



City of Dallas

Memorandum

Date: April 24, 2015

To: Honorable Members of the Quality of Life & Environment Committee: Dwaine R. Caraway (Chair), Sandy Greyson (Vice Chair), Rick Callahan, Carolyn R. Davis, Lee M. Kleinman, Adam Medrano

Subject: Sanitation Services Bulk and Brush Collection

On Monday, April 27, 2015, the Quality of Life & Environment Council Committee will be briefed an update on the Sanitation Services Bulk and Brush Collection. The briefing materials are attached for your review.

Please feel free to contact me if you have any questions or need additional information.

A handwritten signature in black ink, appearing to read 'Mark McDaniel'.

Mark McDaniel
Assistant City Manager

Attachment

c: The Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Rosa A. Rios, City Secretary
Daniel F. Solis, Administrative Judge
Craig D. Kinton, City Auditor
Ryan S. Evans, First Assistant City Manager
Eric D. Campbell, Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Sana Syed, Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor and Council
Kelly High, Director, Sanitation Services

Sanitation Services Bulk and Brush Collection

Quality of Life & Environment Committee

April 27, 2015



Briefing Overview

- Provide an overview of the current collection program
- Discuss challenges with the current program
- Provide information related to other cities
- Begin a discussion on possible changes to the current collection program and the benefits
- Discuss possible pilot programs
- Provide policy considerations
- Next Steps

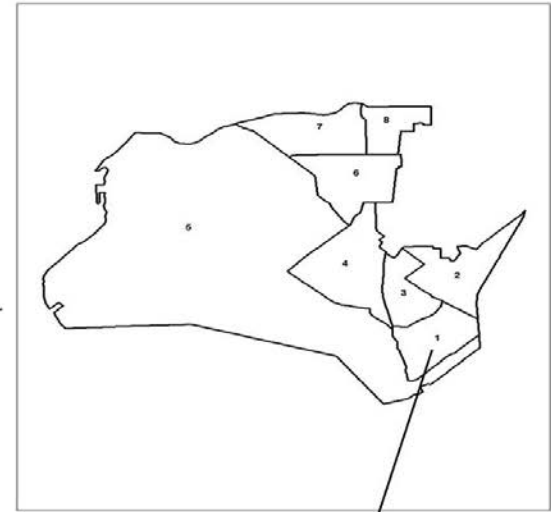
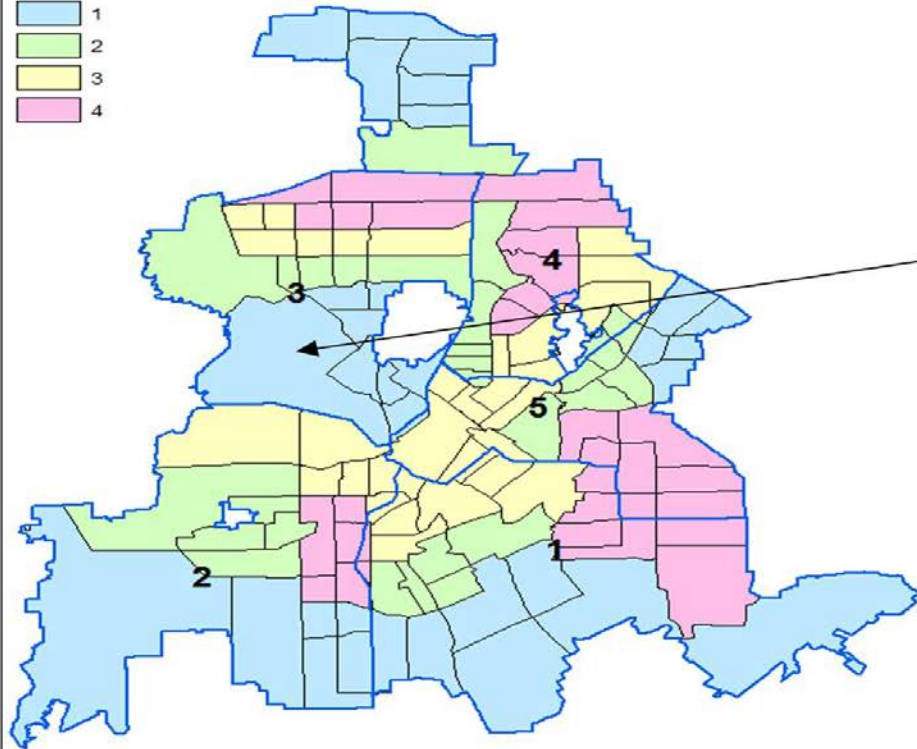
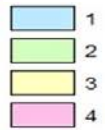
Current Collection Program



Current Collection Schedule

- Bulk & brush is collected monthly (12 times annually) by 5 Sanitation collection districts
- Sanitation districts are divided into four collection weeks per month (Weeks 1, 2, 3 and 4)
- Bulk & Brush can be set out beginning Thursday prior to a specific collection week
 - All material must be set out by Monday morning at 7 am
- Collection occurs Monday through Thursday, but depending on volume can extend into the weekend

Bulk and Brush Week of Service



Current Collection Criteria

- Essentially, no limitations on volume
 - Chapter 18 states that when quantities are “excessive”, “the director of Sanitation shall determine the amount of brush to be collected”
 - Over the years this has evolved to no limits
- Brush and bulk items can be commingled
 - Tree limbs, brush, and bagged leaves accepted
 - White goods/appliances allowed (except those containing refrigerant)
 - Household furniture and other bulky items accepted
 - Small debris should be containerized
 - No chemicals, paints, rocks, bricks, electronics, construction/remodeling debris, tires, or bagged grass clippings (except from March 15 to April 15)

Collection Method

- Bulk & Brush is collected using “roto-booms” or grapple trucks and truck/trailer combos
 - A typical brush crew consists of 1 roto-boom and 2 truck/trailer combos
 - Districts typically have 4-6 crews for weekly collections
- On Wednesdays, during peak season, rear loader refuse trucks are utilized to collect small set outs and bagged debris



By The Numbers



Bulk and Brush Collection Budget

- Annual budget of \$13M
- 113 regular FTEs
- 5 Combo Booms
- 26 Roto-booms
- 52 brush truck/trailer combos

Note: Does not include the supplemental use of rear loaders and disposal cost of approximately \$2M annually

Collection Volumes

- Dallas crews collect over 150,000 tons per year
 - 0.63 tons per household (compared to 0.24 tons in Austin, 0.29 tons in Ft. Worth, 0.42 tons in Houston and 0.24 tons in San Antonio)
- Monthly volumes range from less than 10K tons to greater than 20K tons
- Seasonal storms can create significant volume increases
 - In FY 2013-14 crews collected over 172,000 tons (0.72 tons/household)



