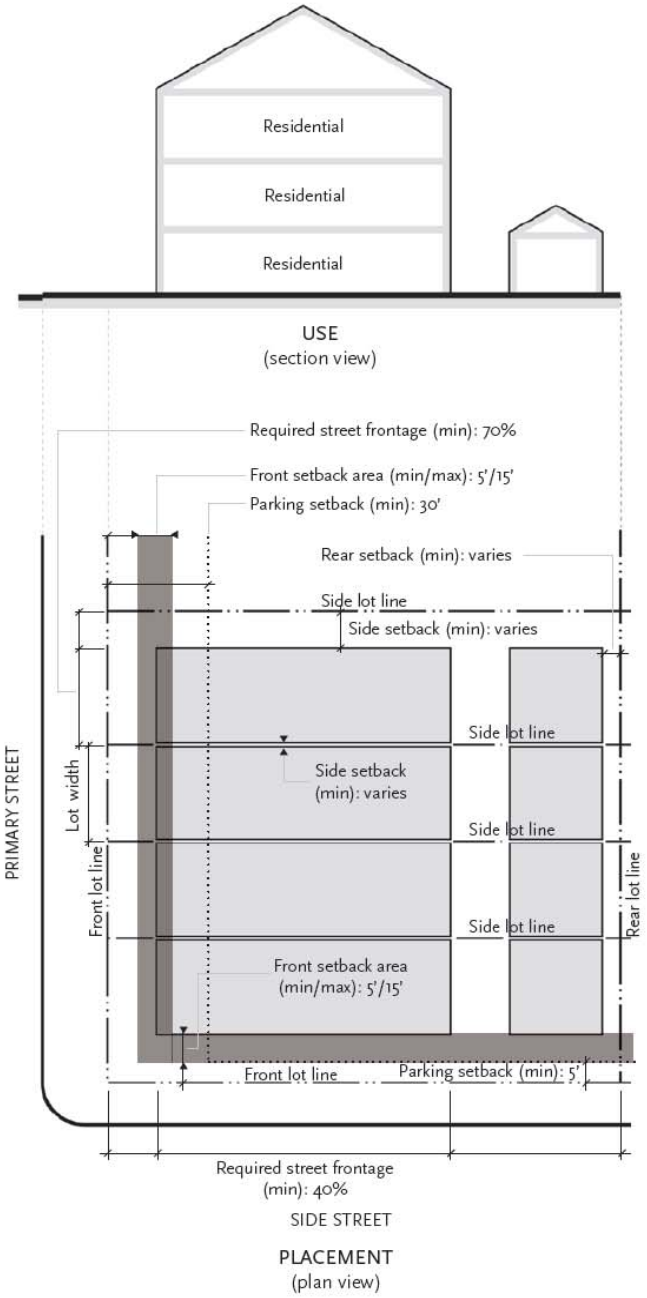

(3) Districts Permitted.

LOW:	WMU-3, WMU-5	WR-3, WR-5	RTN
MEDIUM:	WMU-8, WMU-12	WR-8, WR-12	

Th

townhouse

(4) Use and Placement.



BUILDING USE

A summary of permitted uses is shown on the left. For a complete list of permitted uses, see Section 51A-13.306, "Uses."

BUILDING PLACEMENT

LOT	
Area (min sf)	1,200
Area (max sf)	none
Width (min ft)	16
Width (max ft)	none
Lot coverage (max)	80%

FRONT SETBACK AREA	
Primary street (min/max ft)	5/15
Side street (min/max ft)	5/15
Service street (min/max ft)	none

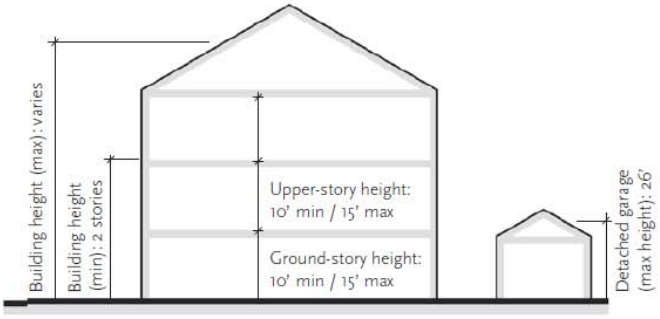
REQUIRED STREET FRONTAGE	
Primary street (min)	70%
Side street (min)	40%
Service street (min)	none

PARKING SETBACK	
From primary street (min ft)	30
From side street (min ft)	5
From service street (min ft)	5
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district or alley (min ft)	5

SIDE SETBACK	
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district (min ft)	0 or 5
Abutting alley (min ft)	5

REAR SETBACK	
Abutting single-family district (min ft)	24
Abutting multifamily or nonresidential district (min ft)	24
Abutting alley (ft)	3 or 20 or more
Abutting service street (ft)	3 or 20 or more

(5) Height and Elements.

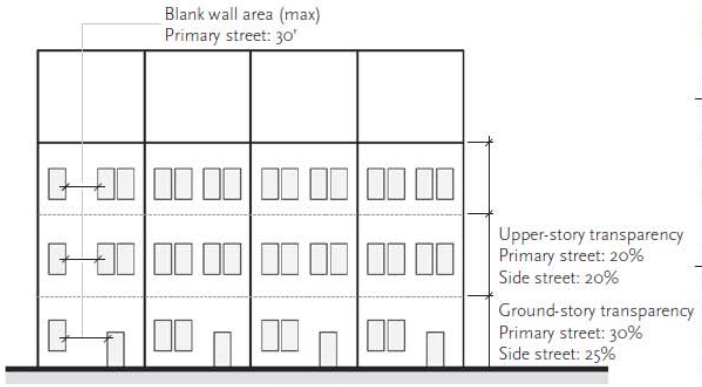


HEIGHT
(section view)

BUILDING HEIGHT

HEIGHT	
Building height (max stories/ft)	
RTN	2½ / 35
WMU-3, -5 , -8, -12 WR-3, -5, -8, -12	3½ / 50
Building height (min stories)	
RTN	2
WMU-3, -5 , -8, -12 WR-3, -5, -8, -12	2
Detached garage (max ft)	26

STORY HEIGHT	
Ground story (min/max ft)	10/15
Upper story (min/max ft)	10/15



ELEMENTS
(elevation view)

BUILDING FACADE

GROUND-STORY TRANSPARENCY	
Primary street facade (min)	30%
Side street facade (min)	25%
Service street facade (min)	none
Measured from floor to floor.	

UPPER-STORY TRANSPARENCY	
Primary street facade (min)	20%
Side street facade (min)	20%
Service street facade (min)	none
Measured from floor to floor.	

BUILDING ENTRANCE	
Primary street	required
Entrance spacing (max linear ft)	none
Side street	allowed
Service street	allowed

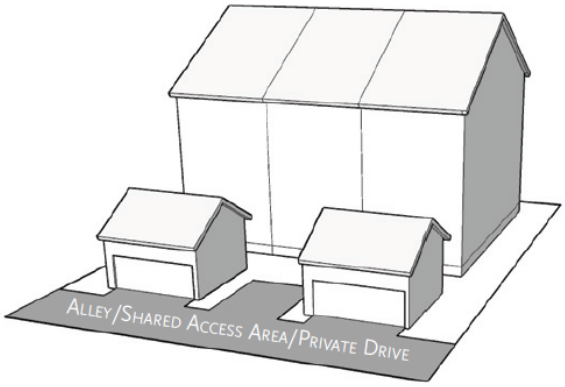
BLANK WALL AREA	
Primary street (max linear ft)	30
Side street (max linear ft)	none
Service street (max linear ft)	none

(6) Garage Placement.

(A) Except for an alley, no garage access is permitted from a public street.

(B) All vehicular access must be to the rear of the building.

(C) Where the garage is less than 20 feet from the alley, an automatic garage door opener is required.



(7) Landscaping.

(A) General landscaping standards and alternative requirements for shared access developments are set forth in Section 51A-13.304(a)(2), "Landscaping."

(B) Except in a shared access development, one site tree must be provided in the front yard for a townhouse on an individually-platted lot in all districts.

(C) In a shared access development or if more than one townhouse unit is located on the same lot, the following requirements apply:

(i) One site tree must be provided for every 4,000 square feet of lot area, or portion thereof, or a minimum of one site tree must be provided for each individual unit, whichever is greater.

(ii) Site trees must be evenly distributed throughout the development.

(8) Townhouses on Individually-Platted Lots.

(A) Except for the foundation, a dwelling unit must be physically separable from contiguous dwelling units in the event of removal of a dwelling unit. Each party wall must be governed by a set of deed restrictions, stipulating that if a dwelling unit is removed, the party wall stays with the remaining dwelling unit.

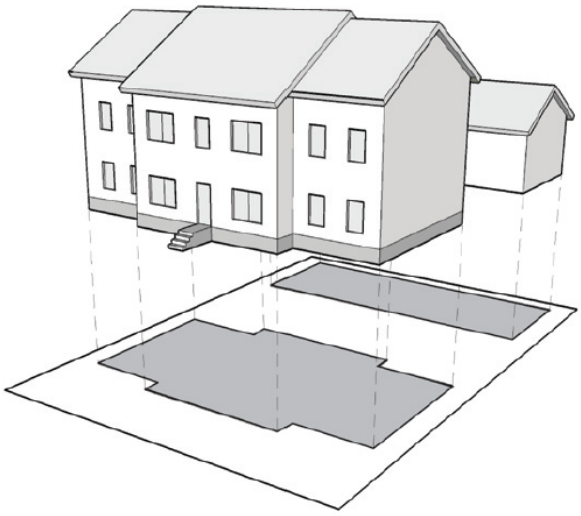
(B) Each dwelling unit must have separate utility services; however, general utility services on land owned and maintained by a homeowner's association are allowed.

Mh

manor house

(h) Manor House.

(1) Definition.



A development type with two to five attached dwelling units consolidated in a single structure.

A manor house must be located on a single lot and must contain common walls. The building must look like a conventional single-family house with a single primary entrance except that a manor house with two dwelling units (duplex) may have one primary entrance for each unit. Dwelling units within a building may be situated either wholly or partially over or under other dwelling units. No garage may face a primary street. In the RTN district, up to two units per lot are permitted. An elevated ground floor for residential uses is recommended to ensure privacy.

(2) Character Examples.

Character examples are provided below for illustrative purposes only and are intended to be character examples of the development type and not the streetscape.



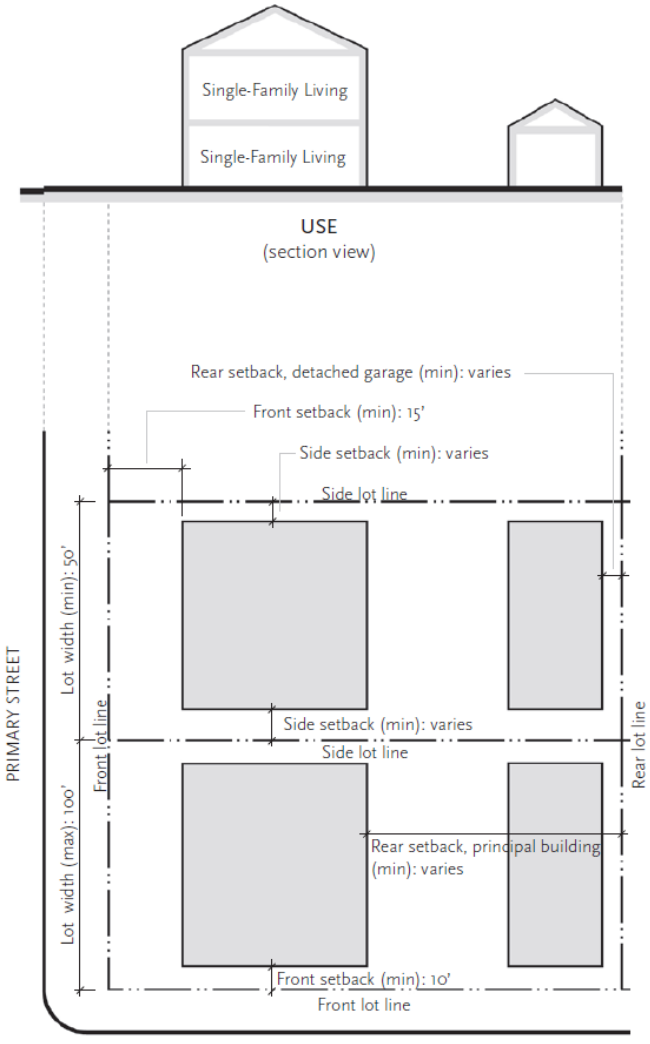





(3) Districts Permitted.

LOW:	WMU-3, WMU-5,	WR-3, WR-5	RTN

(4) Use and Placement.



BUILDING USE

A summary of permitted uses is shown on the left. For a complete list of permitted uses, see Section 51A-13.306, "Uses."

BUILDING PLACEMENT

LOT	
Area (min sf)	
2 units (duplex)	7,000
3 to 5 units	10,000
Area (max sf)	20,000
Width (min ft)	50
Width (max ft)	100
Lot coverage (max)	60%

FRONT SETBACK	
Primary street (min ft)	15
Side street (min ft)	10

SIDE SETBACK	
Abutting single-family district (min ft)	10
Abutting multifamily or nonresidential district (min ft)	5
Abutting alley (min ft)	5

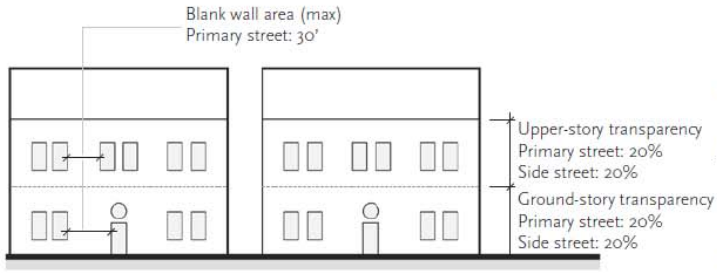
REAR SETBACK (principal building)	
Abutting single-family district (min ft)	15
Abutting multifamily or nonresidential district (min ft)	15

REAR SETBACK (detached garage)	
Abutting common lot line (min ft)	3
Abutting alley (min ft)	3 or 20+

(5) Height and Elements.



HEIGHT
(section view)



ELEMENTS
(elevation view)

BUILDING HEIGHT

HEIGHT	
Building height (max stories/ft)	2½ / 35
Building height (min stories)	2
Detached garage (max ft)	26

STORY HEIGHT	
Ground story (min/max ft)	10/15
Upper story (min/max ft)	10/15

BUILDING FACADE

GROUND-STORY TRANSPARENCY	
Primary street facade (min)	20%
Side street facade (min)	20%
Service street facade (min)	none

Measured from floor to floor.

UPPER-STORY TRANSPARENCY	
Primary street facade (min)	20%
Side street facade (min)	20%
Service street facade (min)	none

Measured from floor to floor.

BUILDING ENTRANCE	
Primary street	required
Entrance spacing (max linear ft)	none
Side street	allowed
Service street	allowed

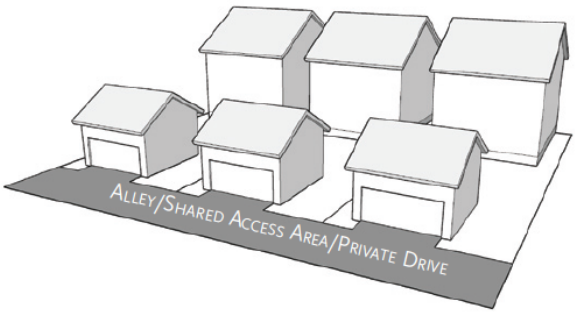
BLANK WALL AREA	
Primary street (max linear ft)	30
Side street (max linear ft)	none
Service street (max linear ft)	none

(6) Garage Placement.

(A) Alley Provided.

(i) When an alley is provided and developed, all vehicular access must take place from the alley. On corner lots, access may be taken from the side street, in which case the garage door may face a side street.

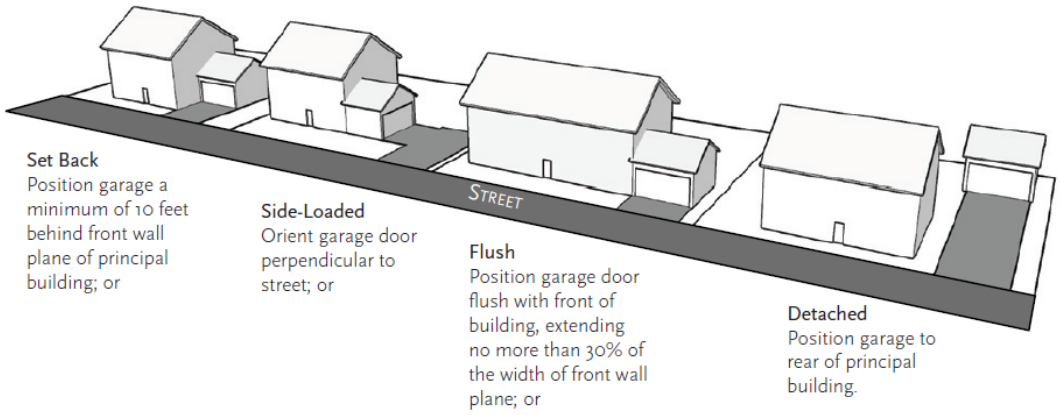
(ii) If the garage is less than 20 feet from the alley, an automatic garage door opener is required.



(B) No Alley Provided.

(i) When an alley is not provided or developed, street-facing garages may be positioned as set forth below.

(ii) If the garage is less than 20 feet from the street, an automatic garage door opener is required.



Set Back
Position garage a minimum of 10 feet behind front wall plane of principal building; or

Side-Loaded
Orient garage door perpendicular to street; or

Flush
Position garage door flush with front of building, extending no more than 30% of the width of front wall plane; or

Detached
Position garage to rear of principal building.

(7) Landscaping.

(A) General landscaping standards are set forth in Section 51A-13.304(a)(2), "Landscaping."

(B) In the RTN district, one site tree must be provided in the front yard of a manor house on an individually platted lot.

(C) A minimum of one site tree must be provided on the lot for each individual unit in the manor house. At least one site tree must be located in the front yard of each manor house.

CPC Action – November 19, 2015

Z145-340(WE) Planner: Warren Ellis

Motion: It was moved to recommend **approval** of a WR-5 Walkable Urban Residential District with a Height Map Overlay on property zoned Planned Development District No. 466 and an MF-2(A) Multifamily District on the north corner of North Hall Street and Roseland Avenue.

Maker: Abtahi
Second: Emmons
Result: Carried: 15 to 0

For: 15 - Anglin, Emmons, Houston, Davis, Shidid*, Anantasomboon, Abtahi, Haney, Jung, Housewright, Schultz*, Peadon, Murphy, Ridley, Tarpley

Against: 0
Absent: 0
Vacancy: 0

*out of the room, shown voting in favor

Notices: Area: 200 Mailed: 24
Replies: For: 2 Against: 0

Speakers: None

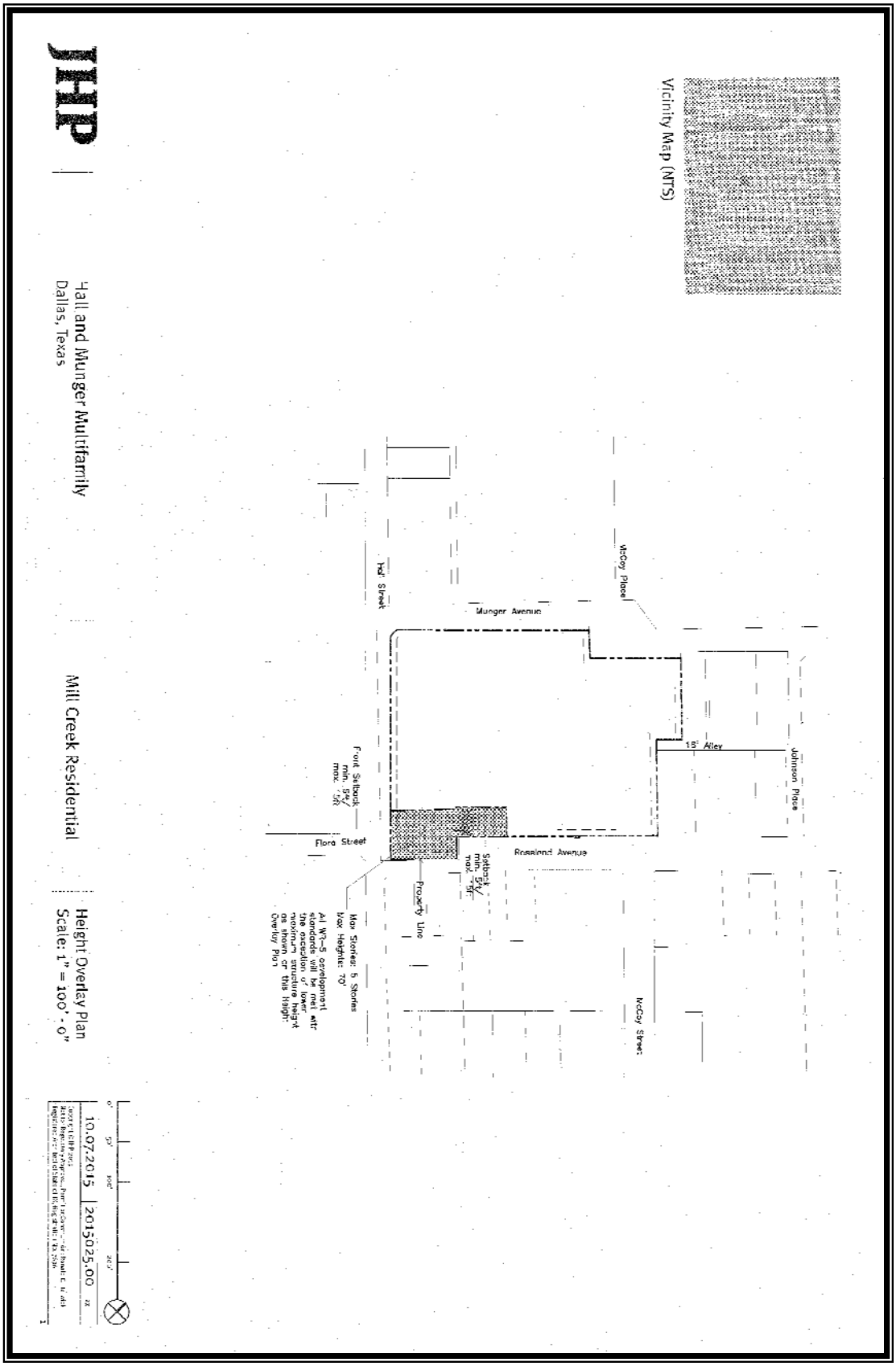
LIST OF OFFICERS
Moxie Investments, LTD.

