

# Memorandum



CITY OF DALLAS

DATE March 21, 2014

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

SUBJECT 2014 Mosquito Plan

The attached briefing will be presented to the Quality of Life & Environment Committee on Monday March 24, 2014. The briefing will provide you with the mosquito abatement plan for the 2014 season implemented by the Department of Code Compliance.

Please let me know if you have any questions.

A handwritten signature in blue ink, appearing to read 'Charles M. Cato'.

Charles M. Cato

Interim Assistant City Manager

Attachment

cc: Honorable Mayor and Member of the City Council

A.C. Gonzalez, City Manager  
Warren M.S. Ernst, City Attorney  
Daniel F. Solis, Administrative Judge  
Rosa A. Rios, City Secretary  
Craig D. Kinton, City Auditor  
Ryan S. Evans, Interim First Assistant City Manager  
Jill A. Jordan, P.E., Assistant City Manager  
Forest E. Turner, Assistant City Manager  
Joey Zapata, Assistant City Manager  
Theresa O'Donnell, Interim Assistant City Manager  
Jeanne Chipperfield, Chief Financial Officer  
Frank Libro, Public Information Officer  
Elsa Cantu, Assistant to the City Manager – Mayor and Council

# 2014 Mosquito Plan

Quality of Life & Environment  
Committee

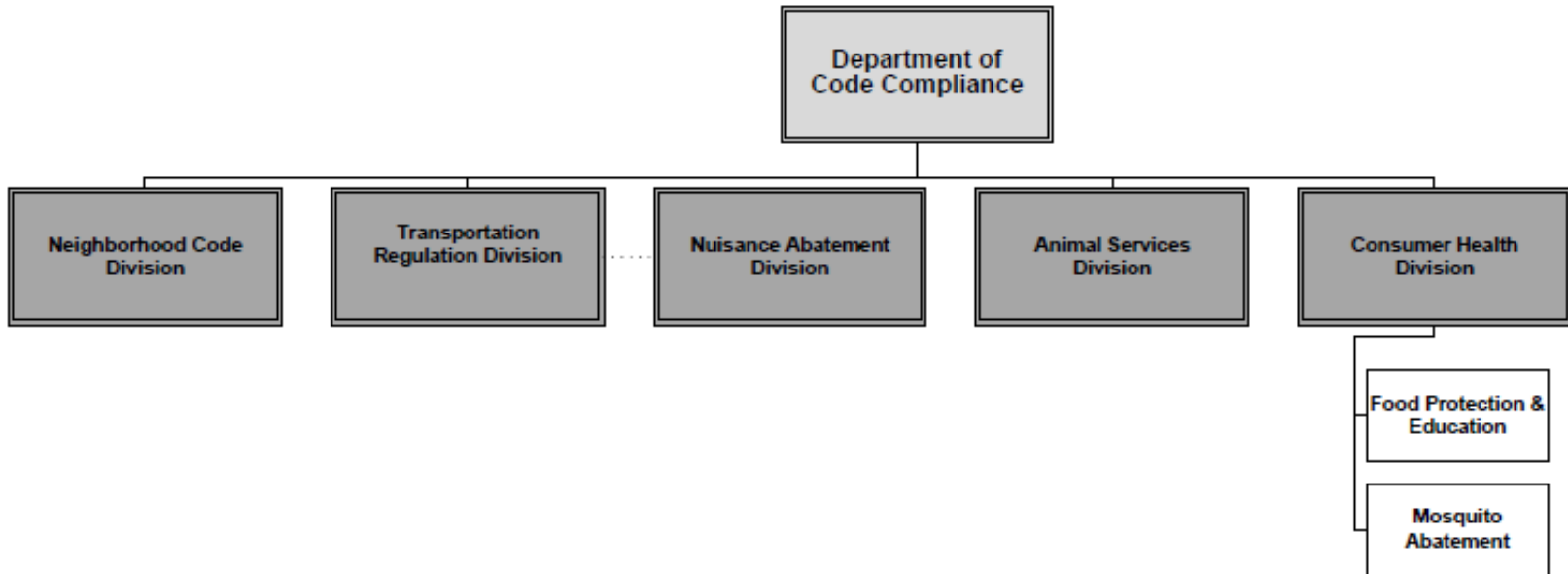
March 24, 2014



# Outline

- Background
- 2014 WNV Action Plan
- Public Education
- Mosquito Surveillance
- Environmental Mitigation
- Spray and Notification
- Additional Preparedness Efforts

# Background



- Consumer Health Division
  - Created January 2014
  - 37 FTE
  - \$2.8M FY 13 Budget

# Background

- Consumer Health Division – Mosquito Abatement Unit
  - Works to prevent the spread of mosquito-transmitted diseases to the public.
  - Information concerning the control of a variety of pests, including rats, roaches, and other insects, is also available from this office.
- The City contracts with Dallas County to act as Health Authority and advise on matters affecting public health.
- The City of Dallas implements Mosquito Control guidelines provided by Dallas County (Exhibit A).