Matrix of Monthly Volumes

TONS	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	AVG	TOTAL
FY-15	20,455	17,813	14,858	12,183	8,375	7,734	24,000*						14,457	<i>Projected</i> 173,000
FY-14	14,473	10,788	21,567	18,758	8,871	12,227	17,319	18,632	12,925	15,732	11,862	9,082	14,353	172,234
FY-13	9,394	13,970	12,116	11,728	11,343	12,433	13,433	22,491	16,284	10,970	14,127	9,029	13,110	157,319
FY-12	10,950	12,177	10,576	12,071	10,254	16,315	15,847	15,063	14,148	10,020	13,779	10,043	12,604	151,243
3 yr Avg	11,606	12,312	14,753	14,186	10,156	13,658	15,533	18,729	14,452	12,240	13,256	9,385	13,355	160,265

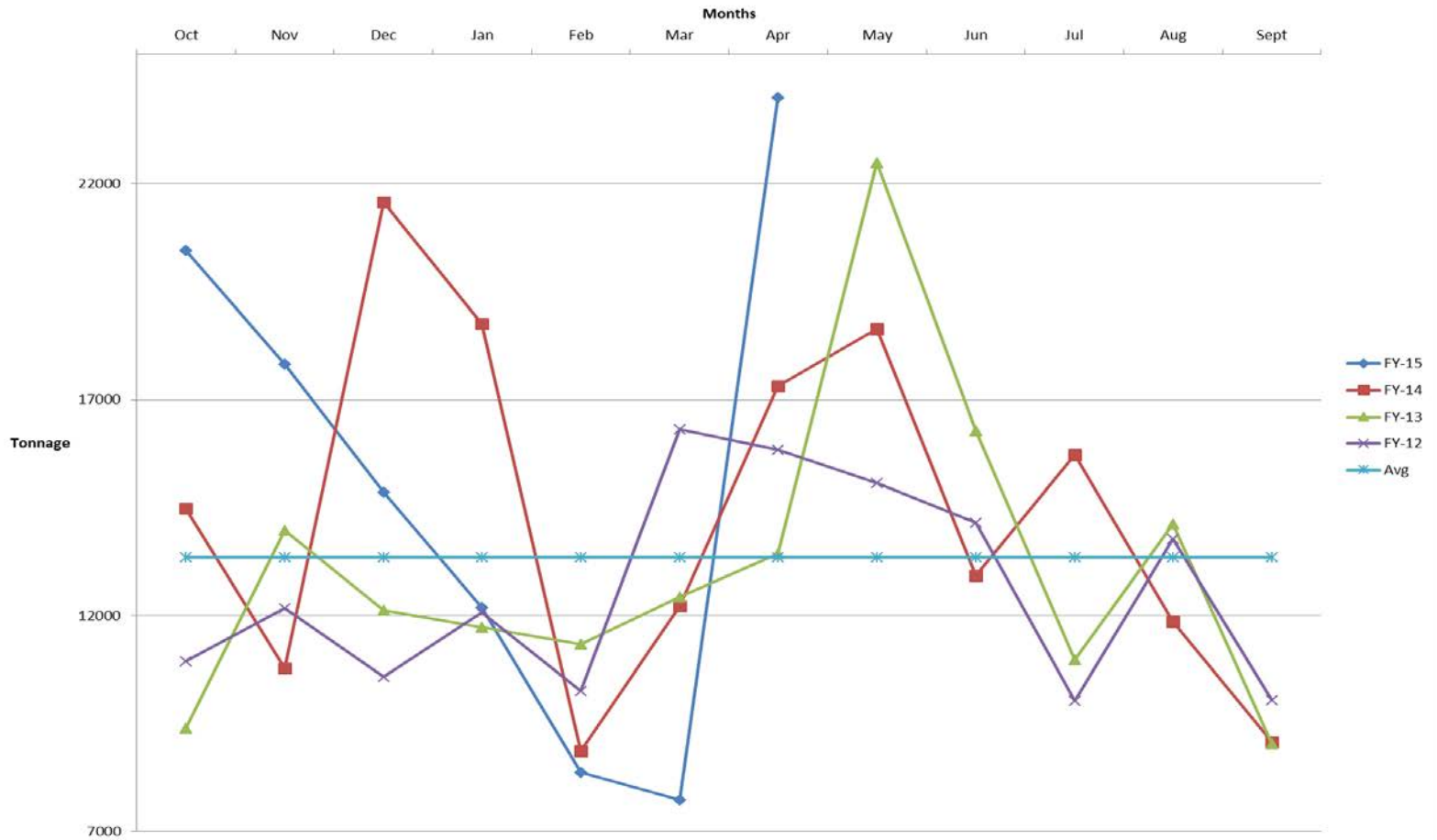
Extremely High

Slightly Above

Within or Below

*Estimated for April 2015. Over 12K tons collected in the first two collection weeks

Matrix of Monthly Volumes



Matrix of Weekly Volumes

Calendar Year 2014					
SANITATION DISTRICTS	WEEK 1 TONS	WEEK 2 TONS	WEEK 3 TONS	WEEK 4 TONS	TOTAL
1	9,148	8,023	7,470	11,593	36,234
2	9,390	9,097	7,080	7,685	33,252
3	7,386	6,805	7,857	8,669	30,717
4	12,747	7,305	9,873	8,783	38,708
5	9,682	6,715	5,872	11,054	33,323
TOTAL					172,234

Bulk and Brush Set Outs



Brush Set Outs



Bagged Leaf Set Outs



Illegal Set-Outs or Illegal Dumping?



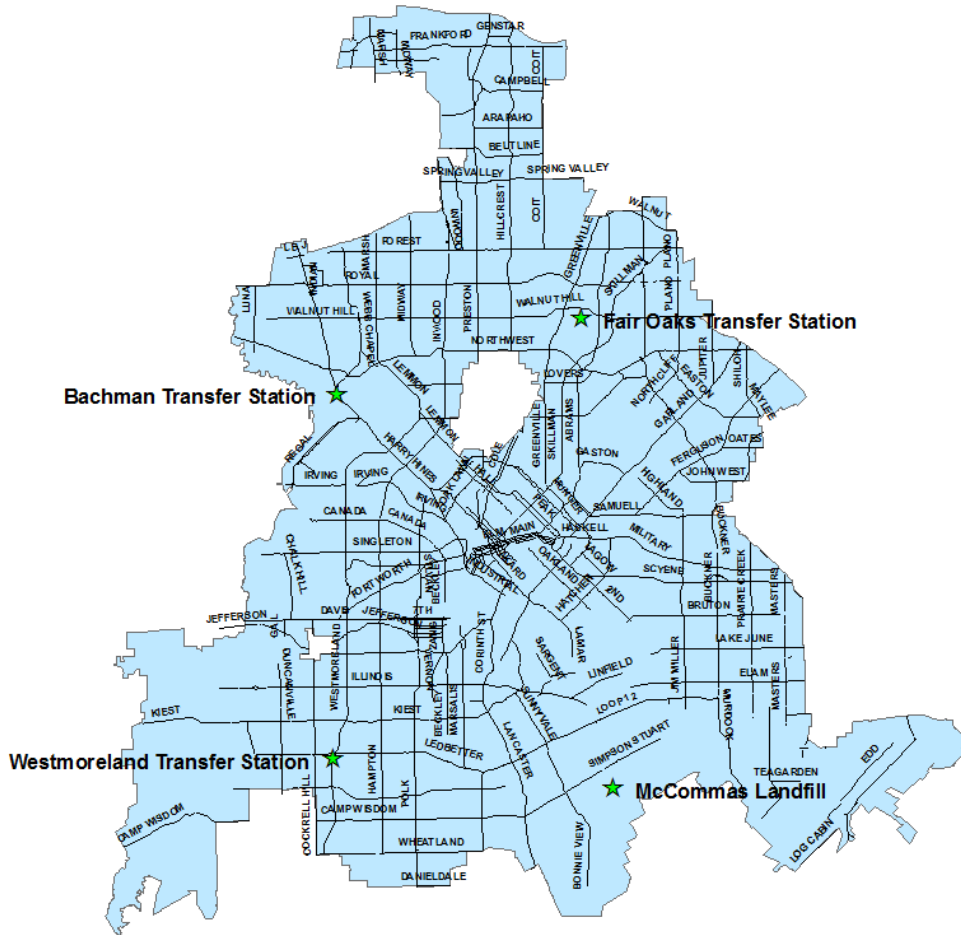
Other Disposal Options (Self Haul)