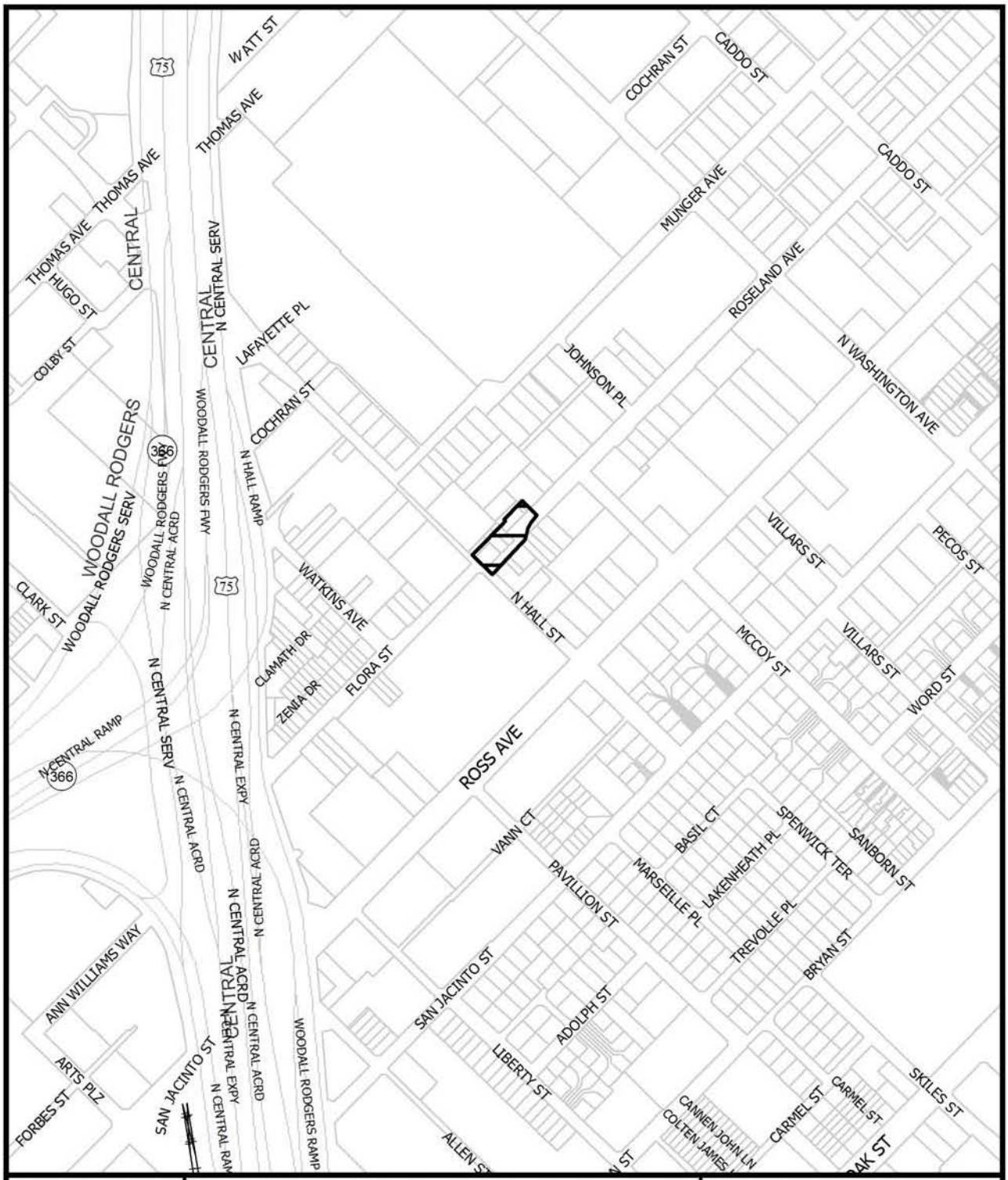
- Joe Bevers — General Partner
- Nahant, LLC — General Partner
- Joe Bevers — President/Director/Manager

LIST OF OFFICERS
Mill Creek Residential Trust, LLC Governing Person

- Charles R. Brindell — Chairman and CEO
- Mark R. Dempsey — Executive Managing Director, Acquisition
- Broderick A. Perdue — Managing Director

Height Map Overlay



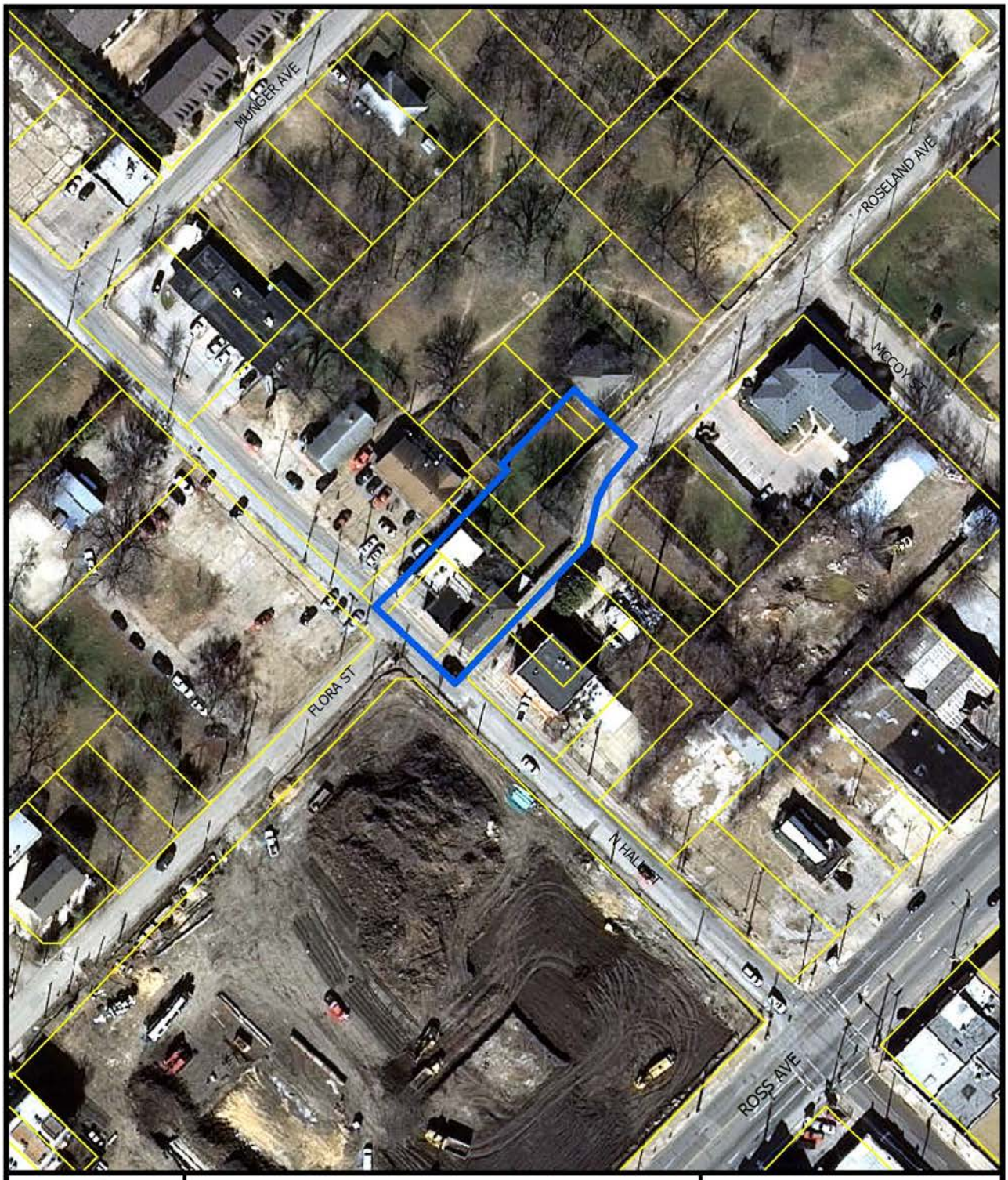


1:4,800

VICINITY MAP

Case no: Z145-340

Date: 11/3/2015

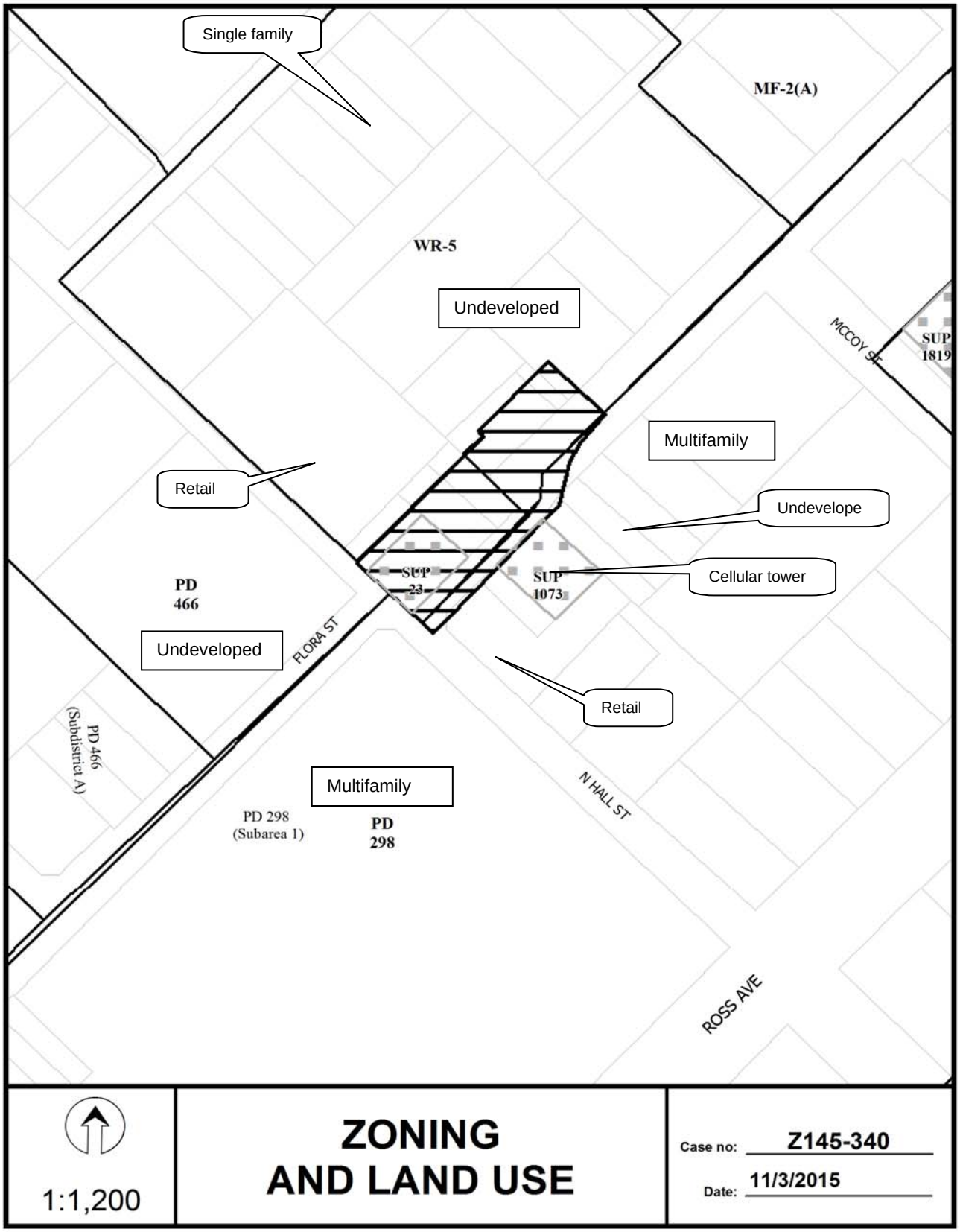


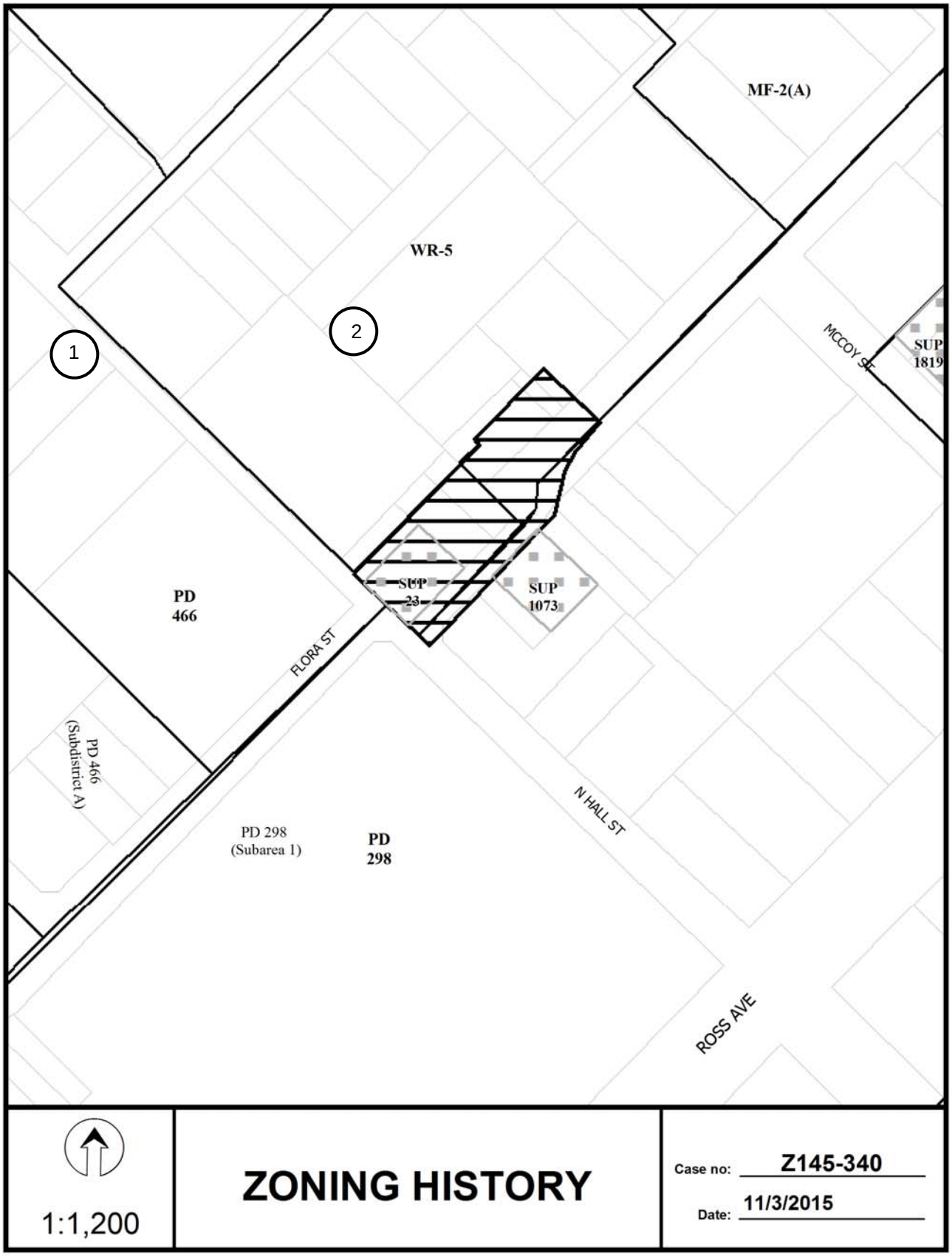
1:1,200

AERIAL MAP

Case no: Z145-340

Date: 11/3/2015


Single family
MF-2(A)
WR-5
Undeveloped
MCCOY ST
SUP 1819
Multifamily
Retail
Undevelope
Cellular tower
SUP 23
SUP 1073
PD 466
Undeveloped
FLORA ST
Retail
PD 466 (Subdistrict A)
Multifamily
N HALL ST
PD 298 (Subarea 1)
PD 298
ROSS AVE
1:1,200
ZONING AND LAND USE
Case no: Z145-340
Date: 11/3/2015


MF-2(A)
WR-5
1
2
MCCOY ST
SUP
1819
SUP
23
SUP
1073
PD
466
FLORA ST
PD 466
(Subdistrict A)
PD 298
(Subarea 1)
PD
298
N HALL ST
ROSS AVE
1:1,200
ZONING HISTORY
Case no: Z145-340
Date: 11/3/2015

Z145-340(WE)

CPC RESPONSES



Notification List of Property Owners

Z145-340

24 Property Owners Notified ***2 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
	1	3400	ROSELAND AVE	WOODARD JOHN R JR
	2	3310	ROSELAND AVE	WOODARD JOHN R JR
	3	3304	ROSELAND AVE	WOODARD JULIA J ET AL
	4	1800	HALL ST	MOXIE INVESTMENTS LTD
	5	3403	ROSELAND AVE	MOXIE INV LTD
	6	3500	MUNGER AVE	TOPLETZ INVESTMENTS
	7	3306	ROSELAND AVE	WOODARD JOHN O JR
	8	1722	HALL ST	HALL & ROSS LTD PS
	9	3505	ROSELAND AVE	LAMPO CATALINA LILLIAN ROSE & ETAL
	10	1801	HALL ST	HOUSING AUTHORITY OF THE
	11	3213	FLORA ST	DALLAS HOUSING AUTHORITY
	12	1711	MCCOY ST	GIRMA ASKE
	13	1710	HALL ST	TOMAINO PPTIES LP
	14	1723	MCCOY ST	HOUSING AUTHORITY OF THE
	15	3404	ROSELAND AVE	ROSE LIMITED PS
	16	3402	ROSELAND AVE	KIM RACHEL
O	17	3310	MUNGER AVE	LUPSHIRE RESTORATION IN
O	18	3312	MUNGER AVE	LUPSHIRE RESTORATION INC
	19	3408	MUNGER AVE	ANDERSON M B
	20	3409	ROSELAND AVE	BUTLER VERNON JR
	21	3402	MUNGER AVE	AMOR REAL ESTATE INVESTMENTS
	22	1707	HALL ST	SHF I ICON LLC
	23	1716	HALL ST	HALL & ROSS LTD
	24	1810	HALL ST	TOPLETZ INVESTMENTS

AGENDA ITEM # 58

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 4

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 54 V

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a CR Community Retail District and a resolution accepting deed restrictions volunteered by the applicant on property zoned an R-7.5(A) Single Family District on the southwest corner of East Illinois Avenue and Seevers Avenue
Recommendation of Staff: Denial
Recommendation of CPC: Approval, with deed restrictions volunteered by the applicant
Z145-347(WE)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z145-347(WE) **DATE FILED:** September 21, 2015

LOCATION: Southwest corner of East Illinois Avenue and Seevers Avenue

COUNCIL DISTRICT: 4 **MAPSCO:** 54V

SIZE OF REQUEST: Approx. 0.998 acres **CENSUS TRACT:** 56.00

APPLICANT: Orange Development Company, Inc.

OWNERS: Maria Caseres; Veronica Barroso; Rosalyn Ratliff, Executor of Will; Fustino Islas and Maria Del Carmen Peralta; Carolina Ontiveros; and Victor Ornelas

REPRESENTATIVE: Dallas Cothrum, Masterplan

REQUEST: An application for a CR Community Retail District with deed restrictions volunteered by the applicant on property zoned an R-7.5(A) Single Family District.

SUMMARY: The purpose of this request is to allow for the development of a retail [CVS] store. However, all uses within the CR District would be permitted with the exception of those that are being prohibited by the volunteered deed restrictions. The volunteered deed restrictions also propose lighting standards, to prohibit vehicular access on the residential street, and to increase the shrub heights and fencing.

CPC RECOMMENDATION: **Approval**, with deed restrictions volunteered by the applicant.

STAFF RECOMMENDATION: **Denial**

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR RECOMMENDATION:

Staff recommends approval based upon:

1. *Performance impacts upon surrounding property* – The proposed CR Community Retail District on a portion of an existing residential block could have a negative impact on the surrounding single family uses. While the Dallas Development Code anticipates CR Community Retail zoning being adjacent to or in close proximity to residential districts, it states it must be at a scale and intensity compatible with residential communities. The following elements should be considered: screening and buffers where appropriate; landscaping; setbacks; sidewalks and other pedestrian elements; placement of the building, parking, and driveways on the site; and design of the structure potentially utilizing CPTED criteria (Crime Prevention Through Environmental Design).

2. *Traffic impact* – The Engineering Section of the Department of Sustainable Development and Construction has determined that the request will not have a negative impact on the street system.

3. *Comprehensive Plan or Area Plan Conformance* – The request site is located within the Residential Neighborhood Building Block, which envisions "some shops…that serve neighborhood residents…at the edges or at key intersections". As noted in the "Performance impacts" criteria above, the CR Community Retail District is appropriate under these circumstances. Rezoning a portion of a residential block without taking into consideration certain design criteria is not consistent with the Residential Neighborhood Building Block.

Zoning History: There have not been any recent zoning requests in the area over the past five years.