# Background

- Mosquito Abatement Unit
  - Deploys traps and collects samples for testing.
  - Treats standing water with larvicide when it cannot be drained.
  - Issue a Notice of Violation (NOV) to correct standing water.
  - Conducts ground-based spraying on positive test results.
  - Educates citizens on preventive measures.

# Background

- Mosquito Abatement Unit
  - Train other Departments/Divisions within the City to increase awareness of standing water.
    - Streets
    - Parks & Recreation
    - TWM
  - Code staff to assist with abatement efforts.
    - 6 employees in Mosquito Abatement
    - 23 employees in Food Protection & Education
    - 10 employees in Neighborhood Code

# Background

## WNV Human Cases, Dallas County

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Cases	44	104	23	9	16	0	2	398	16
WNV Human Deaths	1	4	0	0	1	0	0	21	2



# Background

## WNV Human Cases, Dallas County & City of Dallas

<b>WNV Deaths</b>	<b>2012</b>	<b>2013</b>
Dallas County	21	2
City of Dallas	9	1

<b>WNV Cases</b>	<b>2012</b>	<b>2013</b>
Dallas County	398	16
City of Dallas	211	7

# 2014 WNV Action Plan

## Primary Focus – Proactive Prevention

Action	2014 Plan
Public information	Radio, television, billboards, Internet, phone calls, water bill inserts, neighborhood outreach & free mosquito dunks to City of Dallas residents.
Standing water complaint turnaround	Respond within 1 day
Mosquito traps	90 traps
Lab results turnaround	3-5 days for PCR only and 5 to 7 days for cell cultures.
Action Thresholds plan	Joint plan will be updated as needed in coordination with Dallas County.
Truck-mounted sprayers	5 Trucks
Emergency Management Plan	To be implemented during declared emergency.
Aerial spraying plan	Guidance from Dallas County and the CDC.