Other Bulk and Brush Disposal Options

- Residents may bring bulk and brush debris to the City's landfill or transfer stations for disposal
 - McCommas Bluff Landfill (Monday - Saturday)
 - Monday-Friday 5:00am – 8:00pm, Saturday 6:00am – 4:00pm (85 hours per week)
 - Bachman Transfer Station (Monday – Saturday)
 - 7:30am - 5:00pm (57 hours a week)
 - Southwest and Fair Oaks Transfer Station (Wednesday & Saturday)
 - 7:30am – 5:00pm (19 hours a week)

Note: Residents free, but limited to a 15ft. trailer or less

CITY OF DALLAS SANITATION SERVICES DISPOSAL LOCATIONS



Collection Challenges



Current Collection Challenges

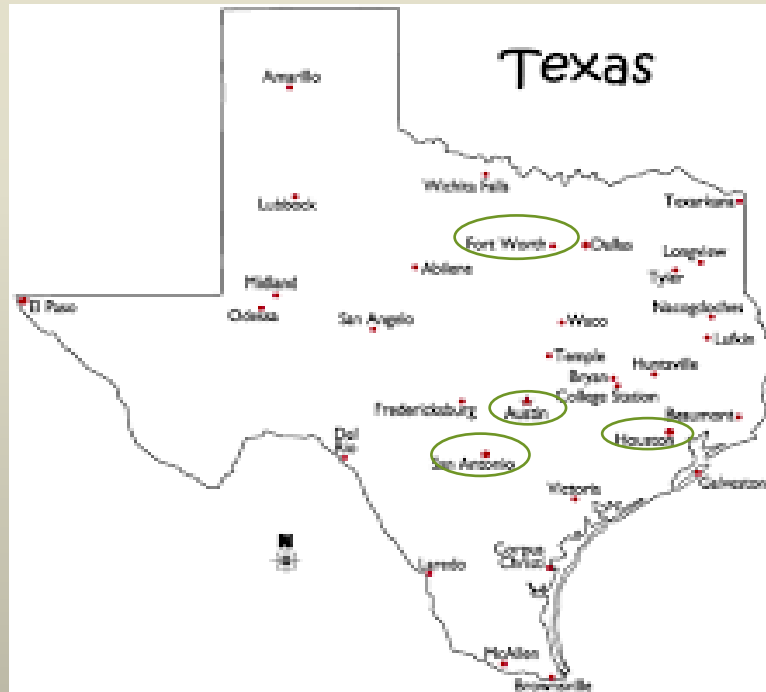
- Based on the time of year, volumes can change dramatically and impact schedules
- Based on current set out and collection schedules, material may be sitting out for 7 - 10 days before collection
- Bulk and Brush is commingled and the organic matter cannot be separated for diversion or reuse
 - Potentially 40-60% organic material

Current Collection Challenges

- There are few restrictions on set out volume and frequency
 - May encourage some homeowners to utilize the City's bulk and brush service for non-residential use
 - May encourage non-resident illegal dumping
 - All customers are paying for those who frequently set out large volumes
- Landscaping companies often utilize the City's collection service for their residual disposal
- Set outs are often "junky" and contribute to blight



What are other major Texas cities doing?



Other Major Texas Cities

- Austin (193,000 households)
 - 2X per year bulk and 2x per year brush (restrictions)
 - Weekly yard waste (restrictions)
 - 46,000 tons collected annually (0.24 tons/household)
- Ft. Worth (207,000 households)
 - Monthly bulk (restrictions)
 - No monthly brush, but weekly yard waste (restrictions)
 - 61,000 tons collected annually (.29 tons/household)