Thoroughfares/Streets:

Thoroughfare/Street	Type	Existing ROW	Proposed ROW
East Illinois Avenue	Principal Arterial	107 ft.	107 ft.
Seevers Avenue	Local	50 ft.	50 ft.

Traffic: The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that the proposed development will not have a negative impact on the surrounding street system. The applicant is proposing to prohibit access to the proposed development from Seevers Street in the deed restrictions.

COMPREHENSIVE PLAN: The *fowardDallas! Comprehensive Plan* was adopted by the City Council in June 2006. The *fowardDallas! Comprehensive Plan* outlines several goals and policies which can serve as a framework for assisting in evaluating the applicant's request. The Plan identifies the request site being within a Residential Neighborhood Building Block.

This Building Block represents the life-blood of Dallas, the traditional neighborhood of single-family detached homes. Dallas has many neighborhoods that match this description, including Winnetka Heights, Preston Hollow, Lakewood and Wheatley Place. Single-family dwellings are the dominate land use in these areas. Some shops, restaurants or institutional land uses such as schools and religious centers that serve neighborhood residents may be located at the edges or at key intersections. These areas rely primarily on cars for access, although traffic on neighborhood streets is expected to be low. Cut-through traffic or spill over from commercial areas will be strongly discouraged. Public investment will focus on protecting quality of life by providing amenities such as parks, trails, road improvements and strong code enforcement.

STAFF ANALYSIS:

Land Use:

	Zoning	Land Use
Site	R-7.5(A)	Single Family
North	R-7.5(A)	Single Family
South	R-7.5(A)	Single Family
East	R-7.5(A)	Single Family
West	CR	Retail, Unoccupied Retail

Land Use Compatibility: The 0.998 acre site is currently developed with single family uses. The request site is surrounded by single family uses to the north, across East Illinois Avenue, across Seevers Avenue and south. Retail uses are primarily located along South Beckley Avenue and extend at a depth of approximately 150 feet. A 15-foot alley separates the existing retail development on South Beckley Avenue from the existing residential uses.

Development Standards:

DISTRICT	SETBACKS		Density	Height	Lot Coverage	Special Standards	PRIMARY Uses
	Front	Side/Rear					
R-7.5(A) Single Family	25'	5'	1 Dwelling Unit/ 7,500 sq. ft.	30'	45%		Single family
CR Community retail	15'	20' adjacent to residential OTHER: No Min.	0.75 FAR overall 0.5 office	54' 4 stories	60%	Proximity Slope Visual Intrusion	Retail & personal service, office

Landscaping: Landscaping of any development will be in accordance with Article X, as amended. However, the applicant has incorporated certain landscaping requirement for the proposed development that pertain specific plant materials that will be used to screen the off-street parking along Beckley Avenue and East Illinois Avenue.

Due to the adjacency of the residential district on the eastern side, across Seevers Street and southern side of the property, a 10-foot landscaping buffer is required.

The applicant is proposing to construct the following screening along Seevers Avenue:

1) An eight-foot solid fence must be erected along the Seevers Street frontage, except for areas in visibility triangles, required setbacks, or that create a safety hazard. The required fence must be setback a minimum of seven (7) feet from the right-of-way line.

2) Evergreen shrubs capable of reaching and maintaining a minimum height of five feet, within three years of planting, must be planted along the Seevers Street frontage and must be planted along the entirety of the fence. Initial plantings must be capable of obtaining a solid appearance within three years. Landscape materials must be automatically irrigated.

CPC Action – November 19, 2015

Z145-347(WE) Planner: Warren Ellis

Motion: It was moved to recommend **approval** of a CR Community Retail District with deed restrictions volunteered by the applicant, subject to a site plan on property zoned an R-7.5(A) Single Family District on the southwest corner of East Illinois Avenue and Seevers Avenue.

Maker: Davis
Second: Abtahi
Result: Carried: 14 to 1

For: 14 - Anglin, Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Jung, Schultz, Peadon, Murphy, Ridley, Tarpley

Against: 1 - Housewright
Absent: 0
Vacancy: 0

Notices: Area: 200 Mailed: 39
Replies: For: 20 Against: 0

Speakers: For: Santos Martinez, 900 Jackson St., Dallas, TX, 75226
Maria Segovia, 2327 Seevers Ave., Dallas, TX, 75216
Linda Soliz, 2329 Seevers Ave., Dallas, TX, 75216
Maria Rojas, 2322 Seevers Ave., Dallas, TX, 75216
Jose Angel Salazar, 2324 Seevers Ave., Dallas, TX, 75216
Francisco Rojas, 2322 Seevers Ave., Dallas, TX, 75216
Marvin Crenshaw, 5134 S. Malcolm X Blvd., Dallas, TX, 75215
Victor Segovia, 2327 & 2329 Seevers Ave., Dallas, TX, 75216
Clemmie Skiff, 2402 S. Beckley Ave., Dallas, TX, 75224
Dallas Cothrum, 900 Jackson St., Dallas, TX, 75226
William Cothrum, 900 Jackson St., Dallas, TX, 75226

For (Did not speak): Maria Rojas, 2314 Seevers Ave., Dallas, TX, 75216
Veronica Pedaza, 2322 Seevers Ave., Dallas, TX, 75216
Mariel Chagolla, 2322 Seevers Ave., Dallas, TX, 75216
Jose Mata, 2314 Seevers Ave., Dallas, TX, 75216
Adnana R. Mata, 2314 Seevers Ave., Dallas, TX, 75216
Fermin Saucedo, 2306 Seevers Ave., Dallas, TX, 75216
Maria Saucedo, 2306 Seevers Ave., Dallas, TX, 75216

Against: Alicia Quintans, 227 N. Shore Dr., Dallas, TX, 75216
George Baum, 1514 Seevers Ave., Dallas, TX, 75216

CPC PROPOSED DEED RESTRICTIONS

DEED RESTRICTIONS

THE STATE OF TEXAS)
)
COUNTY OF _____)

KNOW ALL PERSONS BY THESE PRESENTS:

I.

The undersigned, _____, a _____ ("the Owner"), is the owner of the following described property ("the Property"), being in particular a tract of land out of the J. P. Neighbors Survey, Abstract No. __1079__ , being in particular lots ____(10-14), City Block 1/4187, City of Dallas ("City"), __Dallas_____ County, Texas, and being that same tract of land conveyed to the Owner by _____ , by deed dated _____, and recorded in Instrument Number _____, in the Deed Records of __Dallas__ County, Texas, and being more particularly described as follows:

See Exhibit A

II.

The Owner does hereby impress all of the Property with the following deed restrictions ("restrictions"), to wit:

The Owner does hereby impress all of the Property with the following deed restrictions ("restrictions"), to wit:

1. The following main uses are prohibited:

Agricultural uses.
--Crop production

Commercial and business service uses.
--Building repair and maintenance shop
--Medical or scientific laboratory
--Tool or equipment rental

Industrial uses.
--Gas drilling and production
--Temporary concrete or asphalt batch plant

Institutional and community service uses.
--Cemetery or mausoleum

--Community service center
--Convent or monastery
--Hospital
--Open-enrollment charter school or private school
--Public school other than an open-enrollment charter school

Lodging uses.
--Lodging or boarding house
--Overnight general purpose shelter

Miscellaneous uses.
--Attached non-premise sign
--Carnival or circus (temporary)

Office uses.
--Alternative financial establishment

Retail and personal service uses.
--Alcoholic beverage establishments
--Ambulance service
--Auto service center
--Car wash
--Commercial amusement (inside)
--Commercial amusement (outside)
--Commercial parking lot or garage
--General merchandise or food store 100,000 square feet or more
--Home improvement center, lumber, brick or building materials sales yard
--Household equipment and appliance repair
--Liquor store
--Mortuary, funeral home, or commercial wedding chapel
--Motor vehicle fueling station
--Pawn shop
--Restaurant with drive-in or drive-through service
--Swap or buy shop
--Temporary retail use
--Theater

Utility and public service uses.
--Commercial radio and television transmitting station
--Electrical substation

Wholesale, distribution, and storage uses.
--Mini-warehouse
--Recycling buy-back center
--Recycling collection center
--Recycling drop-off container
--Recycling drop-off for special occasion collection

2. These additional restrictions also restrict the following operational aspects for land uses on the Property:

   a. Vehicular access from Seevers Street is prohibited.

   b. An eight-foot solid fence must be erected along the Seevers Street frontage, except for areas in visibility triangles, required setbacks, or that create a safety hazard. The required fence must be setback a minimum of seven (7) feet from the right-of-way line.

   c. Evergreen shrubs capable of reaching and maintaining a minimum height of five feet, within three years of planting, must be planted along the Seevers Street frontage and must be planted along the entirety of the fence. Initial plantings must be capable of obtaining a solid appearance within three years. Landscape materials must be automatically irrigated.

   d. The maximum height for light standards within fifty (50) feet of Seevers Street is fifteen (15) feet with shoe-box or similar down lighting fixtures.

   e. A business may not operate between the hours of midnight and five AM. Drive-through lanes must close by 10 p.m.

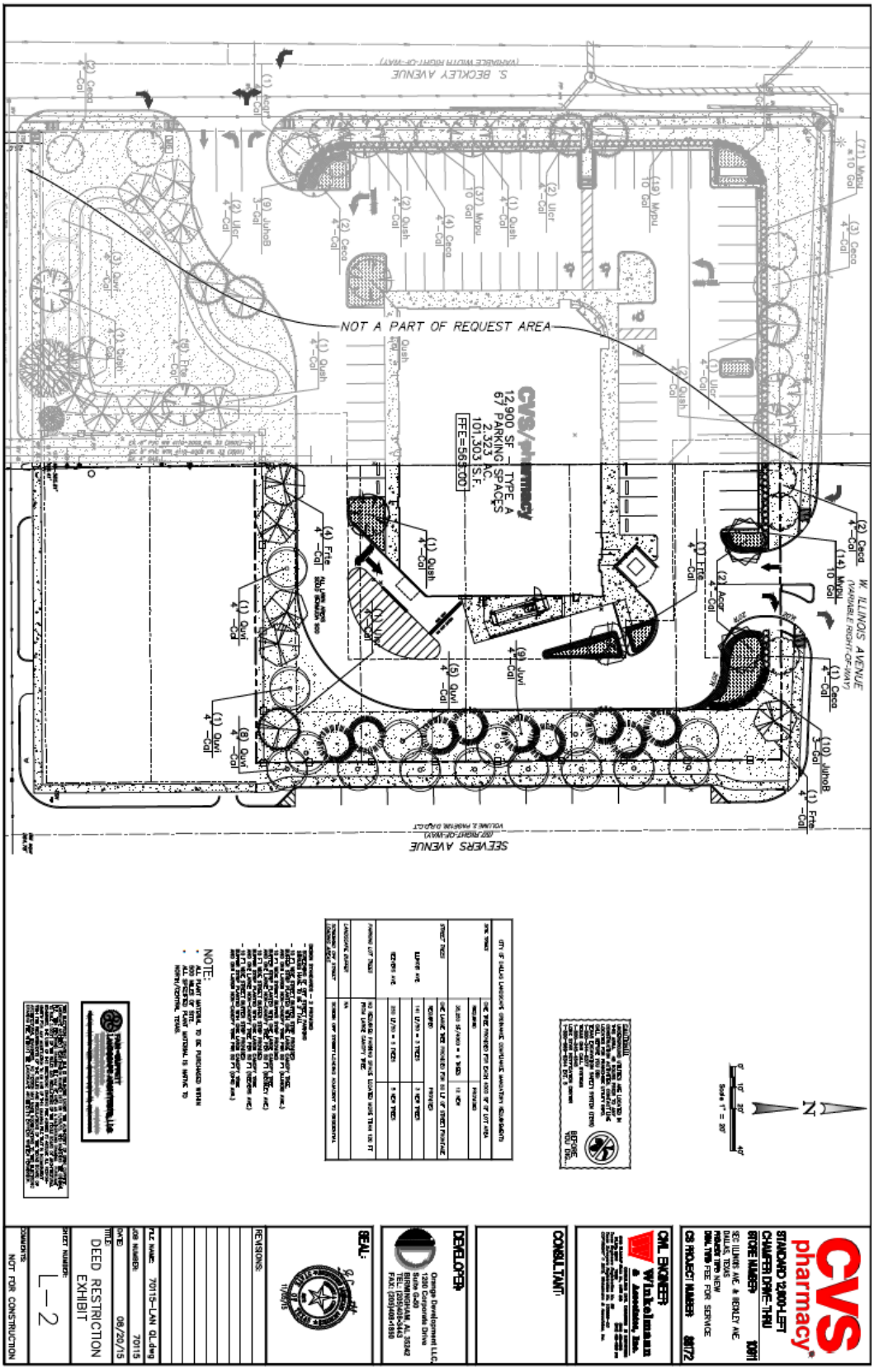
III.

These restrictions shall continue in full force and effect for a period of 20 years from the date of execution, and shall automatically be extended for additional periods of 10 years unless amended or terminated in the manner specified in this document.

IV.

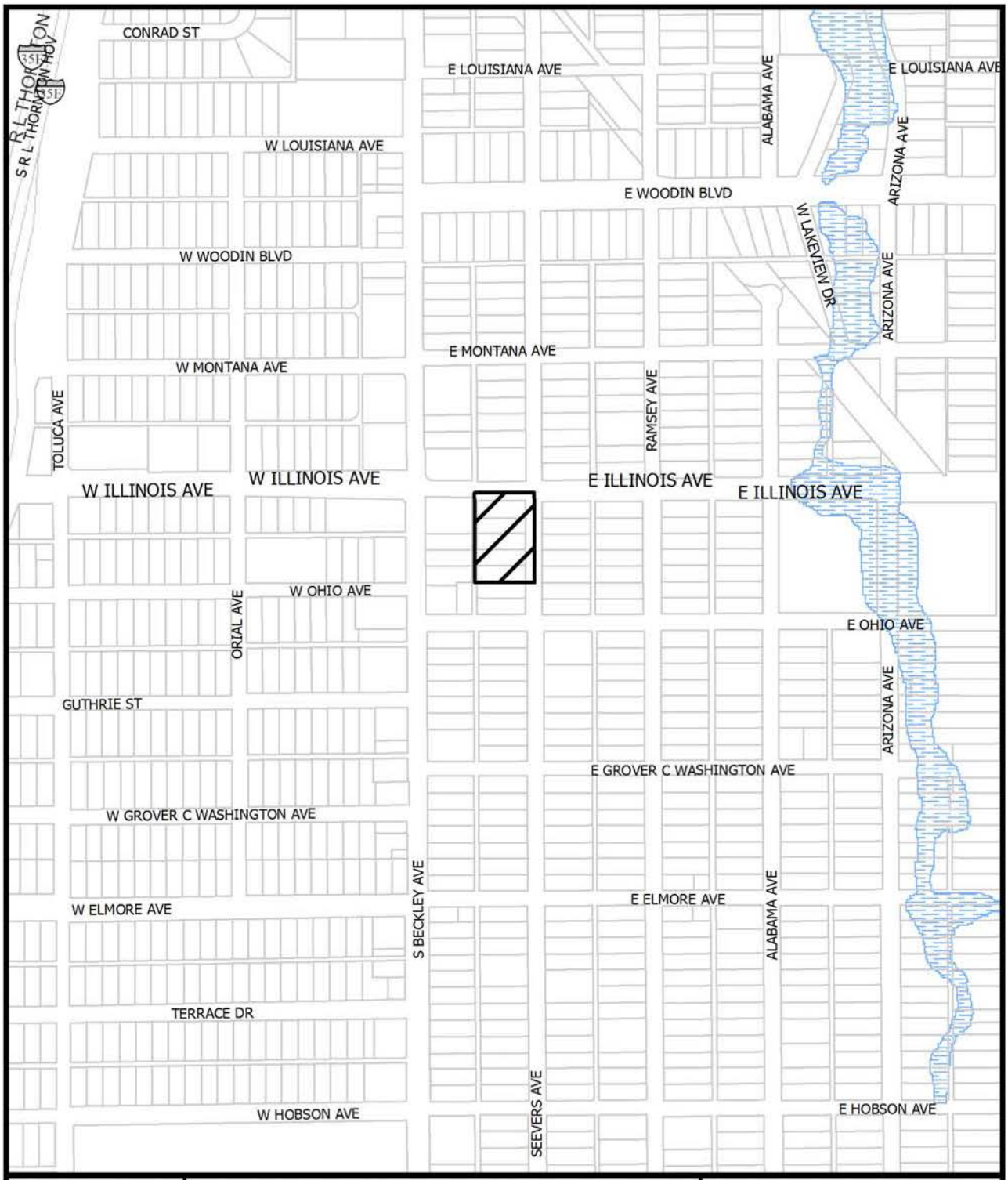
These restrictions may be amended or terminated as to any portion of the Property, upon application to the City of Dallas by the current owner of that portion of the Property, without the concurrence of the owners of the remaining portion of the Property. These restrictions may be amended or terminated only after a public hearing before the City Plan Commission and a public hearing before and approval by the City Council of the City. Notice of the public hearings must be given as would be required by law for a zoning change on the Property. The amending or terminating instrument must be approved as to form by the city attorney. If the City Council approves an amendment or termination of these restrictions, the Owner must then file the amending or terminating instrument in the Deed Records of the county or counties where the Property is located at his or her sole cost and expense before the amendment or termination becomes effective.