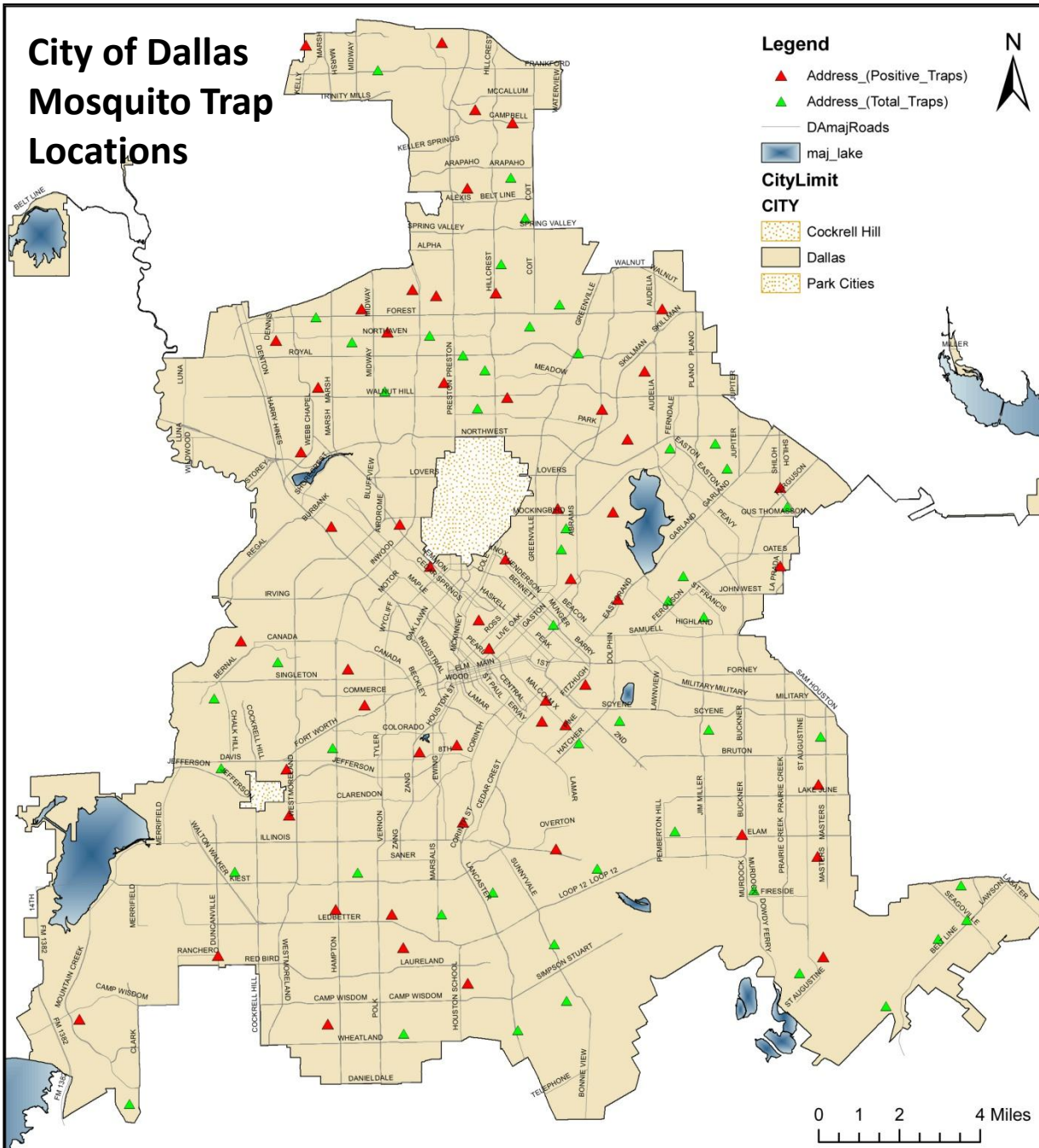
# Public Education

- WNV public education efforts
  - Billboards, radio spots and kiosks
  - Social media, Internet and e-mail blasts
  - Press announcements
  - Street median signs and outreach at community meetings and events
  - Free mosquito dunks to City of Dallas residents
- Emphasize the “4-Ds” of prevention
  - Drain or treat standing water
  - Avoid outdoor activity at Dawn/Dusk
  - Use mosquito repellent (DEET)
  - Dress with long sleeves, pants

# Mosquito Surveillance

- Mosquito trapping and testing for 2014 includes:
  - ✓ Off-season (Winter – Early Spring) mosquito trapping and testing
  - ✓ 90 traps on a weekly basis during 2014 WNV season (May 2014)
  - ✓ 30 traps sent to DCHHS per week
  - ✓ 60 traps sent to DSHS per week

# City of Dallas Mosquito Trap Locations



# Environmental Mitigation

- Use of EPA-approved products to reduce larvae populations (Larvicide):
  - Insecticide used specifically for the larval life stage of a mosquito.
  - Used in breeding sites (abandoned pools, bird baths, tires, any areas that have standing water, etc.).
  - Mosquito Dunks are a form of larvicide.
  - Does not kill adult mosquitoes.
  - Does not harm people, pets, fish or plants.

# Environmental Mitigation

- Use of EPA-approved products to reduce mosquito populations (Adulticide):
  - The City uses Pyrethroid (Aqua Lure 20/20).
  - Naturally occurring pesticide which is found in chrysanthemums.
  - Only product that is mixed with water (other products are chemical based and mixed with oil).
  - Safe for plant life (apples, peaches, leafy vegetables, melon, walnuts, etc).

# Spray & Notification

- Spray Guidelines
  - Trap locations with “high trap count”.
  - Mosquito pool has tested positive for WNV.
  - Confirmed human case of WNV in the City of Dallas and positive mosquito pool in the same area.
    - Team will investigate the area of the human case to identify any breeding sites/sources.
    - Appropriate treatment method utilized.
  - Multiple human cases of WNV within ½ mile radius.



# Spray & Notification

- Spray Guidelines
  - The City generally sprays within a ½ mile circle around the positive trap in population dense areas from the public streets only.
  - Spray between 9:00 PM and 5:00 AM.
    - (10:00 PM and 3:00 AM in 2013)
  - Spray activities begin within 5-7 hours after notification by lab.
    - (A minimum of 24 hour notice required in 2013)

# Spray & Notification

- Notification
  - News release issued in April and posted on City's website:
    - Announce start of mosquito season
    - Spray guidelines
    - Precautions to take
    - Avoid contact, stay indoors (including pets)
    - Keep windows up on passing vehicles
    - Don't follow trucks
    - Wash thoroughly with soap and water if you come in contact

# Spray & Notification

- Notification
  - Signs posted in the area to be sprayed (if time/location permits)
  - Radio Ads begin in May – expand message.
    - Announce start of mosquito season
    - Emphasize the 4-D's
    - Spray Guidelines
  - Weekly recap of spray activities.
  - Trap location and spray activity maintained on the City of Dallas website.