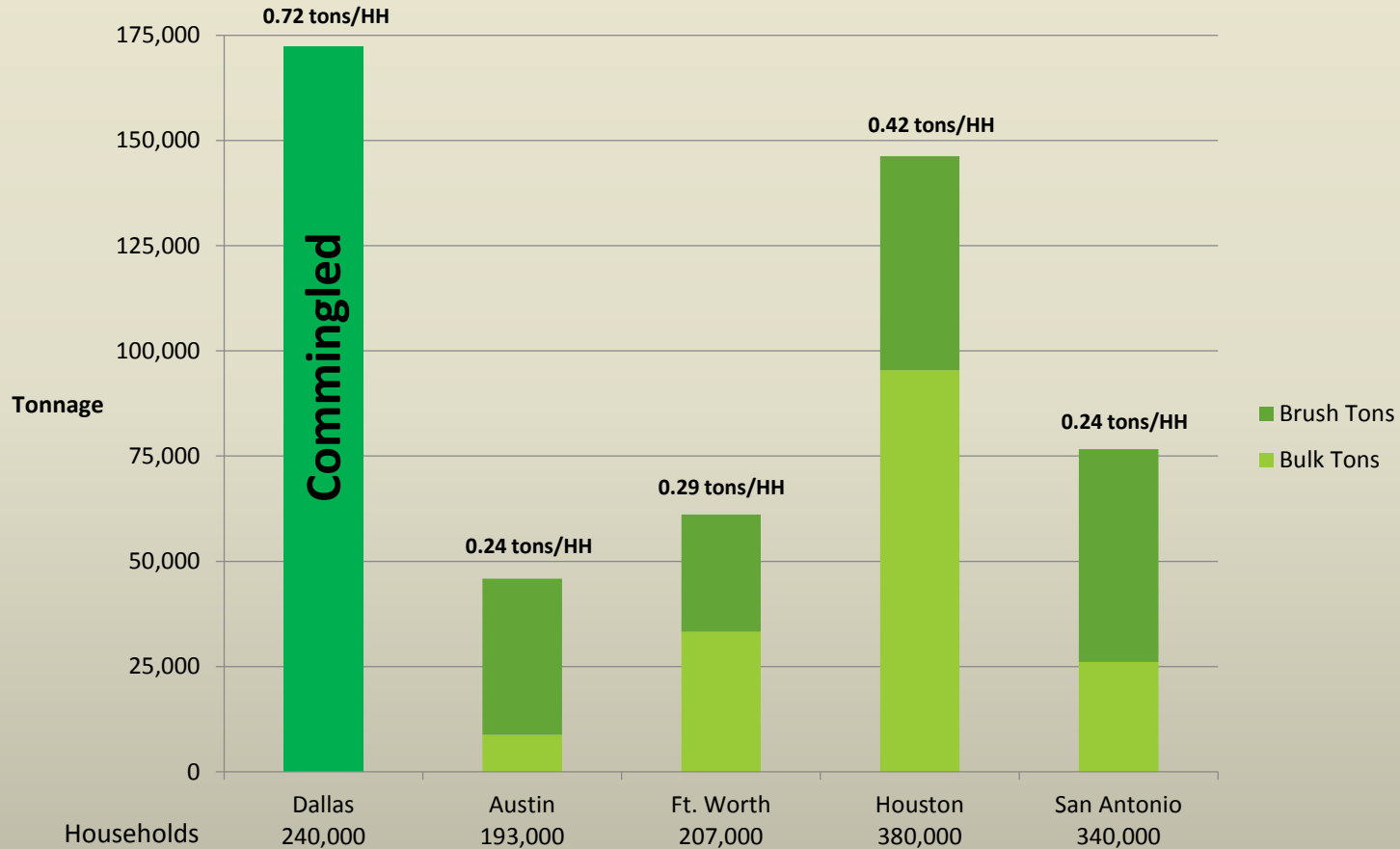
Other Major Texas Cities

- Houston (380,000 households)
 - Alternating bulk and brush months
 - Limits on volume
 - Weekly yard waste (restrictions)
 - Landscape contractors required to haul their waste
 - 160,000 tons collected annually (0.42 tons/household)
- San Antonio (340,000 households)
 - 2X per year bulk and 2x per year brush (restrictions)
 - Piloting weekly organics collection (roll-cart)
 - 80,000 tons collected annually (0.24 tons/household)

Other Major Texas Cities (drop off sites)

- Austin
 - 1 drop off location
 - Open 40 hours a week (Monday thru Friday 8-4)
- Ft. Worth
 - 3 drop off locations
 - Open 59 hours/week (Monday thru Friday 8-6, Saturday 8-5)
- Houston
 - 6 drop off locations
 - Open 45 hours/week (Wednesday thru Sunday 10-7)
- San Antonio
 - 4 drop off locations
 - Open 40 hours/week (Tuesday thru Friday 8-5, Saturday 8-12)

FY14 Comparison of Other Texas Cities



Potential Program Changes



Changes for Dallas to consider

- Separate bulk and brush collection
- Place volume restrictions on set outs
- Reduce length of early set out times
- Require landscapers to haul off their own waste
- Develop conveniently located and accessible citizen drop off sites
- Increase inspection to verify legitimate set outs
- Change bulk/brush week boundaries to balance house counts per collection week

Benefits of Changes



Benefits of programmatic changes

- Reduced number of days that material sits out on the curb
- Bulk or “junky” items would be set out less frequently
- Restrictions would reduce the overall volume of material
- Limited volume and collection days should discourage non-residential set outs
- Convenient drop off options for out of cycle disposal needs

Benefits of programmatic changes

- Neighborhood drop off locations could limit illegal dumping in the neighborhoods
 - Many Texas cities utilize drop off locations to limit illegal dumping
- Organics (trees, brush, leaves and grass) can be diverted from the landfill and/or beneficially used
 - It is estimated that 40-60% of the 150,000 tons collected annually could be diverted from the landfill or beneficially reused
 - Consistent with our Zero Waste Goals

Bulk & Brush: Recommendations

#1 Bulk & Brush: Boundary Realignment

- Several weeks have disproportional household counts
 - Brush collection weeks need to be realigned and balanced to optimize route collection efficiency
 - Disproportional house counts, tonnage collected, combined with haul distance create inefficiencies

Estimated Bulk/Brush House Count By District								
	Week 1	Week 2	Week 3	Week 4	Total	Average	Low	High
D1	13,582	9,187	9,604	12,125	44,498	11,125	9,187	13,582
D2	18,574	14,841	9,669	10,134	53,218	13,305	9,669	18,574
D3	10,403	8,067	9,797	10,465	38,732	9,683	8,067	10,465
D4	19,737	11,091	14,015	13,913	58,756	14,689	11,091	19,737
D5	11,545	8,116	9,418	18,997	48,076	12,019	8,116	18,997
Total	73,841	51,302	52,503	65,634	243,280	60,820	51,302	73,841

Examples

#2 Neighborhood Drop Off Site - Pilot

- The City should consider the use of strategically placed residential drop off locations for citizen “self haul” use
 - Intended to discourage neighborhood illegal dumping by providing a convenient drop off location and service
 - These would be minimally staffed, appropriately designed and landscaped, NOT transfer stations (no waste stored overnight)
 - Residential use only, no commercial (monthly use limits)
 - Available 5-6 days a week
 - 1 acre facility approximately costs \$2.5m - \$3.5M