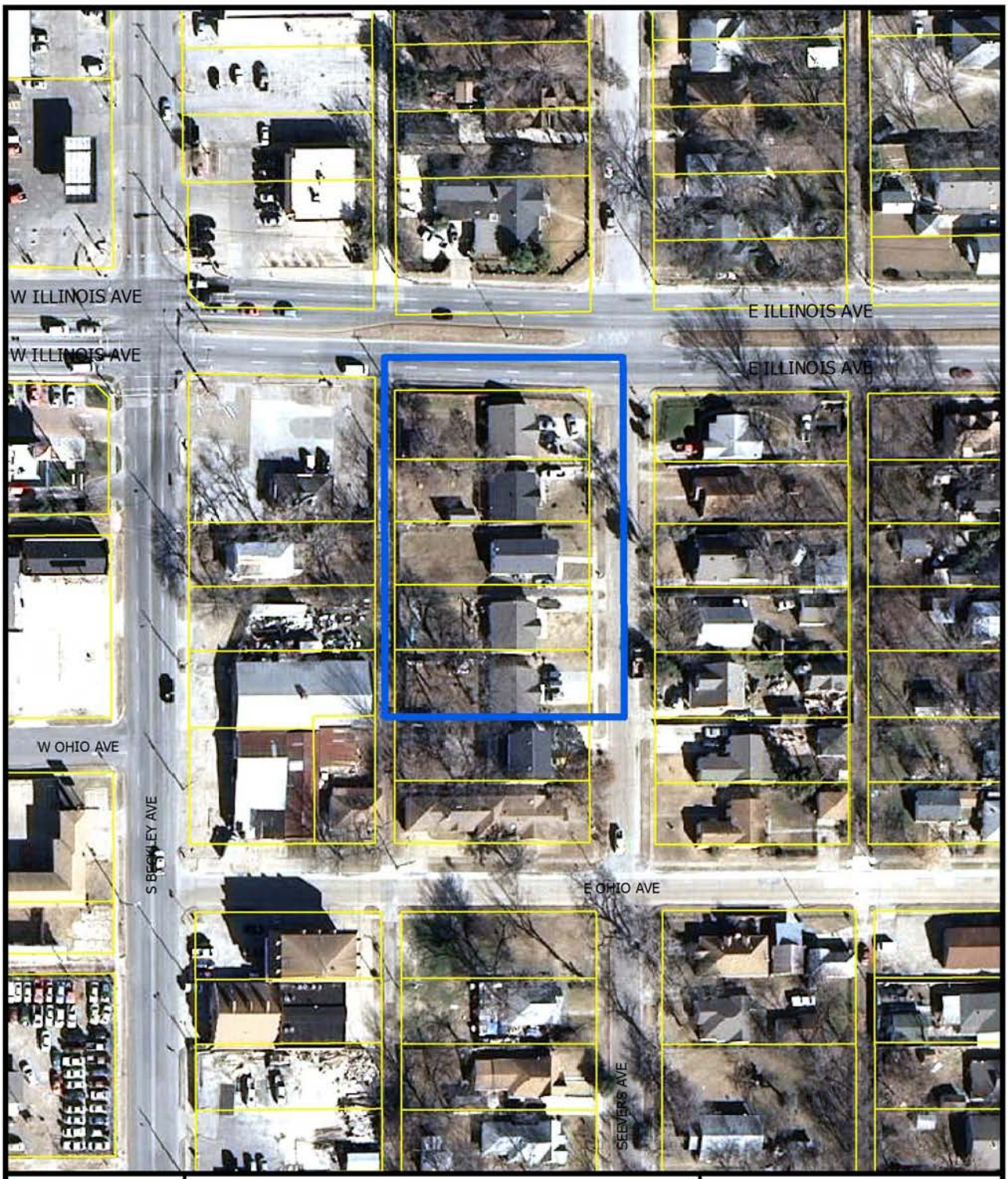
DEED RESTRICTIONS EXHIBIT

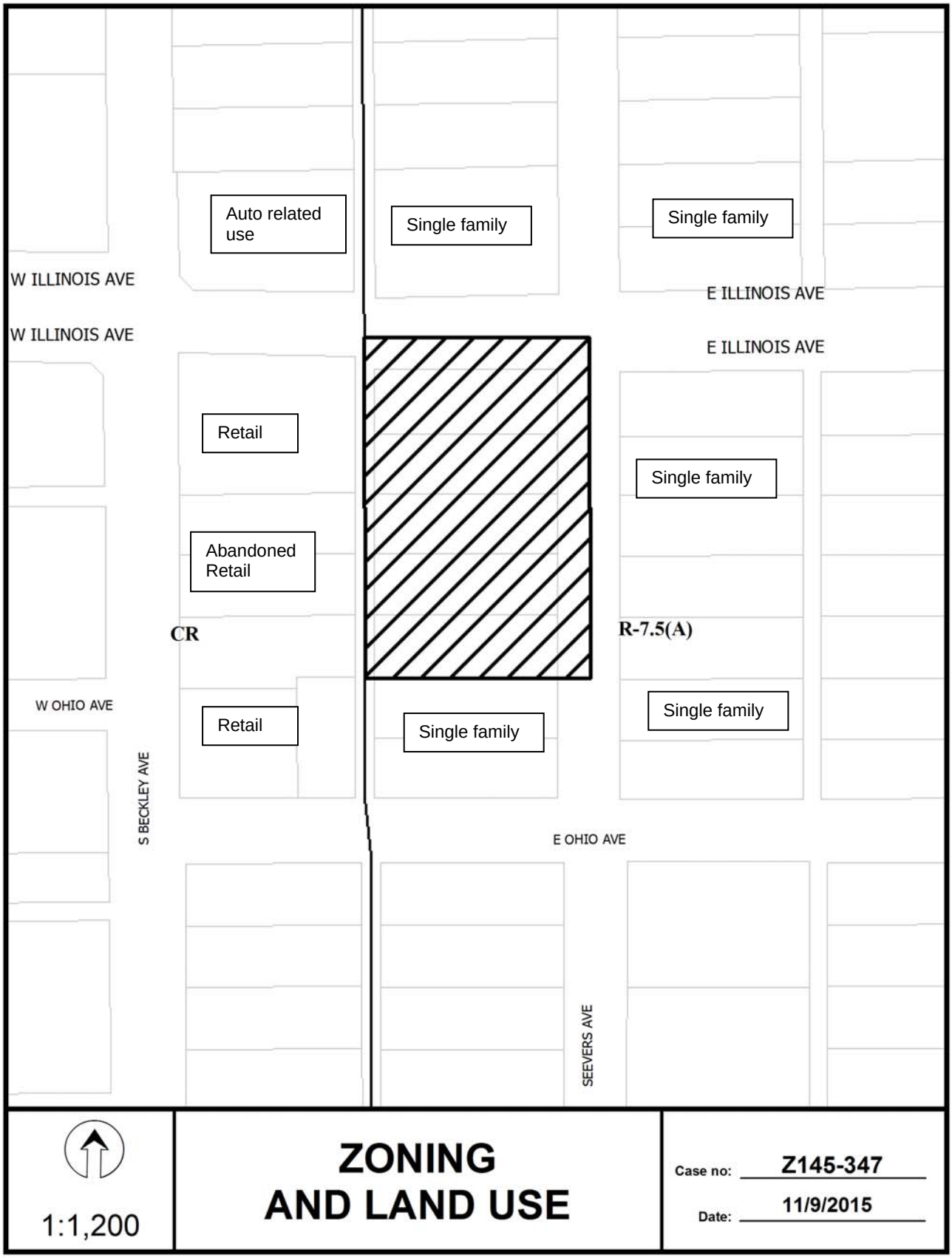


LIST OF OFFICERS

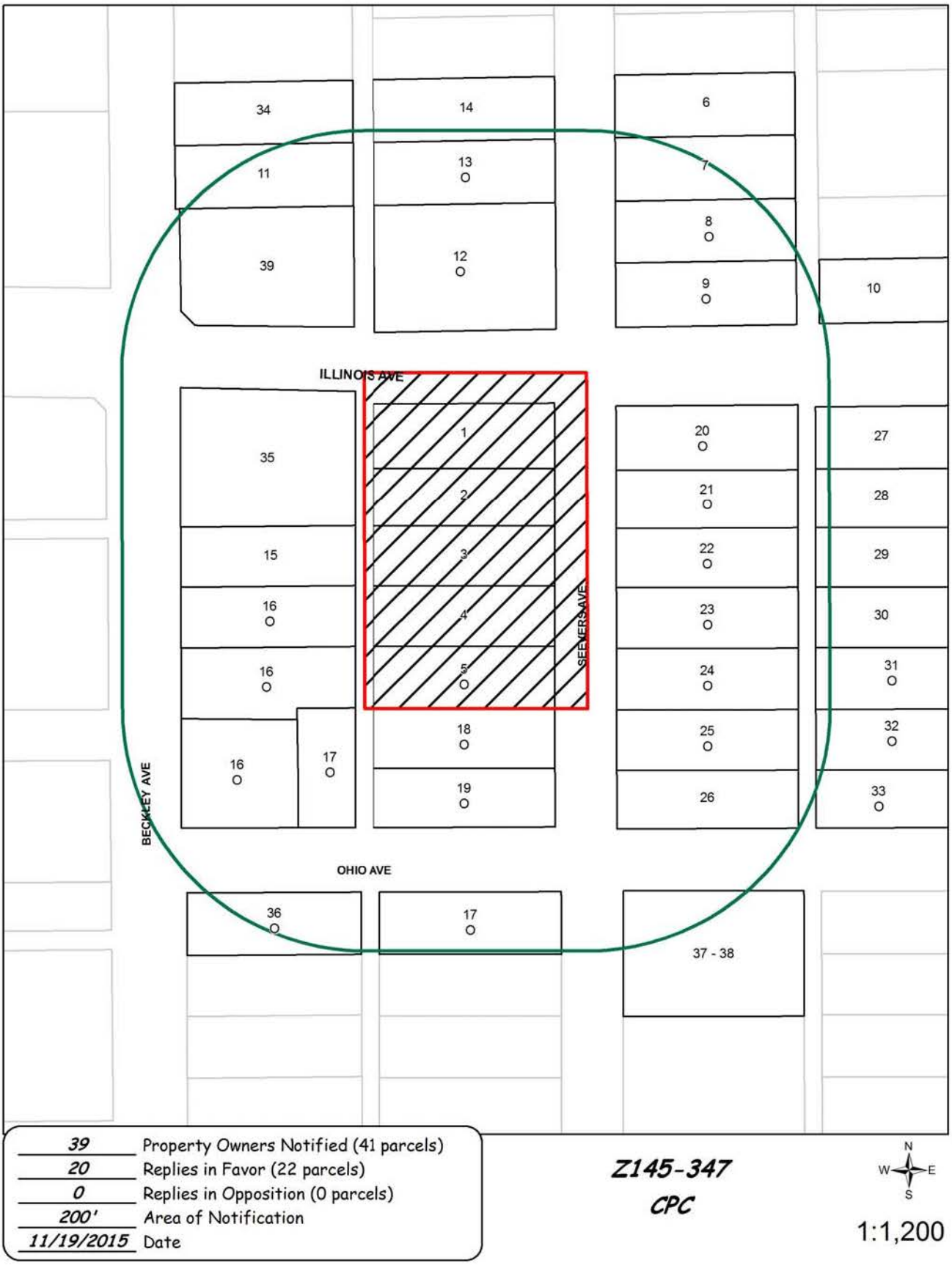
- Jason Price President / Owner
- Donn Fizer Vice President
- Gregory Griffith Vice President


CONRAD ST
S R L THORNTON FWY
R L THORNTON FWY
W LOUISIANA AVE
E LOUISIANA AVE
ALABAMA AVE
ARIZONA AVE
E WOODIN BLVD
W WOODIN BLVD
W LAKEVIEW DR
W MONTANA AVE
E MONTANA AVE
TOLUCA AVE
RAMSEY AVE
W ILLINOIS AVE
E ILLINOIS AVE
W OHIO AVE
E OHIO AVE
ORIAL AVE
GUTHRIE ST
E GROVER C WASHINGTON AVE
W GROVER C WASHINGTON AVE
S BECKLEY AVE
W ELMORE AVE
E ELMORE AVE
TERRACE DR
SEEVERS AVE
W HOBSON AVE
E HOBSON AVE
1:4,800
VICINITY MAP
Case no: Z145-347
Date: 11/3/2015


W ILLINOIS AVE
W ILLINOIS AVE
E ILLINOIS AVE
E ILLINOIS AVE
W OHIO AVE
S BECKLEY AVE
E OHIO AVE
SEEVERS AVE
1:1,200
AERIAL MAP
Case no: Z145-347
Date: 11/3/2015


Auto related use
Single family
Single family
W ILLINOIS AVE
W ILLINOIS AVE
E ILLINOIS AVE
E ILLINOIS AVE
Retail
Single family
Abandoned Retail
CR
R-7.5(A)
W OHIO AVE
Retail
Single family
Single family
S BECKLEY AVE
E OHIO AVE
SEEVERS AVE
1:1,200
ZONING AND LAND USE
Case no: Z145-347
Date: 11/9/2015

CPC RESPONSES



Notification List of Property Owners

Z145-347

39 Property Owners Notified ***20 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*		*Address*	*Owner*
	1	2305	SEEVERS AVE	CASERES MARIA
	2	2311	SEEVERS AVE	BARROSO VERONICA
	3	2315	SEEVERS AVE	JOHNSON DAVID L & ANNIE J
	4	2319	SEEVERS AVE	ISLAS FUSTINO &
O	5	2323	SEEVERS AVE	ORNELAS VICTOR &
	6	2212	SEEVERS AVE	MARTINEZ MARIA REYES
	7	2216	SEEVERS AVE	FORD MURPHY & ANNIE PEARL
	10	2227	RAMSEY AVE	ZAMBRANO MARY BELL
	11	2216	BECKLEY AVE	LOTSA CASH II INC
O	12	2223	SEEVERS AVE	ORTEGA GUADALUPE & ZENIDA
	14	2213	SEEVERS AVE	CHILDERS ROY & LINDA
	15	2314	BECKLEY AVE	HUTSON MABEL E ESTATE
O	16	2316	BECKLEY AVE	MARKS JAMES W
O	17	111	OHIO AVE	SKIEF CLEMMIE
	26	2328	SEEVERS AVE	BENJAMIN THOMAS W JR
	27	2307	RAMSEY AVE	LEIVA JUAN
	28	2309	RAMSEY AVE	CORONADO CARMEN
	29	2313	RAMSEY AVE	MACHADO FELIPE & ROSA E
	30	2317	RAMSEY AVE	WHITAKER CLARA P
O	33	2331	RAMSEY AVE	DELATORRE CESAR & ELDA
	34	2212	BECKLEY AVE	LOTSA CASH II INC
	35	2300	BECKLEY AVE	KIM ANDREW HO
	37	2400	SEEVERS AVE	MOYA VICTOR &
	38	2404	SEEVERS AVE	RAMIREZ MISAEL &
	39	2222	BECKLEY AVE	CHIEF AUTO PARTS INC
O	A1	2226	SEEVERS AVE	JACKSON MARY

11/18/2015

Reply	*Label #*		*Address*	*Owner*
O	A2	2401	SEEVERS AVE	SKIEF CLEMMIE
O	A3	2219	SEEVERS AVE	HERNANDEZ PEDRO LOPEZ &
O	A4	2327	RAMSEY AVE	MORALES MIGUEL A
O	A5	2222	SEEVERS AVE	ROSALES JESUS
O	A6	2327	SEEVERS AVE	SEGOVIA RODRIGO M &
O	A7	2329	SEEVERS AVE	SEGOVIA ROCIO
O	A8	2306	SEEVERS AVE	SAUCEDO FERMIN &
O	A9	2310	SEEVERS AVE	MATA JOSE REFUGIO & ADRIANA R
O	A10	2314	SEEVERS AVE	MATA JOSE R & ADRIANA R
O	A11	2318	SEEVERS AVE	BRYANT LILLIE M ESTATE OF
O	A12	2322	SEEVERS AVE	ROJAS FRANCISCO JAVIER &
O	A13	2324	SEEVERS AVE	SALAZAR ANGEL
O	A14	2323	RAMSEY AVE	RIOS TRINIDAD GUEVARA
O	A15	2402	BECKLEY AVE	SKIEF CLEMMIE

AGENDA ITEM # 59

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): 14

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: 36 S

SUBJECT

A public hearing to receive comments regarding an application for and an ordinance granting a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower on property zoned an MF-3(A) Multifamily District on the north line of Belmont Avenue, west of Greenville Avenue
Recommendation of Staff: Denial
Recommendation of CPC: Approval for a three-year period, subject to a site plan and conditions
Z145-363(SM)

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: Z145-363(SM) **DATE FILED:** September 28, 2015

LOCATION: North line of Belmont Avenue, west of Greenville Avenue

COUNCIL DISTRICT: 14 **MAPSCO:** 36S

SIZE OF REQUEST: Approx. 2,517 SF **CENSUS TRACT:** 10.01

REPRESENTATIVE: Kathy Zibilich, Griffin Harris, PLLC

APPLICANTS: Verizon Wireless, T-Mobile, and AT&T Mobility (New Cingular Wireless)

OWNER: ESC II, L.P.

REQUEST: An application for a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower on property zoned an MF-3(A) Multifamily District.

SUMMARY: The applicants propose to construct a monopole cellular tower not to exceed 100 feet in height to provide cellular coverage while existing mounted cellular antennas are removed from the existing multi-story building where a new multi-story building will be constructed. The applicants indicate intent to remove the tower and mount the antennas on the new building once it is constructed. However, if this Specific Use Permit is approved and the applicants are unable to relocate the antennas on the new building, there would have to be substantially changed circumstances in order to deny its renewal based upon the Federal Communication Commission's order issued in October 2014 that requires municipalities to allow wireless carriers to maintain, replace, and modify an established "tower or base station". On May 21, 2015, the City Plan Commission recommended approval of a Development Code Amendment (DCA145-005) to add a new type of cellular technology, termed "temporary cellular unit", which would allow temporary cellular service where an existing cellular antenna was removed for reconstruction by right. On October 19, 2015, the Economic Development Council Committee held the item under advisement until December 7, 2015. As opposed to waiting on the amendments, the applicants claim demolition is imminent and do not want to risk loss of coverage.

CPC RECOMMENDATION: **Approval** for a three-year period, subject to a site plan and conditions.

STAFF RECOMMENDATION: **Denial**

DESIGNATED ZONING CASE

GUIDING CRITERIA FOR RECOMMENDATION:

The following factors are listed in Chapter 51A of the Dallas Development Code to guide the determination as to whether or not an SUP shall be granted. Staff has listed its findings based upon each component below:

1. *Compatibility with surrounding uses and community facilities* – In September, the Commission recommended denial of the same request (Z145-274) for the northeastern corner of the lot on which the subject site is also located. While the new location is farther removed from existing residents, it is still within the residential proximity of residential zoning to the south. The proposed monopole cellular tower is not compatible with its surroundings which are predominately low rise residential buildings. The currently constructed buildings to the southwest are separated by approximately 230 feet, which only exceeds residential proximity slope height restrictions by 23 feet when measured from property line to the monopole tower. However, PD 725 for residential zoning (under construction) that lies directly to the south of the proposed monopole is only separated by approximately 100 feet, which exceeds residential proximity slope height restrictions by 66 feet. The Development Code allows monopole towers to be exempt from residential proximity slope height restrictions if a specific use permit (SUP) is required for the monopole[1]. The use regulations require that the impact of the tower height on adjacent residential districts be considered in the SUP process.[2]

2. *Contribution to, enhancement, or promoting the welfare of the area of request and adjacent properties* – The proposed height of the monopole cellular tower does not enhance adjacent properties and could be viewed as a nuisance by low-rise residential properties within close proximity.

3. *Not a detriment to the public health, safety, or general welfare* – It is not foreseen that the use would be a detriment to the public health, safety or general welfare.

4. *Conforms in all other respects to all applicable zoning regulations and standards* – The proposed monopole cellular tower will be in compliance with City of Dallas Development Code requirements with the exception of an exemption to residential proximity slope as discussed above in the first guiding criteria.

BACKGROUND INFORMATION:

- The area of request is on the southern edge of a larger tract of land that contains a vacant assisted living facility and convalescent, nursing home, and related institutions, known as Emeritus Vickery Towers.

[1] See Section 51A-4.408(a)(1)(D) of the Dallas Development Code.
[2] See Section 51A-4.202(10.1)((B)(iii) of the Dallas Development Code.

- The now vacant senior center was constructed in 1968 according to permit records and closed in the summer of 2014.

- The Federal Communication Commission (FCC) has adopted various regulations for state and local governments throughout the years to allow cellular carriers flexibility and consistency with dealing with development standards. Most recently, in October 2014 the FCC issued the "Wireless Infrastructure Report and Order", that requires municipalities to allow wireless carriers to maintain, replace, and modify an established "tower or base station".

Zoning History:

1. Z145-274: On September 17, 2015, the City Plan Commission recommended denial without prejudice for an application for a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower, on the west line of Greenville, north of Belmont Avenue.

Thoroughfares/Streets:

Thoroughfares/Street	Type	Existing ROW
Greenville Avenue	Local	60 feet
Belmont Avenue	Local	50 feet

Traffic:

The Engineering Section of the Department of Sustainable Development and Construction has reviewed the request and determined that it will not significantly impact the surrounding street system for the proposed development.

STAFF ANALYSIS:

Comprehensive Plan:

The request site is located in an area considered a Residential Neighborhood in *forward Dallas*. This Building Block represents the life-blood of Dallas, the traditional neighborhood of single-family detached homes. Dallas has many neighborhoods that match this description, including Winnetka Heights, Preston Hollow, Lakewood and Wheatley Place. Single-family dwellings are the dominate land use in these areas. Some shops, restaurants or institutional land uses such as schools and religious centers that serve neighborhood residents may be located at the edges or at key intersections.

The Residential Neighborhood Building Block encourages lower structures; and therefore, the height of the monopole cellular tower that is proposed in this request is inconsistent with the building block.

Surrounding Land Uses:

	Zoning	Land Use
North and west	MF-3(A)	Vacant convalescent, nursing home, and related institutions use
East	CD 12	Single Family detached
South	Tract 2 of PD 625	Single family attached, shared access under construction
Southwest	Tract 2 of PD 625	Single family attached, shared access, constructed circa 2006 per DCAD records

Land Use Compatibility:

To the north and west of the site is the vacant convalescent, nursing home, and related institutions use that currently supports roof mounted cellular antennas. The aged institutional building to the north and west are scheduled for demolition in the near future and the applicant seeks interim cellular communications by providing a monopole cellular tower during the extended construction duration. Retail and restaurant uses also exist further to the south along Greenville Avenue, but the applicant indicates they are too low to support equivalent cellular services to surrounding areas as noted in the applicant's SAR affidavit on page 18 of this report. The surrounding land uses to the south and southwest are the most sensitive uses to the monopole tower as they are predominately single family. Further to the south and east are detached single family neighborhoods, with each of the closest single family structures in each direction measuring approximately 300 feet from the proposed monopole.

Tower Height

The request site is subject to residential proximity slope requirements since the tower will exceed 26 feet in height and is adjacent to single family districts. In order for the proposed 100-foot tall monopole tower to comply with the one to three residential proximity slope height requirement, it must be placed 300 feet away from the nearest site of origination, or low-density residential district. The closest site of origination, or residential property line, is 100 feet to the south at the single family attached shared access development that is currently under construction. The applicant indicates the monopole would be buffered from views on Belmont Avenue by large canopy trees as shown in the height plane diagram on page 7 and the renderings on pages 8 through 12 provided by the applicants. The diagram is an estimate of the proposal and shows that when the observer puts a greater distance between the monopole, they are able to see

more of the structure that projects above the tree canopy. However, as the observer comes closer to the monopole, the views of the monopole that project above the tree canopy are more difficult to see because of intervening tree canopy.

The next closest site of origination is approximately 225 feet to the southwest to an existing single family attached shared access development property line; this would allow a 75-foot tall structure in the location proposed. The third closest site of origination is approximately 280 feet east of the proposed monopole; which results in allowing a 93-foot tall structure. Finally, the next closest single family structure to the monopole is located approximately 305 feet south of the proposed monopole which would allow a 101-foot tall structure in the location proposed.

Cellular Communications Utility

Although coverage maps vary by wireless carrier, the applicant indicates that if the existing mounted cellular antennas are removed, cellular service will decrease for surrounding properties as shown in the coverage maps below. The coverage maps in the pages 15 through 17 of this were report are from affidavits prepared by the applicants' experts; the full affidavits can be found in the plans section with the agenda. A fourth affidavit was prepared by Verizon's Site Acquisition Representative (SAR) stating that there are no viable candidates for the relocation of the mounted antennas other than this request. Page 18 shows the area that the representative evaluated and the conclusion of each property evaluated.

Landscaping:

The request will not trigger the requirements of Article X of the Dallas Development Code.

CPC Action – November 19, 2015:

Z145-363(SM) Planner: Sarah May

Motion: It was moved to recommend **approval** of a Specific Use Permit for a tower/antenna for cellular communication limited to a monopole cellular tower for a three-year period, subject to a site plan and conditions on property zoned an MF-3(A) Multifamily District on the north line of Belmont Avenue, west of Greenville Avenue.