# Additional Preparedness Efforts

- Update WNV Action Thresholds Plan
  - Joint plan with Dallas County that allows for uniform response for public information, education, testing, and spraying efforts.
  - Phased response plan for public education, mitigation and surveillance efforts based on increasing risk of infections.
- Emergency Management Plan (TBD)
  - Developed a guide for conducting operations in response to a declared WNV outbreak.
  - Utilizes Incident Command System (ICS) to integrate and coordinate response among city departments.

# Exhibit A

# Exhibit A

## Dallas County Mosquito Control: Action Thresholds

The following recommendations are intended to guide mosquito control programs and may include other applicable community procedures. All actions are subject to change without notice due to organizational priorities, weather or other unforeseen circumstances.

<b>Risk Level One – Normal Response</b>	
<i>Conditions: Probability of human outbreak is low (Year-round status in the absence of escalating triggers)</i>	<i>Trigger: Normal mosquito activity with little or no evidence of viral activity</i>
<b>Surveillance</b>	
<ul style="list-style-type: none"> <li>• Routine monitoring of public health threats by DCHHS Epidemiology Division</li> <li>• Monitor larval and adult mosquito bionomics (dip counts and trap surveillance)</li> <li>• Identify mosquito samples and laboratory testing for disease</li> </ul>	
<b>Information/Education</b>	
<ul style="list-style-type: none"> <li>• Public education and community outreach programs focused on risk potential, personal protection and residential source reduction</li> </ul>	
<b>Control Measures</b>	
<ul style="list-style-type: none"> <li>• Source reduction through physical and environmental measures</li> <li>• Biological – mosquito fish</li> <li>• Larvicides (surface oils, biorational bacterial products and insect growth regulators)</li> </ul>	
<b>Risk Level Two – Public Health Advisory</b>	
<i>Conditions: Probability of human outbreak is moderate</i>	<i>Trigger: Virus detected in mosquito samples</i>
<b>Surveillance</b>	
<ul style="list-style-type: none"> <li>• Increased mosquito surveillance in areas of positive traps</li> </ul>	
<b>Information/Education</b>	
<ul style="list-style-type: none"> <li>• Public health advisory released</li> <li>• Advise the public and emphasize source reduction, personal protection and disease symptoms</li> </ul>	
<b>Control Measures</b>	
<ul style="list-style-type: none"> <li>• Ground-based ULV adulticide application multiple times around positive trap location, with continued mosquito surveillance *</li> <li>• Contact vendor for ground ULV assistance in designated treatment areas</li> <li>• Larviciding of breeding sites around infected trap sites</li> </ul>	

# Exhibit A

## Dallas County Mosquito Control: Action Thresholds

The following recommendations are intended to guide mosquito control programs and may include other applicable community procedures. All actions are subject to change without notice due to organizational priorities, weather or other unforeseen circumstances.

<b>Risk Level Three – Public Health Warning</b>	
<i>Conditions: Probability of human outbreak is high</i>	<i>Trigger: Virus detected in multiple mosquito samples from different times and locations; or confirmed human case(s)</i>
<b>Surveillance</b>	
<ul style="list-style-type: none"> <li>Increase surveillance activities in adjacent areas where spread of virus is likely</li> </ul>	
<b>Information/Education</b>	
<ul style="list-style-type: none"> <li>Public health warning released</li> <li>Publicize vector control measures within the target communities</li> <li>Warn the general public of the probability of disease and provide guidance</li> </ul>	
<b>Control Measures</b>	
<ul style="list-style-type: none"> <li>Adjust ground-based ULV adulticide equipment to maximum label rate</li> <li>Ground-based ULV adulticide application of area around confirmed human case(s) after mosquito trapping confirms the presence of disease *</li> <li>Ground-based ULV adulticide application of positive mosquito sites and expanded areas around sites *</li> <li>Contact vendor for possible aerial treatment(s)</li> </ul>	
<b>Risk Level Four – Public Health Emergency</b>	
<i>Conditions: Human outbreak is confirmed</i>	<i>Trigger: Multiple human cases confirmed and detection of increased or continued viral mosquito activity</i>
<b>Surveillance</b>	
<ul style="list-style-type: none"> <li>Continued mosquito surveillance in areas of confirmed human cases</li> </ul>	
<b>Information/Education</b>	
<ul style="list-style-type: none"> <li>Public health emergency considered</li> <li>Declaration of public health emergency/distribution of emergency alerts</li> </ul>	
<b>Control Measures</b>	
<ul style="list-style-type: none"> <li>Ground-based ULV adulticide application in areas of clustered human cases *</li> <li>Recommend aerial adulticide applications in targeted zones</li> </ul>	

\*Ground based ULV applications should ideally be conducted multiple times per week in targeted areas based on mosquito surveillance and positive mosquito virus isolates