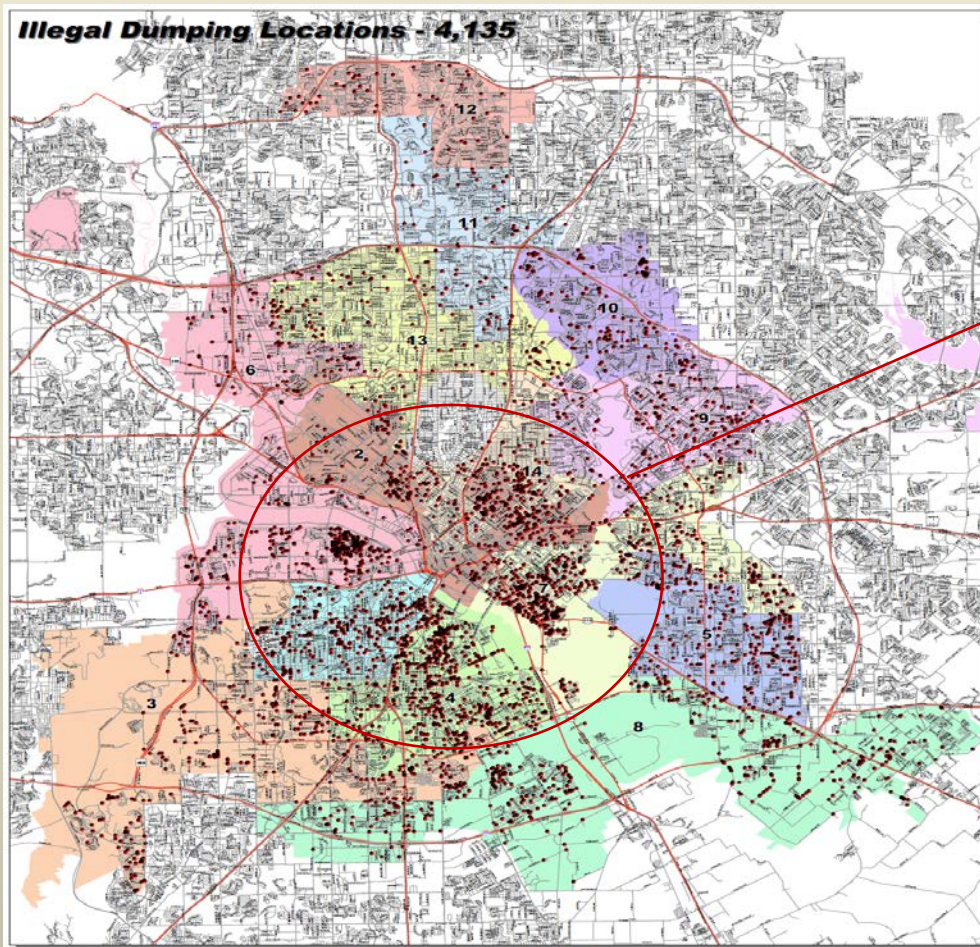


**San Antonio
Neighborhood Drop Off**

#2 Neighborhood Drop Off Site - Pilot

- If directed, staff could locate and develop a temporary neighborhood drop off location
 - Identify a temporary location that is:
 - Conveniently located and suitable to the surrounding neighborhood
 - In an area with high concentrations of illegal dumping
 - During the pilot, we would track impact on illegal dumping cases in the surrounding area, receive neighborhood feedback and test the effectiveness of the site

Illegal Dumping Locations - 4,135



Areas of concentration

**Illegal Dumping CCS Response
FY2013-2014**

Legend

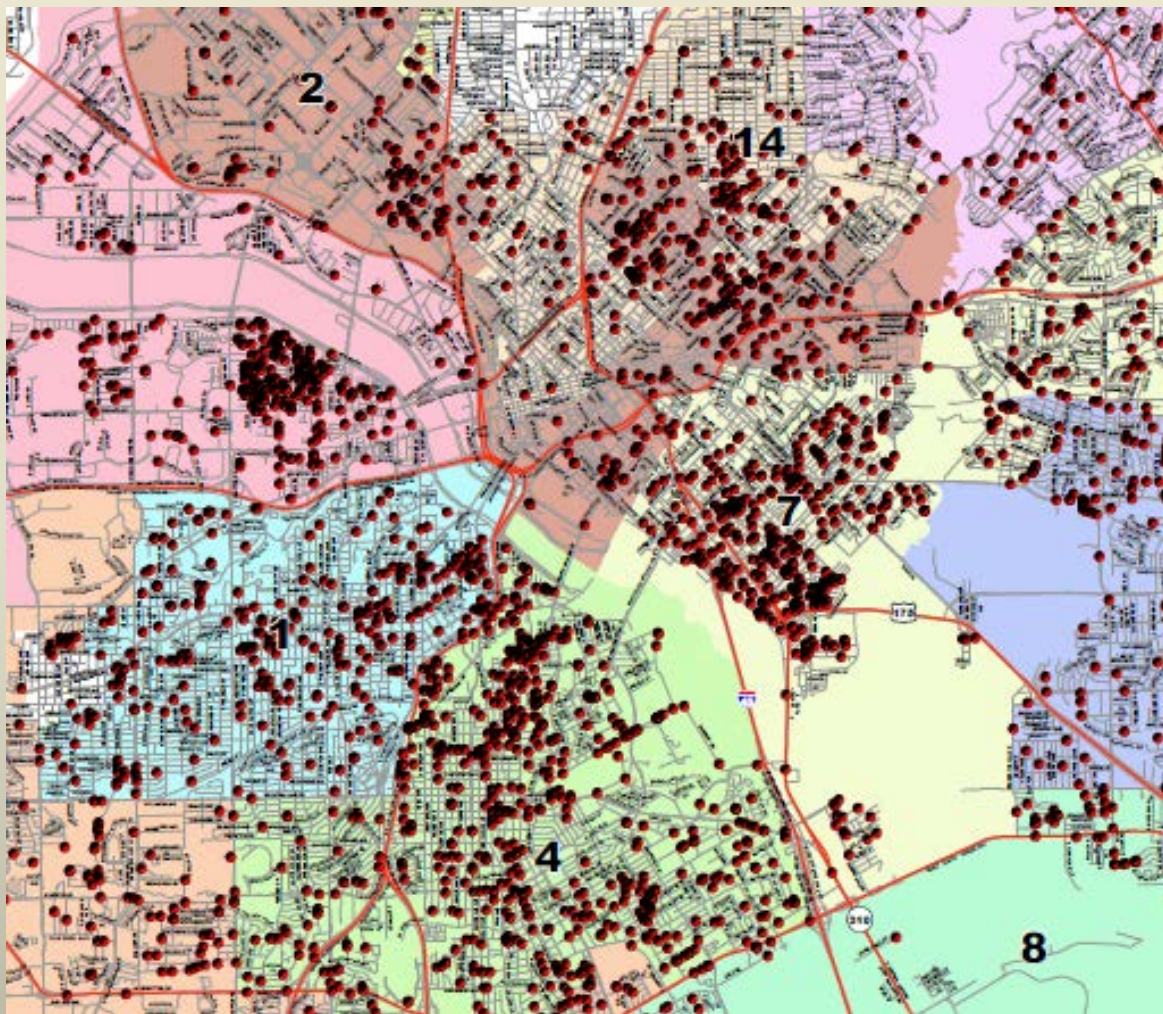
Council Districts	
1	6
2	7
3	8
4	9
5	10
11	12
13	14

• Illegal Dumping
— Freeways
— Roads

ENTERPRISE GIS

Data Source:
Roads, Council Dist. - City of Dallas Enterprise GIS
Bulk Trash/Illegal Dump Locations - City of Dallas Code Compliance

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#3 Alternative Collection - Pilot

- Sanitation could pilot a modified bulk and brush collection program
 - Staff recommends monthly brush collection and limited “on call” bulk collection (4 times per year)
 - Additional option – Set volume limits on both the brush and bulk collections
 - 8-10 Cubic yards is consistent with other major Texas cities
 - Additional option - Require the use of compostable bags for leaves and grass clippings
 - Staff recommends piloting a program in an entire bulk/brush week
 - Pilot area(s) would have to be identified
- If directed staff could further develop the pilot program and bring back a refined program to Quality of Life committee for further consideration
 - Pilot Boundaries, implementation schedule, outreach, etc.