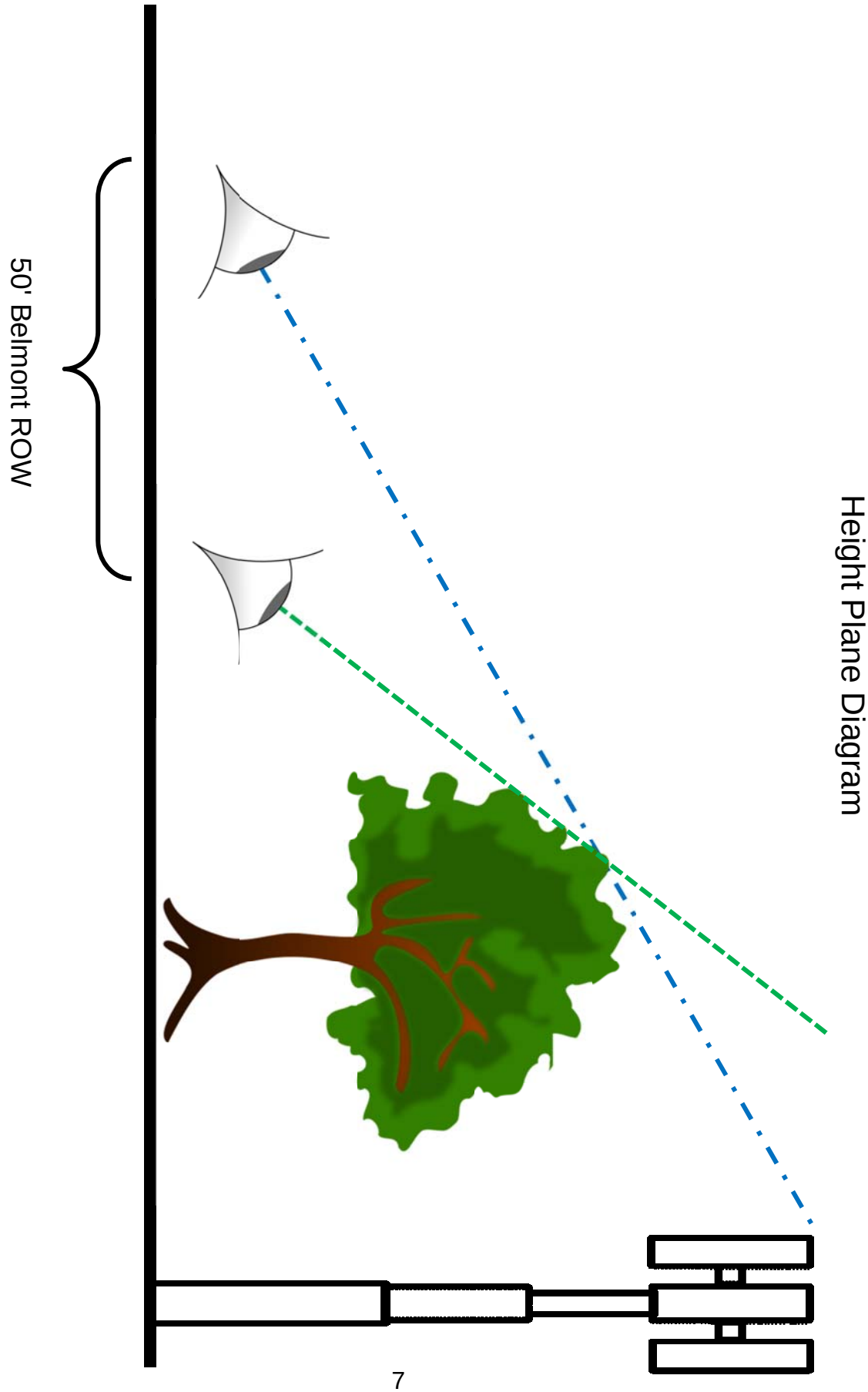
Maker: Emmons
Second: Shidid
Result: Carried: 12 to 0

For: 12 - Emmons, Houston, Davis, Shidid, Anantasomboon, Abtahi, Haney, Housewright, Schultz, Peadon, Murphy, Tarpley

Against: 0
Absent: 1 - Anglin
Vacancy: 0
Conflict: 2 - Jung, Ridley

Notices: Area: 200 Mailed: 8
Replies: For: 0 Against: 0

Speakers: For: Kira Bauman, 2300 Springmere Dr., Arlington, TX, 7601
Mark Rieves, 5530 Goodwin Ave., Dallas, TX, 75206
For (Did not speak): Kathy Zibilich, 8150 N. Central Expwy., Dallas, TX, 752(
Against: None


50' Belmont ROW
Height Plane Diagram


Dallas Vickery Towers
Verizon: 182834
Looking North East (Belmont Ave) - BEFORE
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.


Dallas Vickery Towers
Verizon: 182834
Looking North East (Belmont Ave) - AFTER
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.


Dallas Vickery Towers
Verizon: 182834
Looking North West (Greenville Ave) - BEFORE
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.


Dallas Vickery Towers
Verizon: 182834
Looking North West (Greenville Ave) - AFTER
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.


Looking West (Belmont Ave) - BEFORE
Dallas Vickery Towers
Verizon: 182834
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.
CIVIL & STRUCTURAL CONSULTANTS
ACGI JOB# 15-5231


Looking West (Belmont Ave) - AFTER
Dallas Vickery Towers
Verizon: 182834
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.
CIVIL & STRUCTURAL CONSULTANTS
ACGI JOB# 15-5231


Dallas Vickery Towers
Verizon: 182834
Looking East (Belmont Ave) - BEFORE


Dallas Vickery Towers
Verizon: 182834
Looking East (Belmont Ave) - BEFORE


Dallas Vickery Towers
Verizon: 182834
Looking West (Greenville Ave) - BEFORE
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.


Dallas Vickery Towers
Verizon: 182834
Looking West (Greenville Ave) - AFTER
COPYRIGHT 2015
ALLPRO
CONSULTING GROUP, INC.

Verizon Wireless
Network, Central Texas Region
7 Village Circle, Suite 400
Westlake, TX 76262

Todd Seneker
Columbia Pacific Advisors, LLC
1910 Fairview Ave E, Suite 200
Seattle WA 98102

Re: 5619 Belmont Avenue Replacement of Antennas on new building

Dear Mr. Seneker:

Dallas MTA, L.P. d/b/a Verizon Wireless (Verizon Wireless) currently has antennas on the roof of your building at 5619 Belmont Avenue in Dallas, Texas (the Property). Verizon Wireless is interested in leasing a portion the Property for the purpose of installing and maintaining a temporary pole tower/antenna for cellular communication and related equipment to replace coverage provided by the existing antennas but only until such time that the existing antennas at that address can be replaced on the new building to be built at the Property.

This letter will confirm that the proposed tower is understood to be temporary and only for the period of construction, and Verizon fully intends to relocate to the rooftop upon completion of the new building. I am authorized to sign on behalf of Verizon Wireless.

Sincerely,

Dallas MTA, L.P. d/b/a Verizon Wireless
By: Verizon Wireless Texas, LLC, its General Partner

By: _____
Kandi Vongsombath, Manager - Real Estate

T-Mobile USA, Inc.
2250 Lakeside Boulevard
Richardson, Texas 75082

November 2, 2015

Mr. Todd Seneker
Columbia Pacific Advisors, LLC
1910 Fairview Ave. E, Suite 200
Seattle, WA 98102

Re: 5619 Belmont Avenue (Replacement of Antennas onto the New Building)

Dear Mr. Seneker:

I represent T-Mobile USA, Inc. and its affiliates (collectively, "T-Mobile").

T-Mobile currently has antennas on the roof of your building at 5619 Belmont Avenue in Dallas, Texas (the "Property"). T-Mobile is interested in using a portion of the Property for the purpose of installing and maintaining a temporary pole tower/antenna for cellular communication and related equipment to replace coverage provided by the existing antennas. However, that temporary tower would only be utilized until such time that the existing antennas at that address can be replaced onto the new building that is being built at the Property.

This letter will confirm that the proposed tower is understood to be temporary and that T-Mobile intends to relocate to the new rooftop upon completion of the new building.

Sincerely,

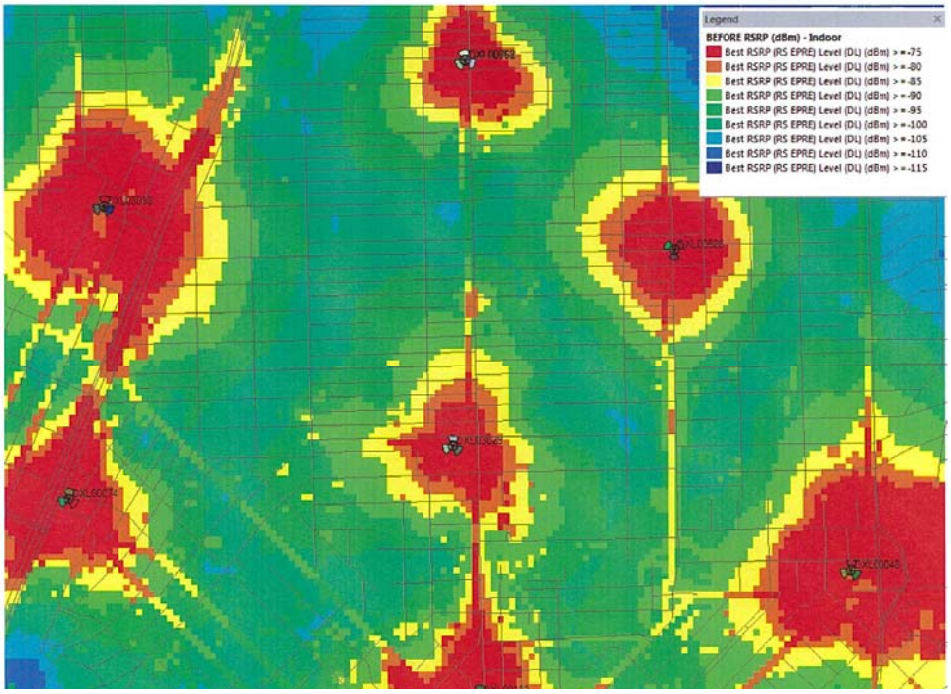
J. Christopher Luna

J. Christopher Luna
Senior Legal Director

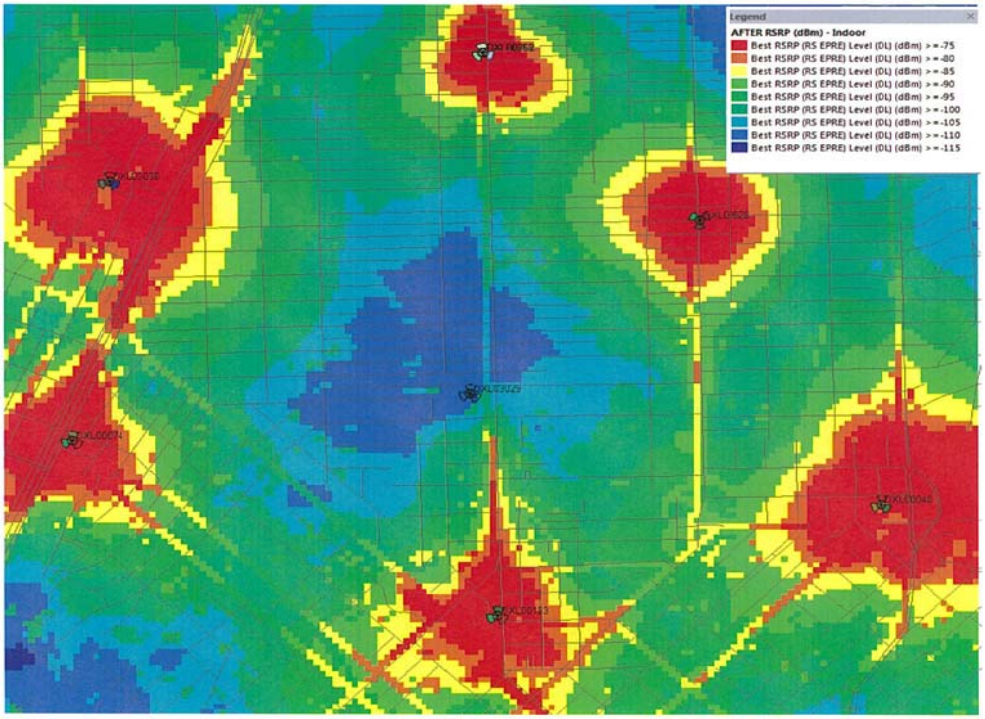
E-mail: Chris.Luna@T-Mobile.com
Telephone: (214) 570-4883
Toll Free Fax: (844) 669-6339

AT&T Coverage Maps

DXU3029/DXL03029 – On-Air

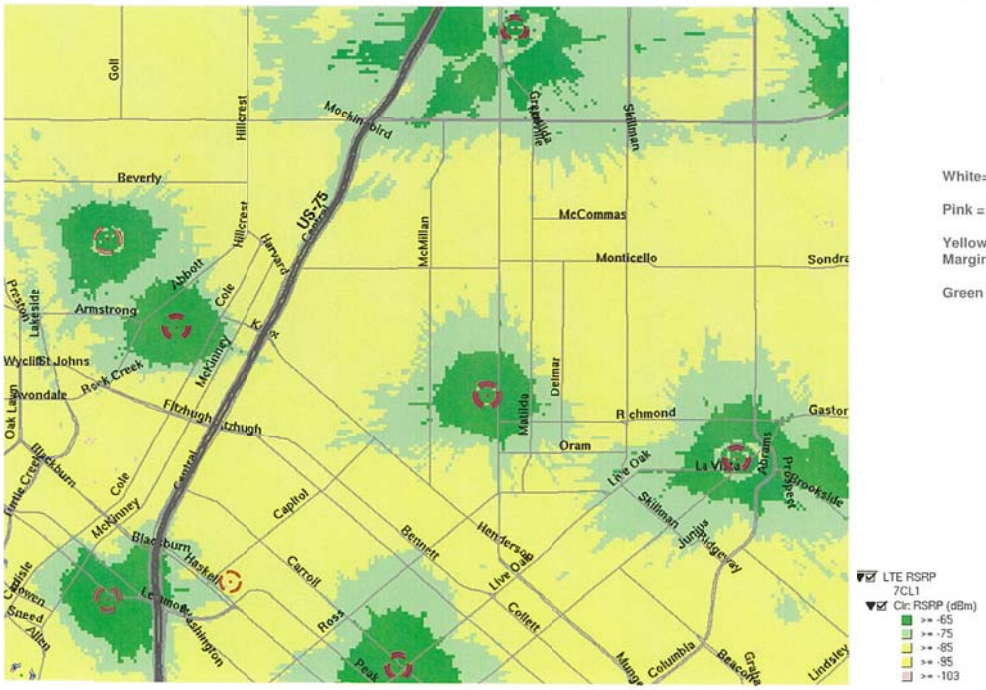


DXU3029/DXL03029 – Off-Air



Verizon Coverage Maps

With Dallas Vickery Towers – LTE 700MHz RSRP



White= No coverage

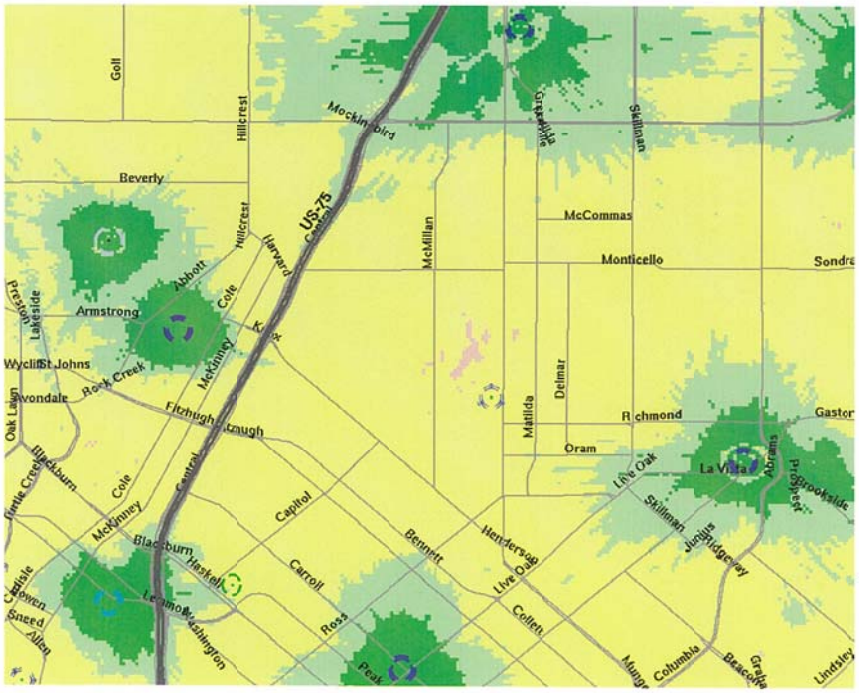
Pink = Poor Coverage

Yellow = Good Coverage inside Vehicle & Marginal Coverage inside Building

Green = Good Coverage inside Buildings

Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement. 2

Without Dallas Vickery Towers – LTE 700MHz RSRP



White= No coverage

Pink = Poor Coverage

Yellow = Good Coverage inside Vehicle & Marginal Coverage inside Building

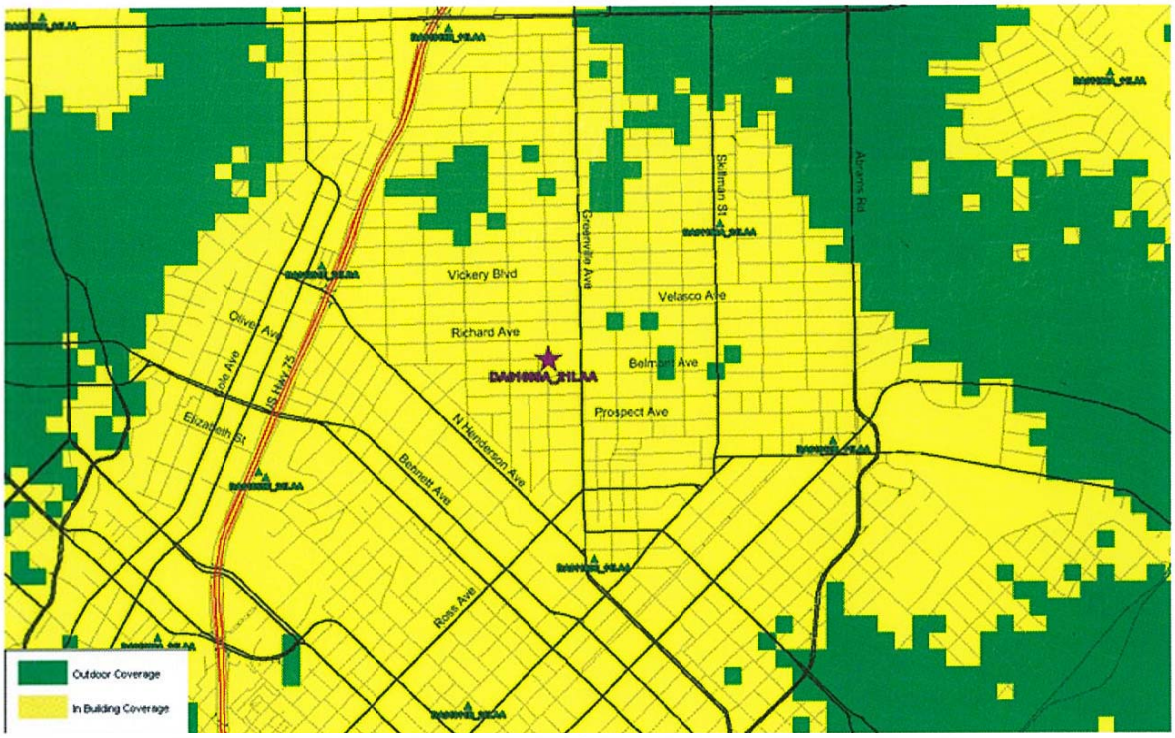
Green = Good Coverage inside Buildings

Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement. 3

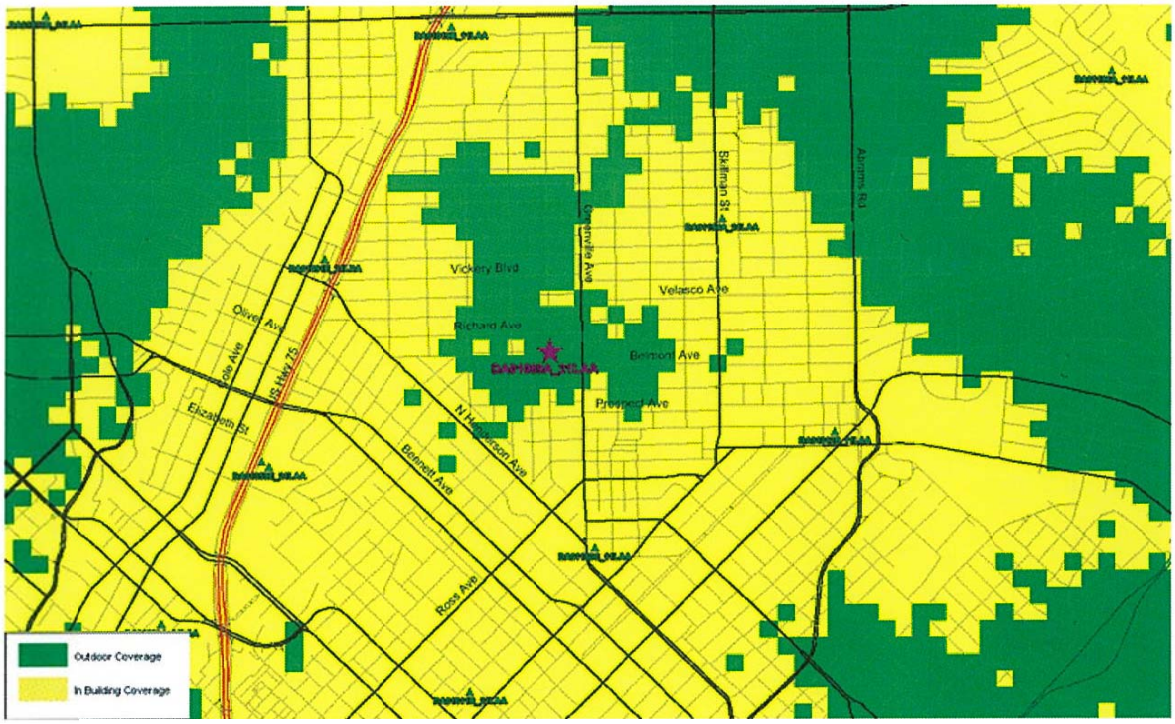
T-Mobile Coverage Maps

To Affidavit of Mauricio Martinez

See attached Current Coverage with Existing Antennas Propagation Map



See attached After Removal of Existing Antennas Propagation Map





Dallas Vickery Towers
VZW SAR Affidavit

Exhibit B

List of Candidates Considered or Contacted and Result

New Tower/antenna sites
2218 Greenville Ave – Too close to residential and owner not interested
2201 Greenville – insufficient space for tower
5601 Sears – owner not willing to lease property
5624 Sears - insufficient space for tower
5724 Prospect - insufficient space for tower
2237 Greenville – too close to residential property
2203 Greenville – insufficient space for tower
5700 Roam – Oncor sub-station – location not allowed by Oncor

Collocations on Existing Towers
1521 Greenville – too far outside search ring and too close to other Verizon tower
1300 Greenville - too far outside search ring and too close to other Verizon tower

List of Officers
ESC II, L.P.

If the owner is a corporation, partnership or trust, a list of partners/principals or officers must be provided so that any conflict of interest by City Plan Commissioners or City Council persons can be identified before a vote is taken.

The list of partners/principals or officers is set forth below.

Name: Columbia Pacific Master Fund '98 General Partnership
Position held: General Partner
Name: Daniel R. Baty
Position held: Limited partner
Name: Brandon Baty
Position held: _____
Name: Stanley Baty
Position held: _____

Recommended SUP Conditions

1. USE: The only use authorized by this specific use permit is a tower/antenna for cellular communication limited to a monopole cellular tower.

2. SITE PLAN AND ELEVATION PLAN: Use and development of the Property must comply with the attached site plan and elevation plan.

3. TIME LIMIT: This specific use permit expires on _____ (three years after the passage of this ordinance).

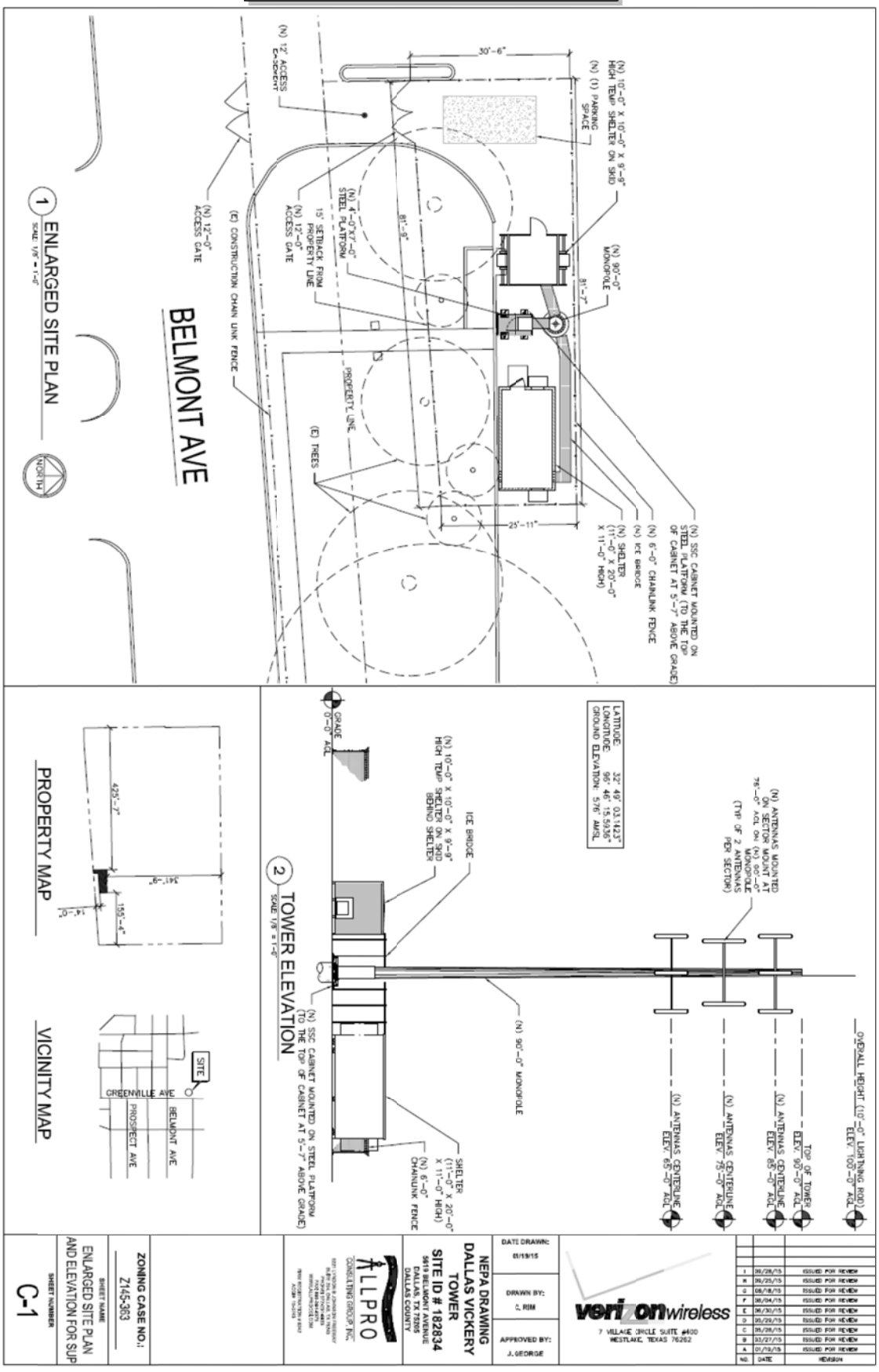
4. HEIGHT: The tower/antenna for cellular communication may not exceed 100 feet in height.

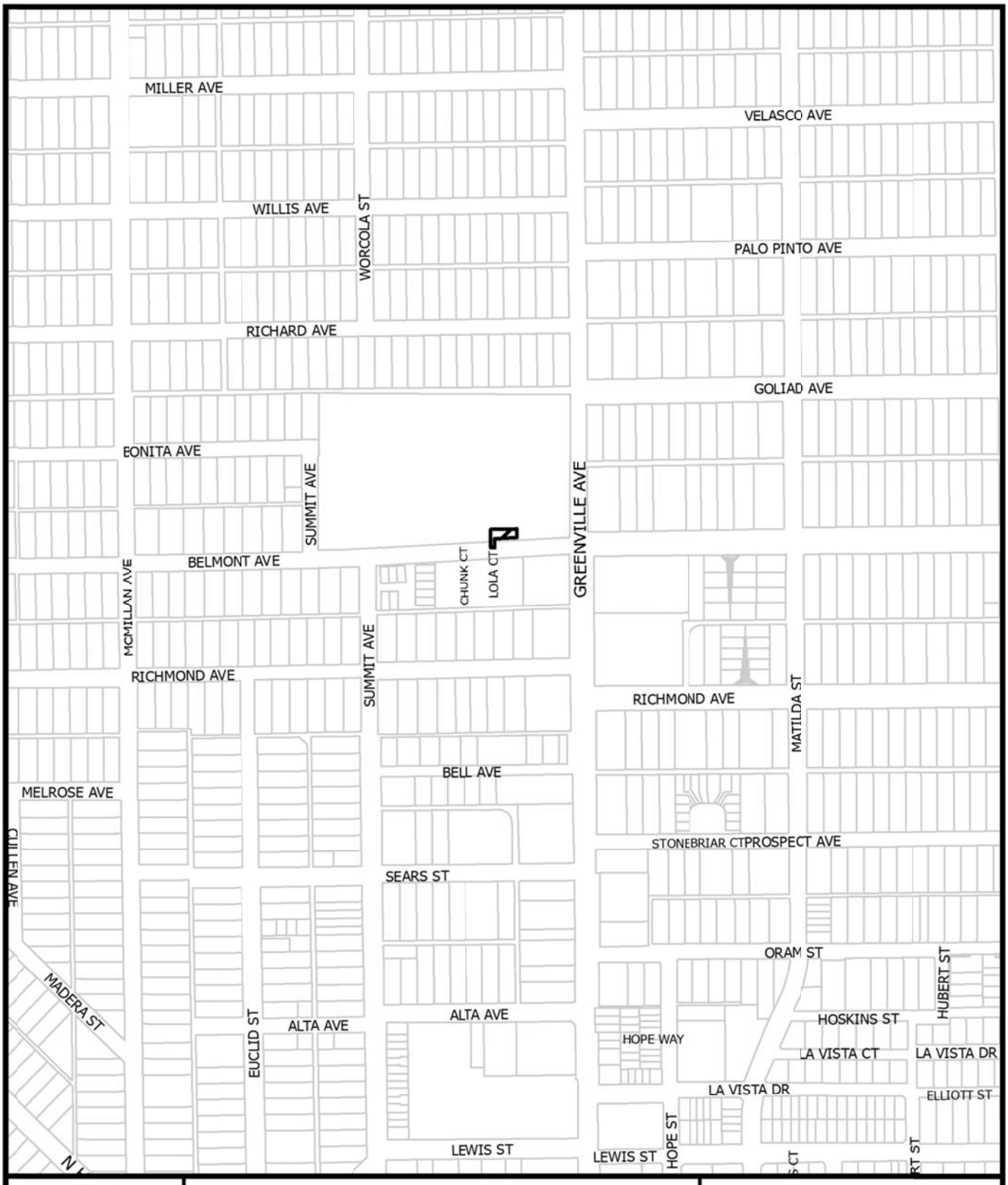
5. ILLUMINATION: Except as required by the Federal Aviation Administration, the tower/antenna for cellular communication may not be illuminated.

6. MAINTENANCE: The Property must be properly maintained in a state of good repair and neat appearance.

7. GENERAL REQUIREMENTS: Use of the Property must comply with all federal and state laws and regulations, and with all ordinances, rules, and regulations of the City of Dallas.

Proposed Site Plan



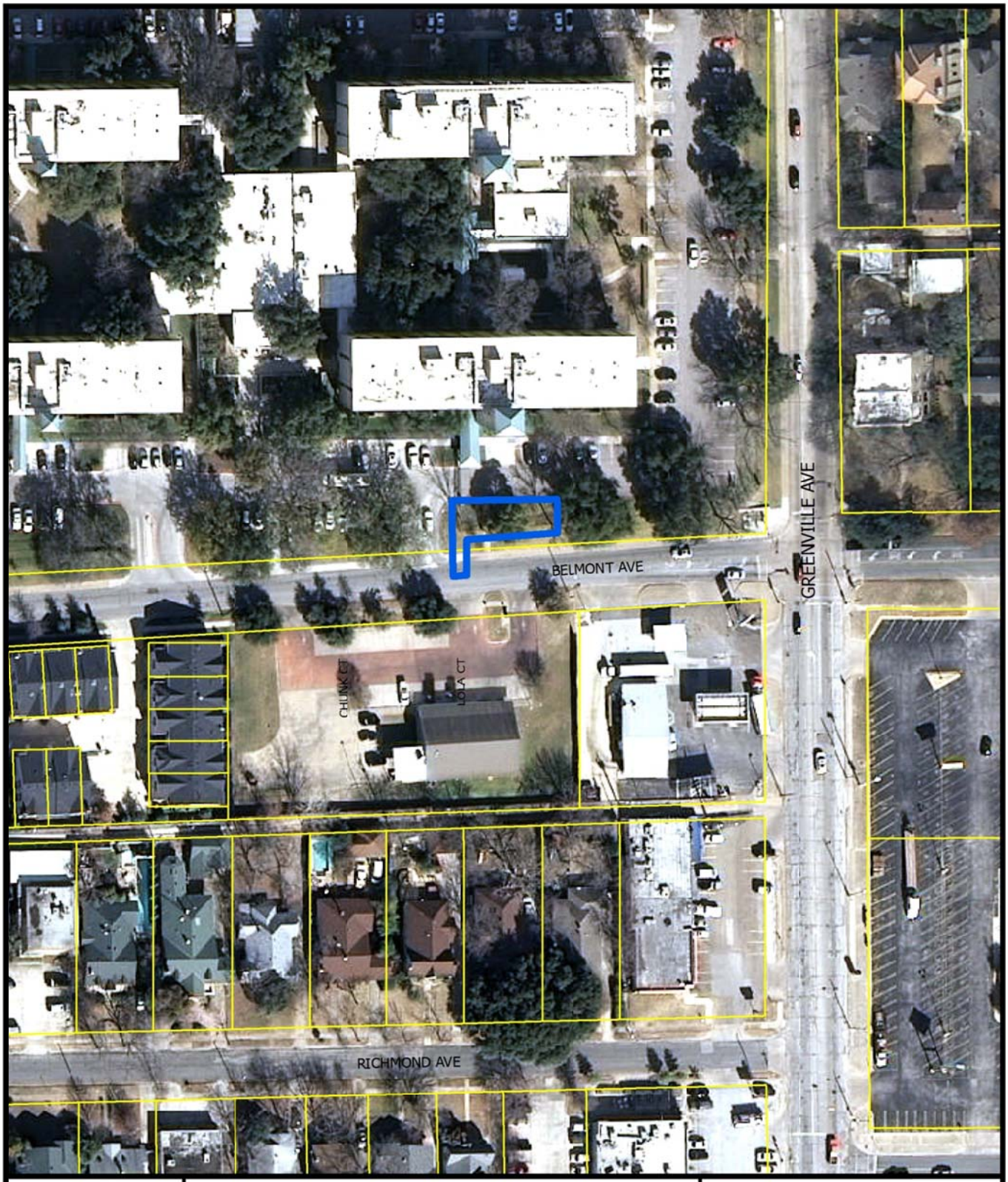


1:4,800

VICINITY MAP

Case no: Z145-363

Date: 11/3/2015

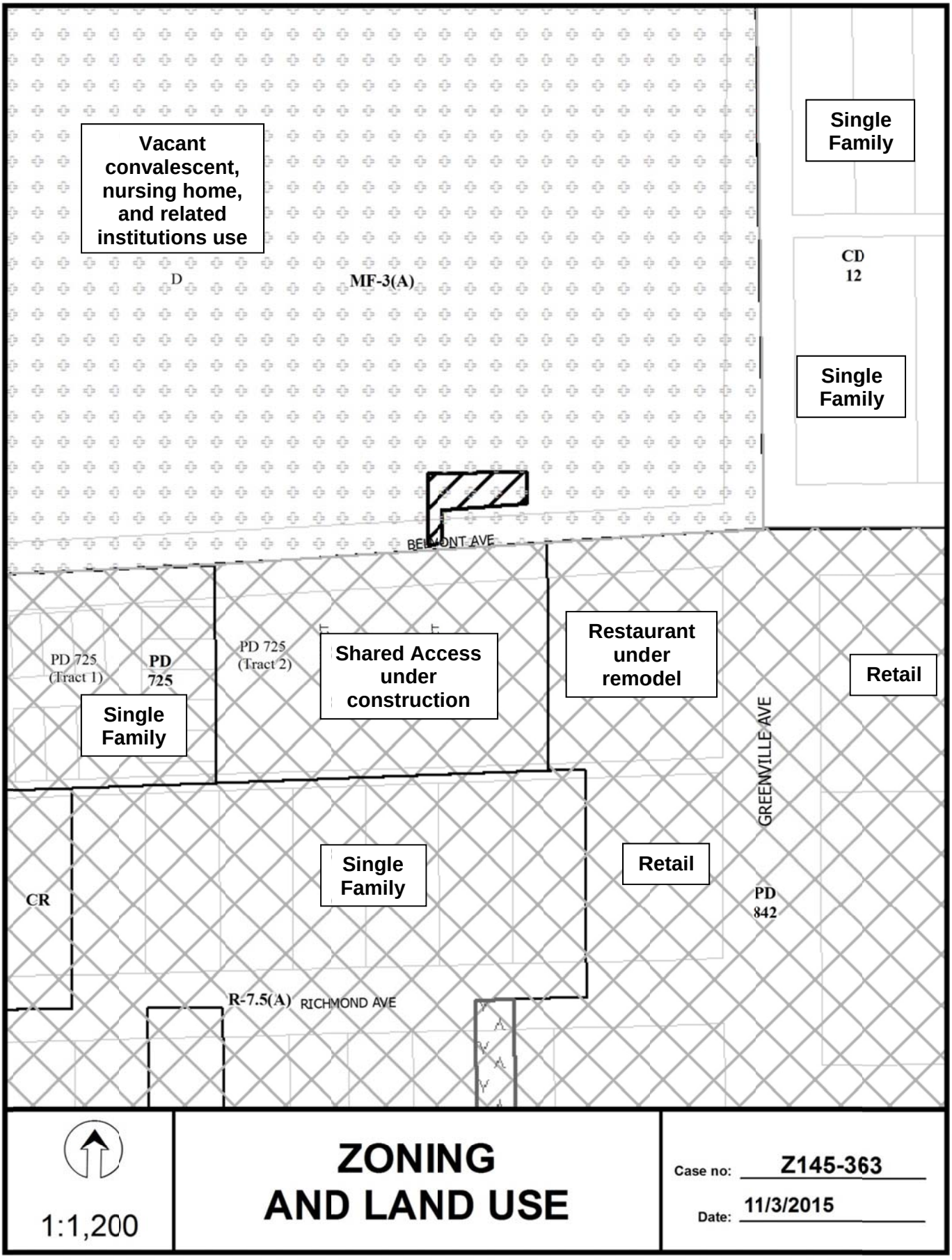


1:1,200

AERIAL MAP

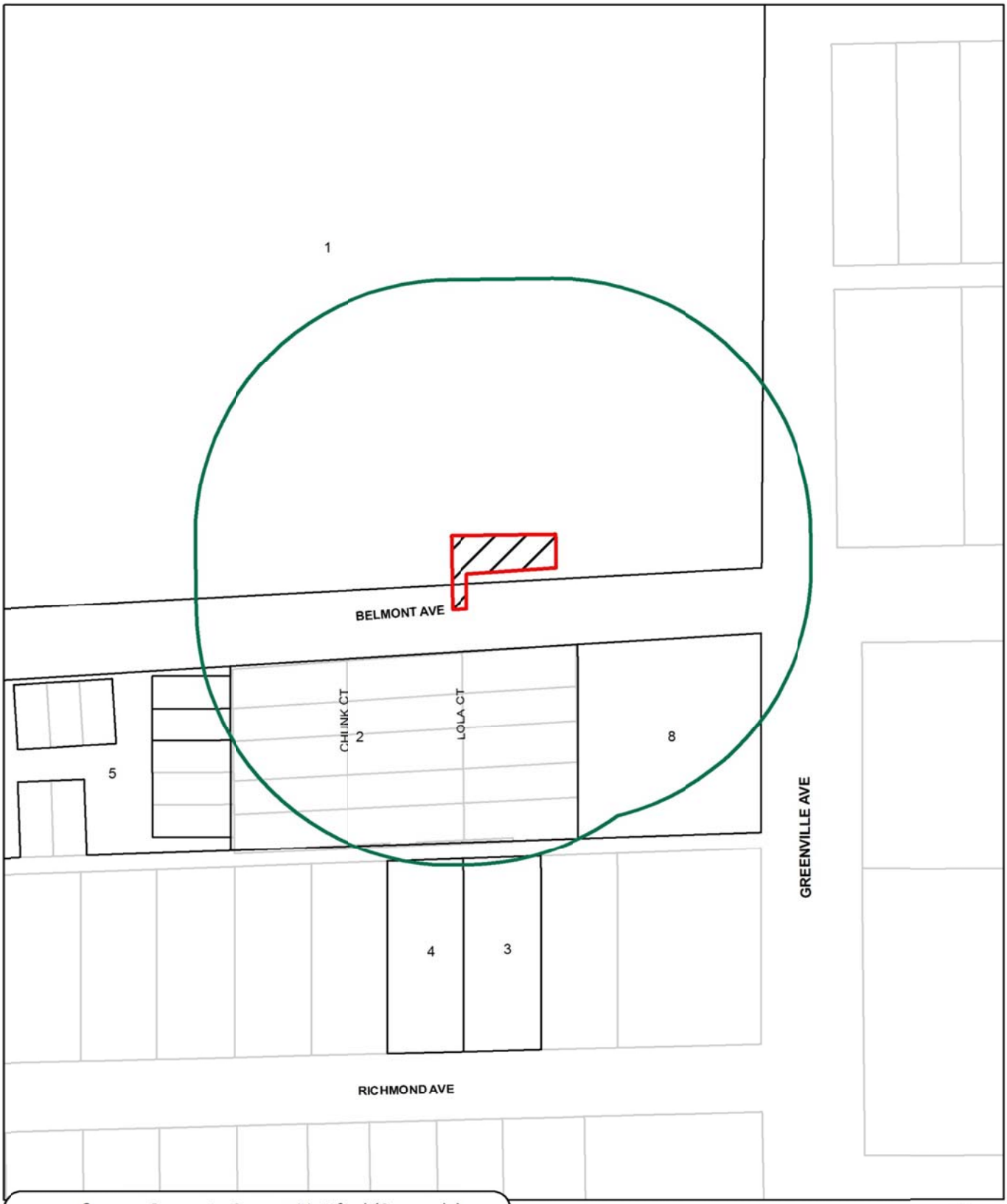
Case no: Z145-363

Date: 11/3/2015


Vacant convalescent, nursing home, and related institutions use
D
MF-3(A)
Single Family
CD 12
Single Family
BELMONT AVE
PD 725 (Tract 1)
PD 725
Single Family
PD 725 (Tract 2)
Shared Access under construction
Restaurant under remodel
Retail
GREENVILLE AVE
Single Family
Retail
CR
PD 842
R-7.5(A)
RICHMOND AVE
1:1,200
ZONING AND LAND USE
Case no: Z145-363
Date: 11/3/2015

Z145-363(SM)

CPC Responses



8	Property Owners Notified (8 parcels)
0	Replies in Favor (0 parcels)
0	Replies in Opposition (0 parcels)
200'	Area of Notification
11/19/2015	Date

Z145-363
CPC

N
W E
S

1:1,200

11/18/2015

Reply List of Property Owners

Z145-363

8 Property Owners Notified ***0 Property Owners in Favor*** ***0 Property Owners Opposed***

Reply	*Label #*	*Address*		*Owner*
	1	5619	BELMONT AVE	ESC II LP
	2	5650	BELMONT AVE	POST OFFICE PARK LLC
	3	5631	RICHMOND AVE	KOHLER KEVIN C &
	4	5627	RICHMOND AVE	NGUYEN MICHAEL & KANDICE TRINH
	5	5626	BELMONT AVE	SUMMIT BELMONT HOMEOWNERS
	6	5620	BELMONT AVE	MOSELEY LESLYE E
	7	5620	BELMONT AVE	SAIDEJACAMAN ADRIAN &
	8	2237	GREENVILLE AVE	QUIK WAY RETAIL AS II LTD

AGENDA ITEM # 60

KEY FOCUS AREA: Economic Vibrancy

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Sustainable Development and Construction

CMO: Ryan S. Evans, 671-9837

MAPSCO: All

SUBJECT

A public hearing to receive comments regarding consideration of and an ordinance granting amendments to Chapter 51 and Chapter 51A of the Dallas Development Code, Section 51-4.212, "Utility and Public Service Uses," Section 51A-4.408, "Maximum Building Height," and Section 51A-4.704, "Nonconforming Uses and Structures" to amend regulations pertaining to tower/antenna for cellular communication; and Section 51A-13.304(k)(5) to add a configuration provision for utilities on an open space development type
Recommendation of Staff and CPC: Approval
DCA145-005

HONORABLE MAYOR & CITY COUNCIL **WEDNESDAY, JANUARY 13, 2016**

ACM: Ryan S. Evans

FILE NUMBER: DCA145-005 **DATE FILED:** February 6, 2015

TOPIC: Tower/antenna for cellular communication

CITY COUNCIL DISTRICTS: All **CENSUS TRACTS:** All

APPLICANTS: Verizon Wireless, T Mobile, and Cingular (AT&T)

REPRESENTATIVE: Kathy Zibilich, Griffin Harris PLLC

PROPOSAL: Consideration of amending Chapter 51 and Chapter 51A of the Dallas Development Code, Section 51-4.212, "Utility and Public Service Uses," Section 51A-4.408, "Maximum Building Height," and Section 51A-4.704, "Nonconforming Uses and Structures" to amend regulations pertaining to tower/antenna for cellular communication; and Section 51A-13.304(k)(5) to add a configuration provision for utilities on an open space development type.