Policy Considerations Moving Forward

Policy considerations

- Change frequency of bulk and/or brush collections
- Place volume limits on collections
- Provide separate collection for bulk and brush so that organic material can be diverted or beneficially reused
 - Require citizens to place grass clippings and leaves in compostable or paper bags
 - Place volume limitations on bulk and brush collection
- Require landscape companies to haul off their residual waste

Policy considerations

- Consider weekly yard trimming collection (with limited large brush collection)
 - In some cases, this would require alley and curbside collection on the same day
- Change the early set out day
- Increase enforcement for set out verification

Things to consider for policy discussion

- Program changes would require equipment and personnel changes
- Diverting brush and yard trimmings will require the development of a mulching and/or composting program (internal or contracted)
 - Will require additional cost, but this could be offset by a reduced collection program
- Changing brush collection frequency can significantly impact response after storm events
- Any significant program changes will require substantial public outreach and education
- Chapter 18 ordinance changes will be required

Impacts of no changes (maintain status quo)

- Sanitation Services will require additional crews and equipment to consistently finish collections by Thursday
- Development of a far north transfer station should be considered
- Organic material would not be separated and diverted or beneficially reused
 - This would prevent the City from reaching its Zero Waste goals
- Brush week boundary realignments still needed

Next Steps

- Receive input from Committee on pilot programs and policy considerations today
- With committee approval, begin phased implementation of brush week realignment
 - First phase implementation targeted for September 2015
- With committee approval, pursue a location for a neighborhood drop off site pilot
 - Identify a site summer of 2015 and bring back for consideration
- With committee approval, develop a modified bulk/brush collection program for further consideration summer 2015

Appendix

Example – Austin Large Brush Requirements (twice yearly service)



Example – Fort Worth Bulk and Brush limitations



Note: Limit for monthly bulk collection and limit for weekly brush (excluding bags and bundled trimmings)