SUMMARY: This proposal adds a new type of tower/antenna for cellular communication use, called a temporary cellular unit and establishes specific regulations; extends the notice requirement for specific use permits for this use; allows any tower/antenna for cellular communication use the ability to request a specific use permit to exceed residential proximity slope; incorporates language to ensure compliance with recent Federal Communication Commission requirements; and amends configuration requirements in Article XIII open space development type to allow utilities to have flexibility.

CPC RECOMMENDATION: Approval

STAFF RECOMMENDATION: Approval

BACKGROUND INFORMATION:

The Federal Communication Commission (FCC) has adopted various regulations for state and local governments throughout the years to allow cellular carriers flexibility and consistency with dealing with development standards. Most recently, in October 2014 the FCC issued the "Wireless Infrastructure Report and Order", which requires local governments to review and rule on cellular communication permits within 60 days or it is considered approved. This order also clarified previous regulations and required municipalities to adopt regulations that would allow for existing cellular systems to make modifications that did not "substantially modify" the "tower or base station".

On February 6, 2015 the applicant submitted a request to amend regulations concerning tower/antenna for cellular communication land use regulations. The applicant was interested in the addition of an alternative for monopole cellular towers to exceed residential proximity slope by another approval process and to secure a provision for temporary cellular units.

The Zoning Ordinance Committee (ZOC) considered this issue at three public meetings between March 19, 2015 and April 16, 2015. On April 16, 2015, the committee recommended approval of the proposed ordinance

CURRENT REGULATIONS

Overview

Article IV of the Dallas Development Code has three types of systems within the land use called a tower/antenna for cellular communication (TACC); 1) mounted cellular antenna, 2) monopole cellular tower, and 3) other cellular communication tower/antenna. Each type differs in the districts in which they are allowed and in additional regulations that govern their construction. All types require one off-street parking space if an auxiliary building is provided to house support equipment for the TACC that is greater than 120 square feet.

Residential Proximity Slope

Depending on the zoning district in which a TACC is located and its surrounding zoning districts, residential proximity slope (RPS) may play a role in regulating the height of the TACC. In order for a cellular carrier to provide its intended coverage, RPS may be too restrictive. The only remedies an applicant has to exceed RPS, is to appeal to the Board of Adjustment for a variance to the height regulations of the zoning district or to change the zoning to a district that does not regulate RPS. In order for the board of adjustment to grant a variance from height regulations, the applicant must prove that a variance is necessary "to permit development of a specific parcel of land that differs from other parcels of land by being of such a restrictive area, shape, or slope that it

cannot be developed in a manner commensurate with the development upon other parcels of land with the same zoning."[1]

Temporary cellular units

If an existing mounted cellular antenna is damaged, destroyed, or the building that supports an existing mounted cellular antenna is demolished, the development code would require a temporary replacement comply with one of the existing types of TACC. If the interim antenna were mounted on another structure, it would be classified as a mounted cellular antenna, if it met the definition of a monopole cellular tower, it would be classified as such, and if it did not meet either of those definitions, it would be classified as an other cellular communication tower/antenna, which is only permitted by right with a residential adjacency review in the GO(A), CS, industrial, and central area districts and by Specific Use Permit (SUP) otherwise. There is no provision in the current code to treat TACC that are designed to be temporary as a unique type of TACC—they must meet one of the current three types.

Notification

A request for a zoning change or a specific use permit requires surrounding properties to be notified of the requested change. Currently, an application for a specific use permit is notified based on the following sizes of the area of request in the application, not on the type of use, and the area of request must, at a minimum, incorporate the area on which the use is conducted.[2]

Application for original SUP:	
0-1 acre	200 feet
over 1 acre to 5 acres	300 feet
over 5 acres to 25 acres	400 feet
over 25 acres	500 feet
pedestrian skybridge	See 51A-4.217(b)(12)
gas drilling and production	1,000 feet

Because a cellular site may be wholly located within a small lease area located upon a building site that is much larger with the distance for notification based on the lease boundaries, the number of notices mailed to surrounding properties may be limited.

Modifications

When an existing TACC is enhanced, repaired, expanded, or replaced, the current code allows these modifications if they are allowed by the zoning district regulations. If the

[1] Reference Section 51A-3.102(d)(10)(B) of the Dallas Development Code.

[2] Reference Section 51A-1.105(a)(4)

existing TACC is considered a nonconforming use (i.e. it is not allowed in the district or requires a new SUP) or if the TACC is a nonconforming structure and the modifications cause an encroachment into the yard, lot, or space regulations, an appeal to the board of adjustments or a zoning change is required to allow modifications to the existing TACC.

Form district

In 2009, the City of Dallas adopted Article XIII Form District Regulations which sought to regulate the form of a development over focusing on the use of the development as Article IV requires. Within Article XIII, a limited number of districts are allowed. Within those districts, specified development types are allowed and within those development types, building placement, use, building facade, and other unique characteristics to that development type are defined. Article XIII classifies TACC as a utility use which are only permitted as an open space development type. Open space development types allow appropriate building/structure placement for TACC but further requires that open space development types be configured in one of nine ways. None of the currently adopted configurations address utility uses.

STAFF ANALYSIS

Residential Proximity Slope

In 2007, city council adopted an amendment to the Dallas Development Code to allow monopole cellular towers to exceed residential proximity slope if an SUP was required and required that the impact of the height of the monopole cellular tower on the surrounding residential areas be a consideration of the specific use permit. This amendment allowed for a substantial decrease in board of adjustment applications as many monopole cellular towers require a specific use permit once a specified height is achieved.

Since the development code currently allows monopole cellular towers to exceed the height restrictions of RPS when it is above a specified height through the SUP process, staff recommends allowing TACC that are under the specified height but exceed RPS restrictions to apply for a specific use permit as an alternative to requiring the applicant make an appeal to the board of adjustment or apply for a zoning change.

Temporary cellular units

Under the proposed development code amendment, a new type of TACC is proposed, called a temporary cellular unit. This new TACC type allows an interim cellular communication system in instances where an existing mounted cellular antenna is inoperable because it is damaged or destroyed intentionally or unintentionally. Since current technology utilizes cellular communication systems for emergency situations, it

is contrary to public health and safety to deny cellular communication coverage for existing sites in these situations. Staff recommends this new type of TACC to allow an interim cellular system and staff recommends the parameters as outlined in the proposed ordinance which stipulate parking requirements, a time limit, conditions of removal, and maximum height.

Notification

A concern of ZOC was that some neighbors in the vicinity of a request for an SUP for a TACC may not be aware of the request. Because the monopole cellular tower sites are often less than an acre, the current code only requires that notices are sent out to properties that are within 200 feet of the lease area. In a situation where a monopole cellular tower locates on a large parcel that is several acres or more, it could result in only one mailed notification—to the landlord of the larger parcel upon which the monopole cellular tower is proposed. This would be remedied in the proposed code amendment by requiring notices to be mailed out to properties within 500 feet, instead of 200 feet, of the building site, as opposed to the lease area, in order to ensure that neighbors are properly notified of new SUP applications for any type of TACC.

Modifications

Through careful review of the "Wireless Infrastructure Report and Order" issued by the FCC with the applicant and the City Attorney's Office, staff has recommended language to address these requirements and is written so that as federal regulations evolve, the development code will coincide with those requirements.

A helpful two page document on this background can be found here (https://www.planning.org/pas/quicknotes/pdf/QN55.pdf) from the American Planning Association.

Form district

The final issue addressed in this code amendment is in regards to how TACC are regulated in form districts. The amendment proposes an additional configuration type be added for the open space development type in order to address utilities within the form district regulations.

Zoning Ordinance Committee Action
April 16, 2015

Motion to approve staff recommendations amending Tower/Antenna for Cellular Communication regulations except using the language, "The building site has an issued permit to demolish or construct a site…." and the temporary site may increase the height an additional ten feet for each qualifying carrier above one with antennas to be removed not to exceed the allowable building height of the district and an SUP is required if piercing the RPS.

Motion: Margot Murphy
2nd: Matt Enzler

Result: Passed: 6 to 0
For: Murphy, Brown, Enzler, Shidid, Jones, and Gomez
Against: None
Absent: Wilkes
Recused: Shellene

City Plan Commission Action
May 21, 2015

It was moved to recommend **approval** of amending Chapter 51 and Chapter 51A of the Dallas Development Code, Section 51-4.212, "Utility and Public Service Uses," Section 51A-4.408, "Maximum Building Height," and Section 51A-4.704, "Nonconforming Uses and Structures" to amend regulations pertaining to tower/antenna for cellular communication; and Section 51A-13.304(k)(5) to add a configuration provision for utilities on an open space development type with the following modifications: 1) A temporary cellular unit is not subject to a residential proximity slope and 2) Lightning rods on a temporary cellular unit are not included in height calculations.

Maker: Shidid
Second: Emmons
Result: Carried: 7 to 0

For: 7 - Anglin, Emmons, Shidid, Anantasomboon, Lavallaisaa, Tarpley, Schultz

Against: 0
Absent: 6 - Rodgers, Culbreath, Peadon, Murphy, Ridley, Abtahi
Vacancy: 0
Conflict: 2 - Bagley, Shellene

Speakers: For: Kathy Zibilich, 8150 N. Central Expy., Dallas, TX, 75206
Against: None

12-9-15

ORDINANCE NO. _____

An ordinance amending Chapter 51, "Dallas Development Code: Ordinance No. 10962, as amended," and Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code by amending Sections 51-4.202, 51A-4.212, 51A-4.408, 51A-4.704, and 51A-13.304; providing amended regulations for tower/antenna for cellular communication use; providing a penalty not to exceed $2,000; providing a saving clause; providing a severability clause; and providing an effective date.

WHEREAS, the city plan commission and the city council, in accordance with the Charter of the City of Dallas, the state law, and the ordinances of the City of Dallas, have given the required notices and have held the required public hearings regarding this amendment to the Dallas City Code; Now, Therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Paragraph (12), "Tower/Antenna for Cellular Communication," of Section 51-4.202, "Utility and Service Uses," of Division 51-4.200, "Use Regulations," of Article IV, "Zoning Regulations," of Chapter 51, "Dallas Development Code: Ordinance No. 10962, as amended," of the Dallas City Code is amended to read as follows:

(12) Tower/antenna for cellular communication.

(A) Definitions:

(i) Mounted cellular antenna means a cellular antenna that is attached to an existing structure, that complies with the requirements of Subparagraph (E)(i), and that is part of a cellular system authorized by the Federal Communications Commission. An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(ii) Monopole cellular tower means a single pole structure that supports a platform and cellular antennas, that complies with the requirements of Subparagraphs

(E)(ii) and (iii), and that is part of a cellular system authorized by the Federal Communications Commission. An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(iii) Other cellular communication tower/antenna means any cellular communication tower or antenna that is part of a cellular system authorized by the Federal Communications Commission, but that is not covered by the definitions contained in Subparagraphs (A)(i) and (A)(ii). An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(iv) Platform means that portion of a monopole cellular tower that is located on top of the pole and that supports directional, transmitting, and receiving antennas.

(v) Temporary cellular unit means any cellular communication structure, vehicle, trailer mounted apparatus, or device that is part of a system authorized by the Federal Communications Commission that is used to temporarily provide service where an existing tower/antenna for cellular communication is not operable due to one or more of the following reasons:

(aa) The existing tower/antenna for cellular communication use is damaged or destroyed by something other than the intentional act of the owner or agent; or

(bb) A demolition or construction permit has been issued on a building site that requires the removal of existing mounted cellular antenna, monopole cellular tower, or other cellular communication tower/antenna.

(B) Districts permitted:

(i) Mounted cellular antennas: By right in A, single-family, duplex, townhouse, MF-1, MF-2, and MH districts when attached to an existing structure that is currently occupied or was last occupied by a nonresidential use.

(ii) Mounted cellular antennas: By right in MF-3, MF-4, and all nonresidential districts when attached to any existing structure.

(iii) Monopole cellular towers: By right in LC, HC, industrial, and central area districts with RAR required in LC, HC, and industrial districts. By right in O-2, LO, MO, and GO districts if the height of the tower does not exceed the maximum height for structures in that district as provided in the height regulations of Section 51-4.408, with RAR required in the same districts; otherwise by SUP only. By right in the GR district if the height of the tower does not exceed 65 feet, with RAR required; otherwise by SUP only. By right in the SC district if the height of the tower does not exceed 80 feet, with RAR required; otherwise by SUP only. By SUP only in all residential, NO, O-2, and NS districts. The impact of the tower height on an adjacent residential district must be considered in the SUP process.

(iv) Other cellular communication towers/antennas are permitted as follows: O-2, NO, LO, MO, GO, SC, GR, LC, HC, central area, and industrial districts; SUP required in residential, O-1, and NS districts; specific use permit in NO districts if this use exceeds 30 feet in height and in LO and MO districts if this use exceeds 60 feet in height.

(v) Temporary cellular unit is permitted by right in all districts.

(C) Required off-street parking: None required for temporary cellular units. One space if the cellular communication tower/antenna has an auxiliary building housing electronic and communication equipment ("auxiliary building") greater than 120 square feet. Physically separate auxiliary buildings will not be aggregated to determine the area of an auxiliary building for the purpose of determining required off-street parking requirements. No handicapped parking is required.

(D) Required off-street loading: None.

(E) Additional provisions:

(i) Mounted cellular antennas may not exceed 12 feet above the structure to which they are attached. Whip antennas are excluded from this calculation.

(ii) The pole portion of a monopole cellular tower may not exceed 42 inches in diameter. Microwave dishes or similar devices up to three feet in diameter may be mounted on the pole portion of a monopole cellular tower. No more than two dishes or similar devices may be placed on a monopole cellular tower. If microwave dishes or similar devices on a monopole cellular tower are concealed within a stealth tower, then there is no maximum.

(iii) The platform portion of a monopole cellular tower may not have a horizontal cross sectional area greater than 196 square feet. The depth of the platform may not exceed four feet, excluding any whip antenna. Only antennas that are part of a cellular system authorized by the Federal Communications Commissions are permitted on a platform.

(iv) The owner of a monopole or other tower for cellular communication shall notify the building official when the tower is no longer operating as part of a cellular system authorized by the Federal Communications Commission. Within 12 months of the date the tower ceases to operate as part of an authorized cellular system, the tower must either be removed from the site, or a certificate of occupancy must be obtained to allow another permitted use of the tower. If within 12 months the owner fails to remove the tower or obtain proper authorization for use of the tower, the building official shall revoke the certificate of occupancy for the tower and notify the city attorney to pursue enforcement remedies.

(v) Mounted cellular antennas attached to utility structures are exempt from the additional setback regulations in 51-4.401, 51-4.402, and 51-4.403 in certain circumstances. *[See Section 51-4.408(a)(1).]*

(vi) Temporary cellular unit must comply with the following:

(aa) The building official shall issue a certificate of occupancy for a period not to exceed one year. The building official may grant up to two six-month extensions if an application for or amendment to a specific use permit or planned development district has been filed with the director or a permit is issued for the replacement of the existing tower/antenna for cellular communication.

(bb) A temporary cellular unit must be removed upon the expiration of its certificate of occupancy or upon the completion or expiration of a permit to construct a structure upon which to mount a permanent mounted cellular antenna, a monopole cellular tower, or other cellular antenna.

(cc) Except as provided in this provision, a temporary cellular unit must comply with the yard, lot and space regulations of the district and may not exceed the height of the existing tower/antenna for cellular communication use to be removed. Lightning rods atop a temporary cellular unit are not included in height calculations. If a temporary cellular unit collocates existing operators on a single vertical temporary cellular unit, the following regulations apply:

(I) If the height of the existing mounted cellular antenna to be removed is less than the maximum structure height of the district, the maximum structure height may extend an additional ten feet in height for each existing operator above one, not to exceed the maximum structure height of the district.

(II) If the height of the existing mounted cellular antennas to be removed is equal to or exceeds the maximum structure height of the district, the maximum height of the temporary cellular unit may not exceed the height of the existing mounted cellular antennas to be removed.

(vii) The provisions concerning specific use permits in Section 51A-4.219 apply except as modified by this subsection. The director shall send written notice of a public hearing on an application for an SUP for a tower/antenna for cellular communication use to all owners of real property lying within 500 feet of the building site as defined in Section 51A-4.601 on which the tower/antenna for cellular communication use will be located. If the site does not comply with Section 51A-4.601, the director shall send written notice of a public hearing on an application for an SUP for a tower/antenna for cellular communication use to all owners of real property lying within 500 feet of the boundaries of a lot on a preliminary plat that is approved by the city plan commission upon which the tower/antenna for cellular communication use is to be located.

(viii) An application or amendment for a specific use permit or planned development district that would otherwise be required is not required for a modification to an existing tower/antenna for cellular communication or its base station unless the modification substantially changes the physical dimensions of the existing tower/antenna for cellular communication or base station. A modification substantially changes the physical dimensions of an existing tower/antenna for cellular communication or its auxiliary building if it meets any of the criteria listed in 47 C.F.R. §1.40001(b)(7)."

SECTION 2. That Paragraph (10.1), "Tower/Antenna for Cellular Communication," of Section 51A-4.212, "Utility and Public Service Uses," of Division 51A-4.200, "Use Regulations" of Article IV, "Zoning Regulations," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended to read as follows:

"(10.1) Tower/antenna for cellular communication.

(A) Definitions:

(i) Mounted cellular antenna means a cellular antenna that is attached to an existing structure, that complies with the requirements of Subparagraph (E)(i), and that is part of a cellular system authorized by the Federal Communications Commission. An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(ii) Monopole cellular tower means a single pole structure that supports a platform and cellular antennas, that complies with the requirements of Subparagraphs (E)(ii) and (iii), and that is part of a cellular system authorized by the Federal Communications Commission. An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(iii) Other cellular communication tower/antenna means any cellular communication tower or antenna that is part of a cellular system authorized by the Federal Communications Commission, but that is not covered by the definitions contained in Subparagraphs (A)(i) and (A)(ii). An auxiliary building housing electronic and communication equipment is permitted as part of this use.

(iv) Platform means that portion of a monopole cellular tower that is located on top of the pole and that supports directional, transmitting, and receiving antennas.

(v) Temporary cellular unit means any cellular communication structure, vehicle, trailer mounted apparatus, or device that is part of a system authorized by the Federal Communications Commission that is used to temporarily provide service where an existing tower/antenna for cellular communication is not operable due to one or more of the following reasons:

(aa) The existing tower/antenna for cellular communication use is damaged or destroyed by something other than the intentional act of the owner or agent; or

(bb) A demolition or construction permit has been issued on a building site that includes an existing mounted cellular antenna, monopole cellular tower, or other cellular communication tower/antenna.

(B) Districts permitted:

(i) Mounted cellular antennas: By right in A(A), single family, duplex, townhouse, CH, MF-1(A), MF-1(SAH), MF-2(A), MF-2(SAH), and MH(A) districts when attached to an existing structure that is currently occupied or was last occupied by a nonresidential use. By SUP in any of these districts if a mounted cellular antenna is attached to an existing structure that is currently occupied or was last occupied by a nonresidential use and exceeds the residential proximity slope height restrictions. The impact of the antenna height on an adjacent residential district must be considered in the SUP process.

(ii) Mounted cellular antennas: By right in MF-3(A), MF-4(A), office, retail, CS, industrial, central area, mixed use, multiple commercial, P(A), and UC-3 districts when attached to any existing structure. By SUP in any of these districts if a mounted cellular antenna exceeds the residential proximity slope height restrictions. The impact of the antenna height on an adjacent residential district must be considered in the SUP process.

(iii) Monopole cellular towers: By right in commercial, industrial, and central area districts with RAR required in commercial and industrial districts. By right in LO(A), MO(A), GO(A), mixed use, and multiple commercial districts if the height of the tower does not exceed the maximum height for structures in that district as provided in the district regulations (Divisions 51A-4.100 et seq.) with RAR required in the same districts; otherwise by SUP only. By right in the CR district if the height of the tower does not exceed 65 feet, with RAR required; otherwise by SUP only. By right in the RR district if the height of the tower does not exceed 80 feet, with RAR required; otherwise by SUP only. By SUP only in all residential, NO(A), [~~and~~] NS(A) districts, and by SUP in any district where a monopole cellular tower is permitted by right but exceeds the residential proximity slope height restrictions. The impact of the tower height on an adjacent residential district must be considered in the SUP process.

(iv) Other cellular communication towers/antennas are permitted by right in GO(A), CS, industrial, and central area districts. By SUP only in residential, NO(A), GO(A), MO(A), retail, mixed use, and multiple commercial districts. RAR required in GO(A), CS, and industrial districts. By SUP in any district where other cellular communication towers/antennas are permitted by right but exceed the residential proximity slope height restrictions. The impact of the other cellular communication tower/antenna height on an adjacent residential district must be considered in the SUP process.

(v) Temporary cellular unit is permitted by right in all districts.

(C) Required off-street parking: None required for temporary cellular units. One space if the cellular communication tower/antenna has an auxiliary building housing electronic and communication equipment ("auxiliary building") greater than 120 square feet. Physically separate auxiliary buildings will not be aggregated to determine the area of an auxiliary building for the purpose of determining required off-street parking requirements. No handicapped parking is required.

(D) Required off-street loading: None.

(E) Additional provisions:

(i) Mounted cellular antennas may not exceed 12 feet above the structure to which they are attached. Whip antennas are excluded from this calculation.

(ii) The pole portion of a monopole cellular tower may not exceed 42 inches in diameter. Microwave dishes or similar devices up to three feet in diameter may be mounted on the pole portion of a monopole cellular tower. No more than two dishes or similar devices may be placed on a monopole cellular tower. If microwave dishes or similar devices on a monopole cellular tower are concealed within a stealth tower, then there is no maximum.

(iii) The platform portion of a monopole cellular tower may not have a horizontal cross sectional area greater than 196 square feet. The depth of the platform may not exceed 4 feet, excluding any whip antenna. Only antennas that are part of a cellular system authorized by the Federal Communications Commission are permitted on a platform.

(iv) The owner of a monopole or other tower for cellular communication shall notify the building official when the tower is no longer operating as part of a cellular system authorized by the Federal Communications Commission. Within 12 months of the date the tower ceases to operate as part of an authorized cellular system, the tower must either be removed from the site, or a certificate of occupancy must be obtained to allow another permitted use of the tower. If within 12 months the owner fails to remove the tower or obtain proper authorization for use of the tower, the building official shall revoke the certificate of occupancy for the tower and notify the city attorney to pursue enforcement remedies.

(v) Mounted cellular antennas attached to utility structures are exempt from the residential proximity slope regulations in certain circumstances. *[See Section 51A-4.408(a)(1)(C).]*

(vi) Temporary cellular unit must comply with the following:

(aa) The building official shall issue a certificate of occupancy for a period not to exceed one year. The building official may grant up to two six-month extensions if an application for or amendment to a specific use permit or planned

development district has been filed with the director or a permit is issued for the replacement of the existing tower/antenna for cellular communication.

(bb) A temporary cellular unit must be removed upon the expiration of its certificate of occupancy or upon the completion or expiration of a permit to construct a structure to mount a permanent mounted cellular antenna, a monopole cellular tower, or other cellular antenna.

(cc) Except as provided in this provision, a temporary cellular unit must comply with the yard, lot and space regulations of the district and may not exceed the height of the existing tower/antenna for cellular communication use to be removed. Lightning rods atop a temporary cellular unit are not included in height calculations. A temporary cellular unit is not subject to residential proximity slope. If a temporary cellular unit collocates existing operators on a single vertical temporary cellular unit, the following regulations apply:

(I) If the height of the existing mounted cellular antenna to be removed is less than the maximum structure height of the district, the maximum structure height may extend an additional ten feet in height for each existing operator above one, not to exceed the maximum structure height of the district.

(II) If the height of the existing mounted cellular antennas to be removed is equal to or exceeds the maximum structure height of the district, the maximum height of the temporary cellular unit may not exceed the height of the existing mounted cellular antennas to be removed.

(vii) The provisions concerning specific use permits in Section 51A-4.219 apply except as modified by this subsection. The director shall send written notice of a public hearing on an application for an SUP for a tower/antenna for cellular communication use to all owners of real property lying within 500 feet of the building site as defined in Section 51A-4.601 on which the tower/antenna for cellular communication use will be located. If the site does not comply with Section 51A-4.601, the director shall send written notice of a public hearing on an application for an SUP for a tower/antenna for cellular communication use to all owners of real property lying within 500 feet of the boundaries of a lot on a preliminary plat that is approved by the city plan commission upon which the tower/antenna for cellular communication use is to be located.

(viii) An application or amendment for a specific use permit or planned development district that would otherwise be required is not required for a modification to an existing tower/antenna for cellular communication or its base station unless the modification substantially changes the physical dimensions of the existing tower/antenna for cellular communication, or its base station. A modification substantially changes the physical dimensions of an existing tower/antenna for cellular communication or its base station if it meets any of the criteria listed in 47 C.F.R. §1.40001(b)(7)."

SECTION 3. That Subparagraph (D) of Paragraph (1) of Subsection (a), "Special Height Provisions," of Section 51A-4.408, "Maximum Building Height," of Division 51A-4.400, "Yard, Lot, and Space Regulations," of Article IV, "Zoning Regulations," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended to read as follows:

"(D) A tower/antenna for cellular communication [~~monopole cellular tower~~], as defined in Paragraph 51A-4.212(10.1), is exempt from residential proximity slope height restrictions if a specific use permit is required, or if a modification to an existing tower/antenna for cellular communication use is modified in a manner that does not substantially change the physical dimensions of the existing tower/antenna for cellular communication or its auxiliary building. A modification substantially changes the physical dimensions of an existing other cellular communication tower/antenna or its auxiliary building if it meets any of the criteria listed in 47 C.F.R. §1.40001(b)(7) [~~for the monopole cellular tower use~~]."

SECTION 4. That Paragraph (2), "Remodeling a Structure Housing a Nonconforming Use," of Subsection (b), "Changes to Nonconforming Uses," of Section 51A-4.704, "Nonconforming Uses and Structures," of Division 51A-4.700, "Zoning Procedures," of Article IV, "Zoning Regulations," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended to read as follows:

"(2) Remodeling a structure housing a nonconforming use. A person may renovate, remodel, or repair a structure housing a nonconforming use if the work does not enlarge the nonconforming use. A person may renovate, remodel, or repair a structure housing a tower/antenna for cellular communication use if it does not substantially change the physical dimensions of the structure housing a tower/antenna for cellular communication use. A substantial change is anything that meets the criteria listed in 47 C.F.R. §1.40001(b)(7)."

SECTION 5. That Paragraph (5), "Enlargement of a Nonconforming Use," of Subsection (b), "Changes to Nonconforming Uses," of Section 51A-4.704, "Nonconforming Uses and Structures," of Division 51A-4.700, "Zoning Procedures," of Article IV, "Zoning Regulations," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended by adding a new Subparagraph (D) to read as follows:

"(D) A modification to a nonconforming tower/antenna for cellular communication use may be enlarged without board approval if it the enlargement does not

substantially change the physical dimensions of the tower/antenna for cellular communication use. A substantial change is anything that meets the criteria listed in 47 C.F.R. §1.40001(b)(7)."

SECTION 6. That Subsection (c), "Nonconforming Structures," of Section 51A-4.704, "Nonconforming Uses and Structures," of Division 51A-4.700, "Zoning Procedures," of Article IV, "Zoning Regulations," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended by adding a new Paragraph (4) to read as follows:

"(4) A person may renovate, remodel, repair, rebuild, or enlarge the portion of a nonconforming structure that supports a tower/antenna for cellular communication without board approval if it does not substantially change the physical dimensions of the tower or base station. A substantial change is anything that meets the criteria listed in 47 C.F.R. §1.40001(b)(7)."

SECTION 7. That Subparagraph (A), "In General," of Paragraph (5), "Configuration," of Subsection (k), "Open Space Lot," of Section 51A-13.304, "Open Space Lot," of Division 51A-4.300, "District Regulations," of Article XIII, "Form Districts," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended to read as follows:

"**(A) In General.**

An open space lot must be configured as set forth in Subparagraphs (B) through (L[~~K~~])."

SECTION 8. That Paragraph (5), "Configuration," of Subsection (k), "Open Space Lot," of Section 51A-13.304, "Open Space Lot," of Division 51A-4.300, "District Regulations," of Article XIII, "Form Districts," of Chapter 51A, "Dallas Development Code: Ordinance No. 19455, as amended," of the Dallas City Code is amended by adding a new Subparagraph (L), "Utilities," to read as follows:

"**(L) Utilities.**

Except as provided, utilities on an open space lot must comply with the use regulations and additional provisions of Section 51A-13.306. Utilities must meet all standards for design and landscaping required in this article, unless otherwise approved by specific use permit. Utilities may not be used to satisfy public or private open space requirements."

SECTION 9. That the director of sustainable development and construction shall revise the use charts to reflect the change in use regulations made by this ordinance, and shall provide these charts for publication in the Dallas Development Code.

SECTION 10. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed $2,000.

SECTION 11. That Chapters 51 and 51A of the Dallas City Code shall remain in full force and effect, save and except as amended by this ordinance.

SECTION 12. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of Chapter 1 of the Dallas City Code, as amended.

SECTION 13. That this ordinance shall take effect immediately from and after its passage and publication in accordance with the provisions of the Charter of the City of Dallas, and it is accordingly so ordained.

APPROVED AS TO FORM:

WARREN M.S. ERNST, City Attorney

By_____
Assistant City Attorney

Passed_____

AGENDA ITEM # 61

KEY FOCUS AREA: Public Safety

AGENDA DATE: January 13, 2016

COUNCIL DISTRICT(S): All

DEPARTMENT: Police

CMO: Eric Campbell, 670-3255

MAPSCO: N/A

SUBJECT

A public hearing to receive comments on the renewal of the Dallas juvenile curfew ordinance, which provides daytime and nighttime curfew hours for minors, and, at the close of the hearing, consideration of an ordinance amending Chapter 31 of the Dallas City Code to reinstate and continue in effect the Dallas juvenile curfew ordinance - Financing: No cost consideration to the City

BACKGROUND

Enforcement of the Dallas juvenile curfew ordinance began May 1, 1994. Section 370.002 of the Texas Local Government Code requires that the curfew ordinance be reviewed every three years after conducting public hearings to receive citizen comments on whether the curfew ordinance should be abolished, continued, or modified. The last renewal of the Dallas juvenile curfew ordinance (which contained nighttime curfew hours) was approved on April 25, 2012 and became effective May 1, 2012. The daytime curfew hours were added to the juvenile curfew ordinance on May 13, 2009 and became effective May 18, 2009. The juvenile curfew ordinance expired on May 1, 2015.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

This item was briefed to the Public Safety Committee on November 9, 2015.

Public hearings authorized by the City Council on November 10, 2015.

Public hearing held on December 9, 2015.

FISCAL INFORMATION

No cost consideration to the City.

ORDINANCE NO. _____

An ordinance reinstating Section 31-33 of CHAPTER 31, "OFFENSES - MISCELLANEOUS," of the Dallas City Code, as amended; providing for the continuation of the city's juvenile curfew ordinance as required by state law; continuing daytime and nighttime curfew hours for minors; readopting definitions; continuing provisions for offenses and defenses for minors, parents and guardians of minors, and business establishments violating curfew requirements; continuing provisions for enforcement of curfew requirements by the police department; continuing provisions for waiver by the municipal court of jurisdiction over a minor when required under the Texas Family Code; providing a penalty not to exceed $500; providing a saving clause; providing a severability clause; and providing an effective date and an expiration date.

WHEREAS, on June 12, 1991, the city council of the city of Dallas adopted Ordinance No. 20966, which added Section 31-33 to the Dallas City Code to establish nighttime curfew hours for minors, which ordinance was amended by Ordinance No. 21309 on June 10, 1992; and

WHEREAS, the city voluntarily delayed enforcement of this juvenile curfew ordinance pending adjudication of a challenge to the ordinance's constitutionality; and

WHEREAS, on August 10, 1992, the United States District Court for the Northern District of Texas permanently enjoined the city from enforcing the juvenile curfew ordinance; on November 19, 1993, the United States Fifth Circuit Court of Appeals overturned the district court's decision and upheld the city's ordinance as constitutional; and in April 1994, the United States Supreme Court declined to review the Fifth Circuit's decision; and

WHEREAS, on May 1, 1994, the city began initial enforcement of the juvenile curfew ordinance; and

WHEREAS, Section 370.002 of the Texas Local Government Code requires that, before the third anniversary of the adoption of a juvenile curfew ordinance and every third year thereafter, the governing body of a home rule city must review the ordinance's effects on the community and on the problems the ordinance was intended to remedy, conduct public hearings on the need to continue the ordinance, and abolish, continue, or modify the ordinance, or else the ordinance will automatically expire; and

WHEREAS, after conducting public hearings on the need to continue the juvenile curfew ordinance, the city council adopted Ordinance No. 23079 (passed April 9, 1997; effective May 1, 1997), Ordinance No. 24235 (passed April 26, 2000; effective May 1, 2000), Ordinance No. 25231 (passed April 9, 2003; effective May 1, 2003), Ordinance No. 26336 (passed April 26, 2006; effective May 1, 2006), and Ordinance No. 27527 (passed April 22, 2009; effective May 1, 2009), each of which readopted and continued in effect the juvenile curfew ordinance establishing nighttime curfew hours for minors; adopted Ordinance No. 27538 (passed May 13, 2009; effective May 18, 2009), which added daytime curfew hours for minors to the juvenile curfew ordinance; and adopted Ordinance No. 28639 (passed April 25, 2012; effective May 1, 2012), which readopted and continued in effect the juvenile curfew ordinance establishing daytime and nighttime curfew hours for minors; and

WHEREAS, although the juvenile curfew ordinance automatically expired on May 1, 2015, the city council has reviewed the ordinance and determined that the daytime and nighttime curfew hours for minors established by the ordinance have had a positive effect on the community and have had a significant effect on reducing crimes committed by and against juveniles in the city, which problems the ordinance was intended to remedy; and

WHEREAS, on December 9, 2015 and January 13, 2016, the city council conducted public hearings on the need to continue the juvenile curfew ordinance; and

WHEREAS, the city council has determined that a need exists to continue in effect the juvenile curfew ordinance in order to further the health, safety, and welfare of juveniles, and other persons, residing in or visiting the city of Dallas; Now, Therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Section 31-33, "Curfew Hours for Minors," of CHAPTER 31, "OFFENSES - MISCELLANEOUS," of the Dallas City Code, as amended, is readopted and continued in effect, as restated below, with an amendment to Subsection (f) to read as follows:

"SEC. 31-33. CURFEW HOURS FOR MINORS.

(a) Definitions. In this section:

(1) CURFEW HOURS means:

(A) 11:00 p.m. on any Sunday, Monday, Tuesday, Wednesday, or Thursday until 6:00 a.m. of the following day;

(B) 12:01 a.m. until 6:00 a.m. on any Saturday or Sunday; and

(C) 9:00 a.m. until 2:30 p.m. on any Monday, Tuesday, Wednesday, Thursday, or Friday.

(2) EMERGENCY means an unforeseen combination of circumstances or the resulting state that calls for immediate action. The term includes, but is not limited to, a fire, a natural disaster, an automobile accident, or any situation requiring immediate action to prevent serious bodily injury or loss of life.

(3) ESTABLISHMENT means any privately-owned place of business operated for a profit to which the public is invited, including but not limited to any place of amusement or entertainment.

(4) GUARDIAN means:

(A) a person who, under court order, is the guardian of the person of a minor; or

(B) a public or private agency with whom a minor has been placed by a court.

(5) IN SESSION means the status of a school during the fall or spring term when students are required to attend the school. A school is not in session during its summer break or during any holiday or other scheduled general student vacation day or part of a day observed by the school.

(6) MINOR means any person under 17 years of age.

(7) OPERATOR means any individual, firm, association, partnership, or corporation operating, managing, or conducting any establishment. The term includes the members or partners of an association or partnership and the officers of a corporation.

(8) PARENT means a person who is:

(A) a natural parent, adoptive parent, or step-parent of another person; or

(B) at least 18 years of age and authorized by a parent or guardian to have the care and custody of a minor.

(9) PUBLIC PLACE means any place to which the public or a substantial group of the public has access and includes, but is not limited to, streets, highways, and the common areas of schools, hospitals, apartment houses, office buildings, transport facilities, and shops.

(10) REMAIN means to:

(A) linger or stay; or

(B) fail to leave premises when requested to do so by a police officer or the owner, operator, or other person in control of the premises.

(11) SERIOUS BODILY INJURY means bodily injury that creates a substantial risk of death or that causes death, serious permanent disfigurement, or protracted loss or impairment of the function of any bodily member or organ.

(b) Offenses.

(1) A minor commits an offense if he remains in any public place or on the premises of any establishment within the city during curfew hours.

(2) A parent or guardian of a minor commits an offense if he knowingly permits, or by insufficient control allows, the minor to remain in any public place or on the premises of any establishment within the city during curfew hours.

(3) The owner, operator, or any employee of an establishment commits an offense if he knowingly allows a minor to remain upon the premises of the establishment during curfew hours.

(c) Defenses.

(1) It is a defense to prosecution under Subsection (b) that the minor was:

(A) accompanied by the minor's parent or guardian;

(B) on an errand at the direction of the minor's parent or guardian, without any detour or stop;

(C) in a motor vehicle involved in interstate travel;

(D) engaged in an employment activity, or going to or returning home from an employment activity, without any detour or stop;

(E) involved in an emergency;

(F) on the sidewalk abutting the minor's residence or abutting the residence of a next-door neighbor if the neighbor did not complain to the police department about the minor's presence, except that this defense does not apply to a violation of the curfew hours described in Subsection (a)(1)(C) of this section;

(G) attending an official school, religious, or other recreational activity supervised by adults and sponsored by the city of Dallas, a civic organization, or another similar entity that takes responsibility for the minor, or going to or returning home from, without any detour or stop, an official school, religious, or other recreational activity supervised by adults and sponsored by the city of Dallas, a civic organization, or another similar entity that takes responsibility for the minor;

(H) exercising First Amendment rights protected by the United States Constitution, such as the free exercise of religion, freedom of speech, and the right of assembly; or

(I) married or had been married or had disabilities of minority removed in accordance with Chapter 31 of the Texas Family Code.

(2) It is a defense to prosecution under Subsection (b)(3) that the owner, operator, or employee of an establishment promptly notified the police department that a minor was present on the premises of the establishment during curfew hours and refused to leave.

(3) It is a defense to prosecution under Subsection (b) of this section for a violation of the curfew hours described in Subsection (a)(1)(C) that:

(A) the school in which the minor was enrolled or otherwise required to attend was not in session;

(B) the minor was on the premises of the school in which the minor was enrolled or otherwise required to attend;

(C) the minor was participating in a school-approved work study program, or was going to the work study program or returning to home or school from the work-study program without any detour or stop;

(D) the minor was on a lunch break from a school that permits an open campus lunch and was qualified to participate in the open campus lunch program;

(E) the minor was on an excused absence from the school in which the minor was enrolled or otherwise required to attend and had permission from a school official, or, in the case of a home-schooled minor, from the minor's parent or guardian; or

(F) the minor was a high school graduate or had received a high school equivalency certificate.

(d) Enforcement.

(1) Before taking any enforcement action under this section, a police officer shall ask the apparent offender's age and reason for being in the public place. The officer shall not issue a citation or make an arrest under this section unless the officer reasonably believes that an offense has occurred and that, based on any response and other circumstances, no defense in Subsection (c) is present.

(2) A police officer shall not issue a citation to or arrest a parent or guardian of a minor for a violation of Subsection (b)(2) of this section relating to the curfew hours described in Subsection (a)(1)(C), unless the parent or guardian has, within the same calendar year, received at least two prior written warnings from a police officer for a violation of Subsection (b)(2) relating to the curfew hours described in Subsection (a)(1)(C). In calculating the number of warnings received by a parent or guardian in a calendar year, all warnings issued to the parent or guardian will be counted, regardless of whether the warnings relate to the same minor.

(3) A police officer shall not issue a citation to or arrest an owner, operator, or employee of an establishment for a violation of Subsection (b)(3) of this section relating to the curfew hours described in Subsection (a)(1)(C), unless the establishment has, within the same calendar year, received at least two prior written warnings from a police officer for a violation of Subsection (b)(3) relating to the curfew hours described in Subsection (a)(1)(C). In calculating the number of warnings received by an establishment in a calendar year, all warnings issued to any owner, operator, or employee of the establishment will be counted, regardless of whether the warnings relate to the same minor.

(e) Penalties.

(1) A person who violates a provision of this chapter is guilty of a separate offense for each day or part of a day during which the violation is committed, continued, or permitted. Each offense, upon conviction, is punishable by a fine not to exceed $500.

(2) When required by Section 51.08 of the Texas Family Code, as amended, the municipal court shall waive original jurisdiction over a minor who violates Subsection (b)(1) of this section and shall refer the minor to juvenile court.

(f) Expiration. This section expires on January 18, 2019 [~~May 1, 2015~~], unless sooner terminated or extended by city council ordinance."

SECTION 2. That CHAPTER 31 of the Dallas City Code, as amended, will remain in full force and effect, save and except as amended by this ordinance.

SECTION 3. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of CHAPTER 1 of the Dallas City Code, as amended.

SECTION 4. That this ordinance will take effect on January 18, 2016.

APPROVED AS TO FORM:

WARREN M. S. ERNST., City Attorney

By _____
Assistant City Attorney

Passed _____