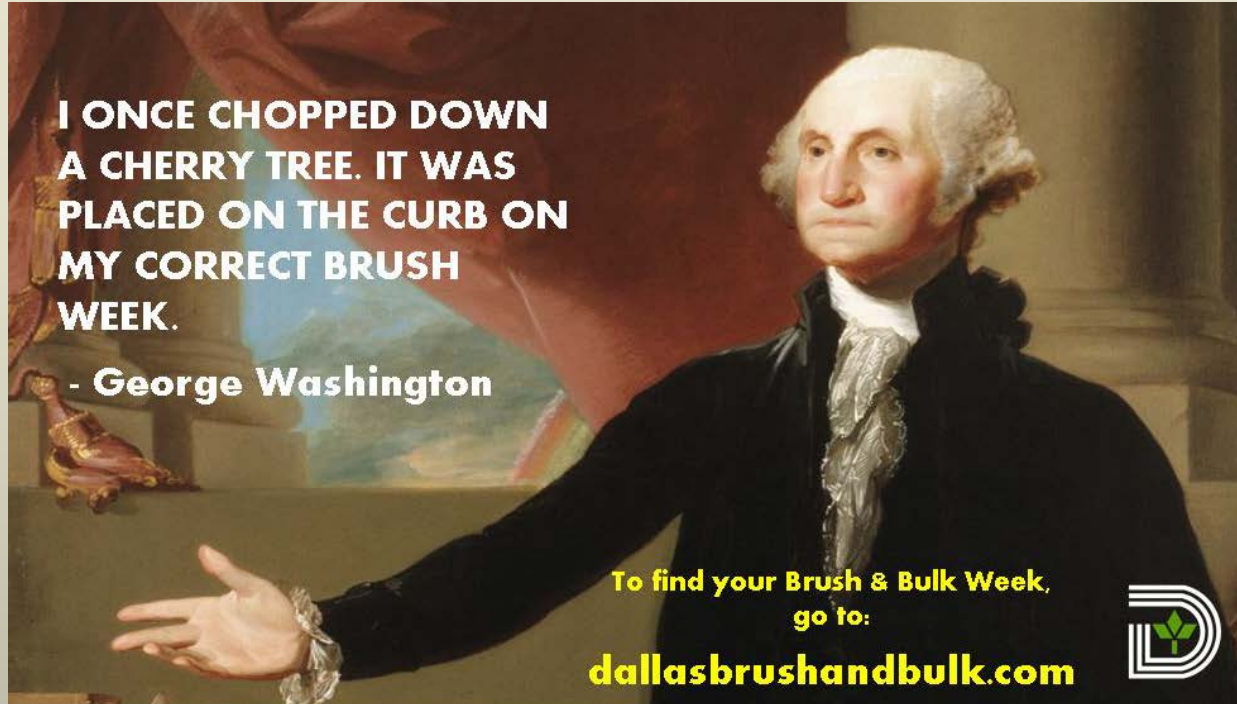
Example - Compostable Bags

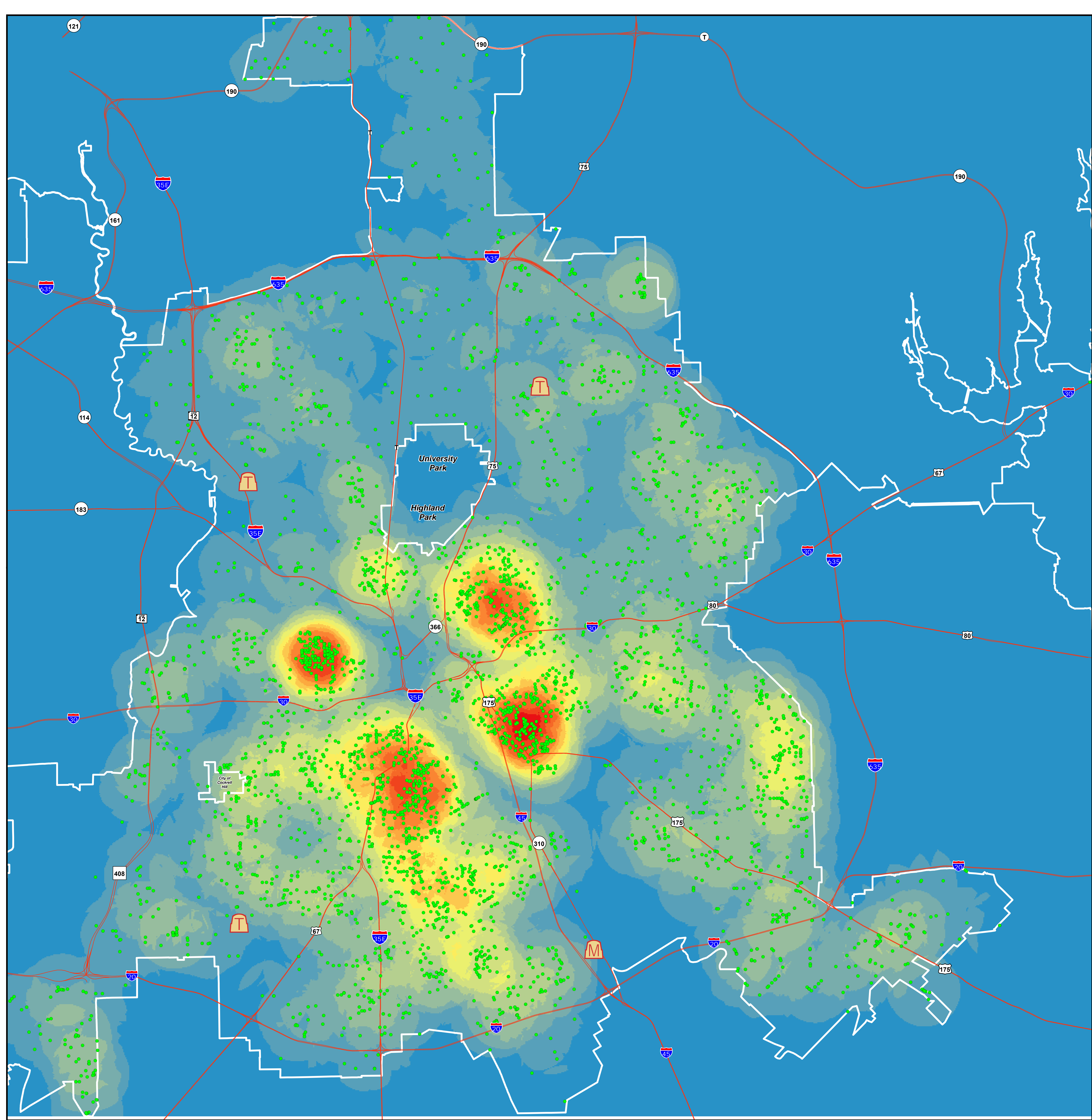


How do citizens get information about their bulk and brush week?

- Updated webpage & established a domain (dallasbulkandbrush.com)
- Convenient calendars for each collection Week on website (in printable pdf format)
- Brush and Bulk collection calendar sent to all residents in Water Insert
- Facebook and Nextdoor
- Advertisements (newspaper, digital banners & emails)
- Radio (WRR)

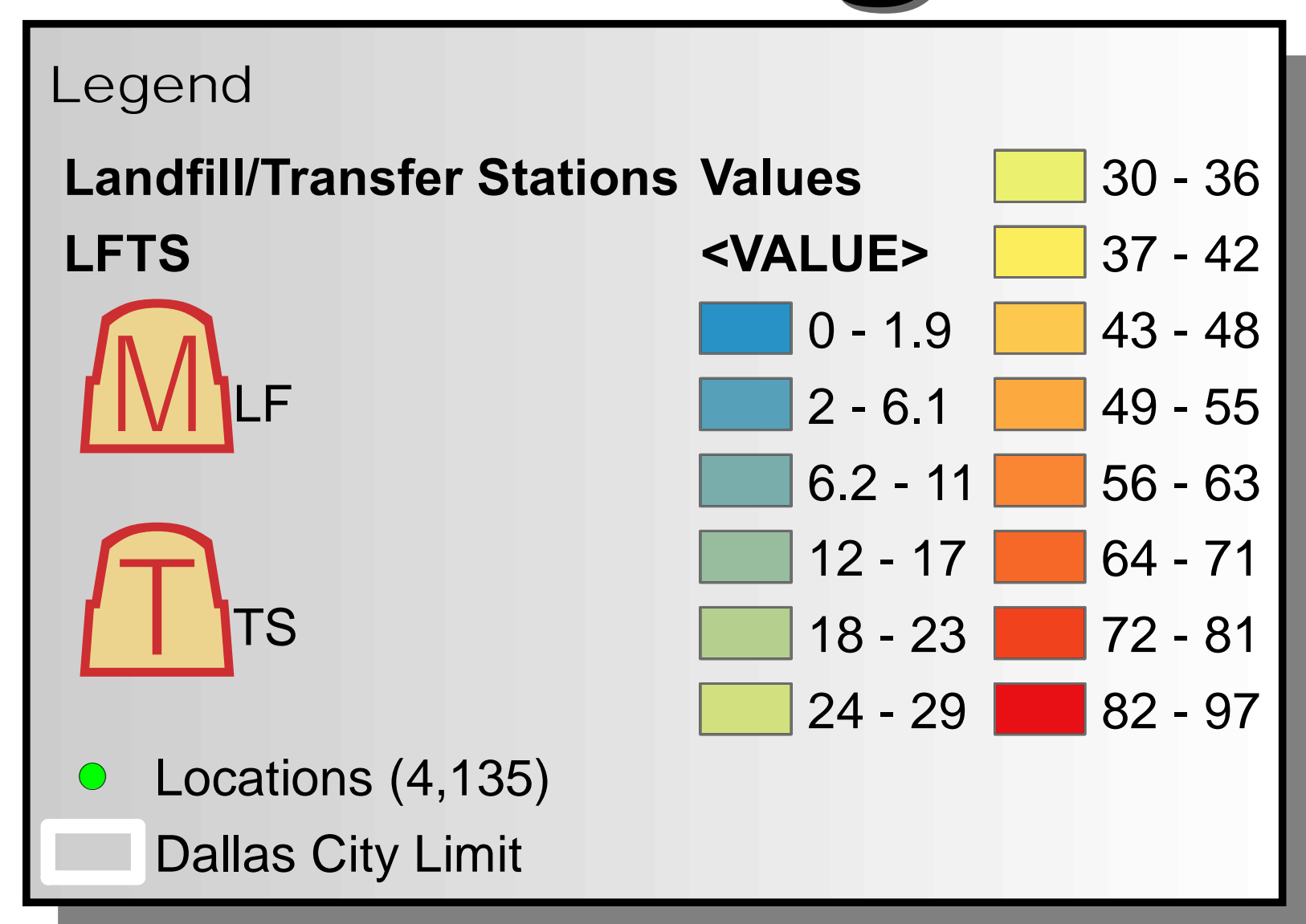
How do citizens get information about their bulk and brush week?





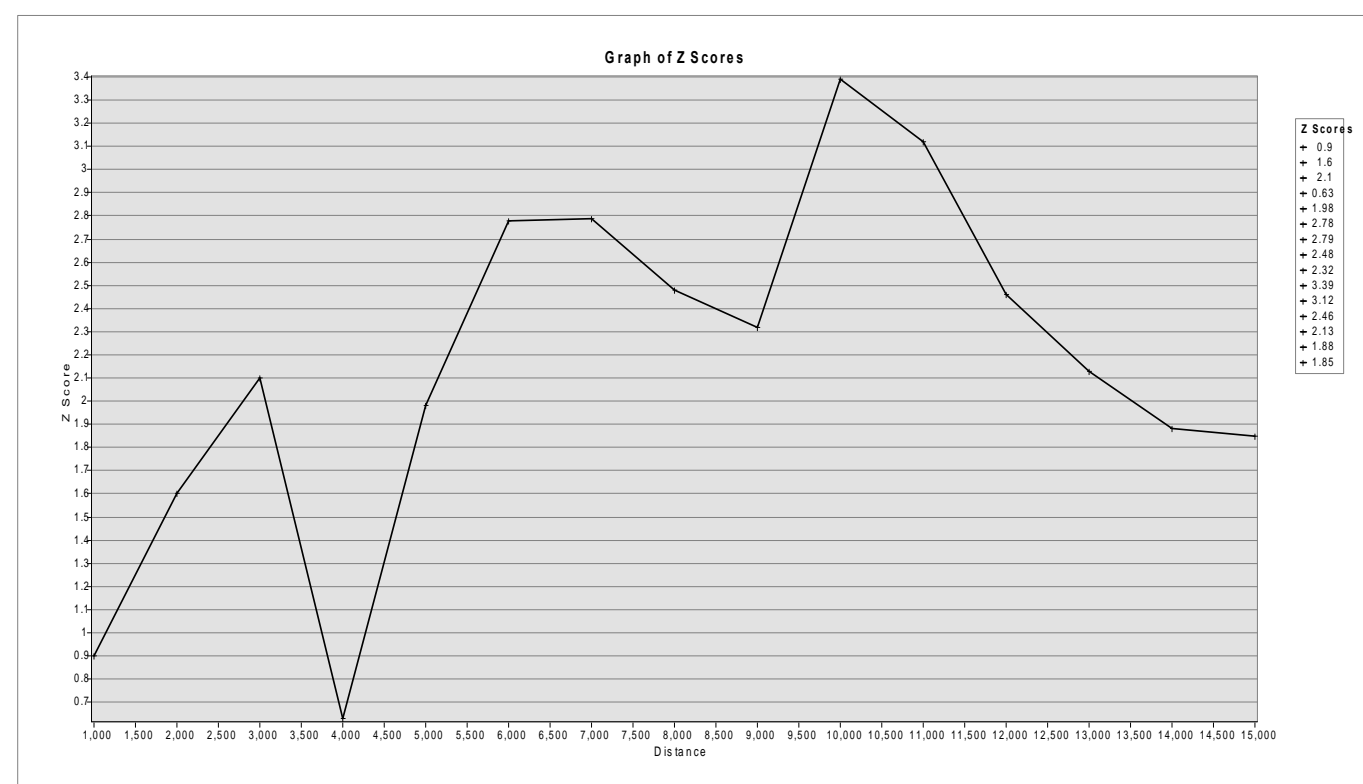
Illegal Dumping CCS Response

FY2013-2014



Spatial Autocorrelation Report
 Moran's Index: 0.004596
 z-score: 3.389835
 p-value: 0.000699

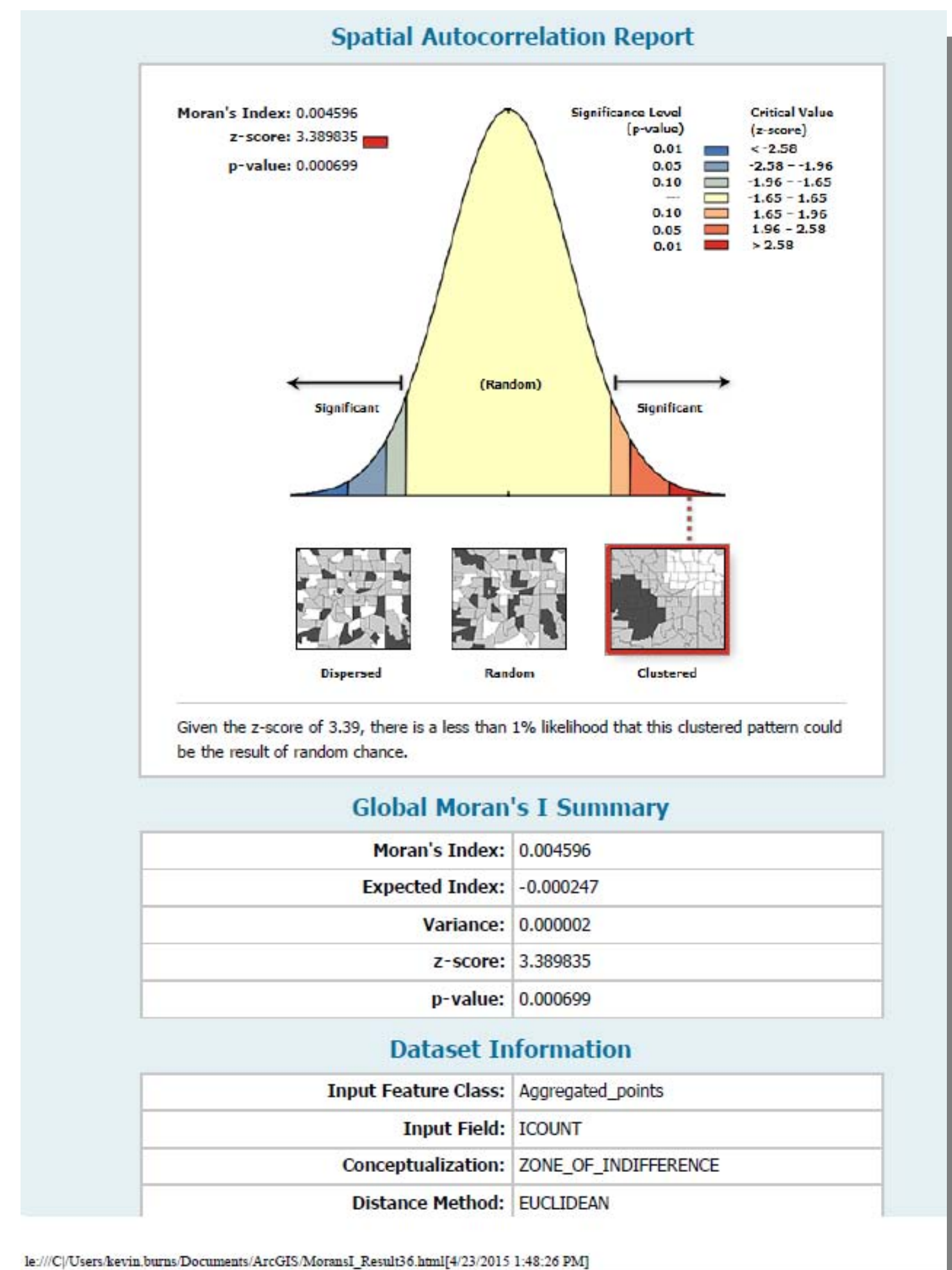
Given the z-score of 3.39, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.



Global Moran's I Summary
 Moran's Index: 0.004596
 Expected Index: -0.000247
 Variance: 0.000002
 z-score: 3.389835
 p-value: 0.000699
 Dataset Information Input Feature Class: Aggregated_points
 Input Field: I_COUNT
 Conceptualization: ZONE_OF_INDIFFERENCE
 Distance Method: EUCLIDEAN
 Row Standardization: False
 Distance Threshold: 10000.0

Data Source:
 Illegal Dump Locations - Code Compliance Services
 Roads, Schools, City Limits - City of Dallas Enterprise GIS

City of Dallas
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 File Location: U:\WCC\20130709_2027_Dist5Map_Gallegos
 Prepared By: Kevin S. Burns
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