

Dallas County Mosquito Control

Zika Response

Presented By: Aubrey Paolino, MS

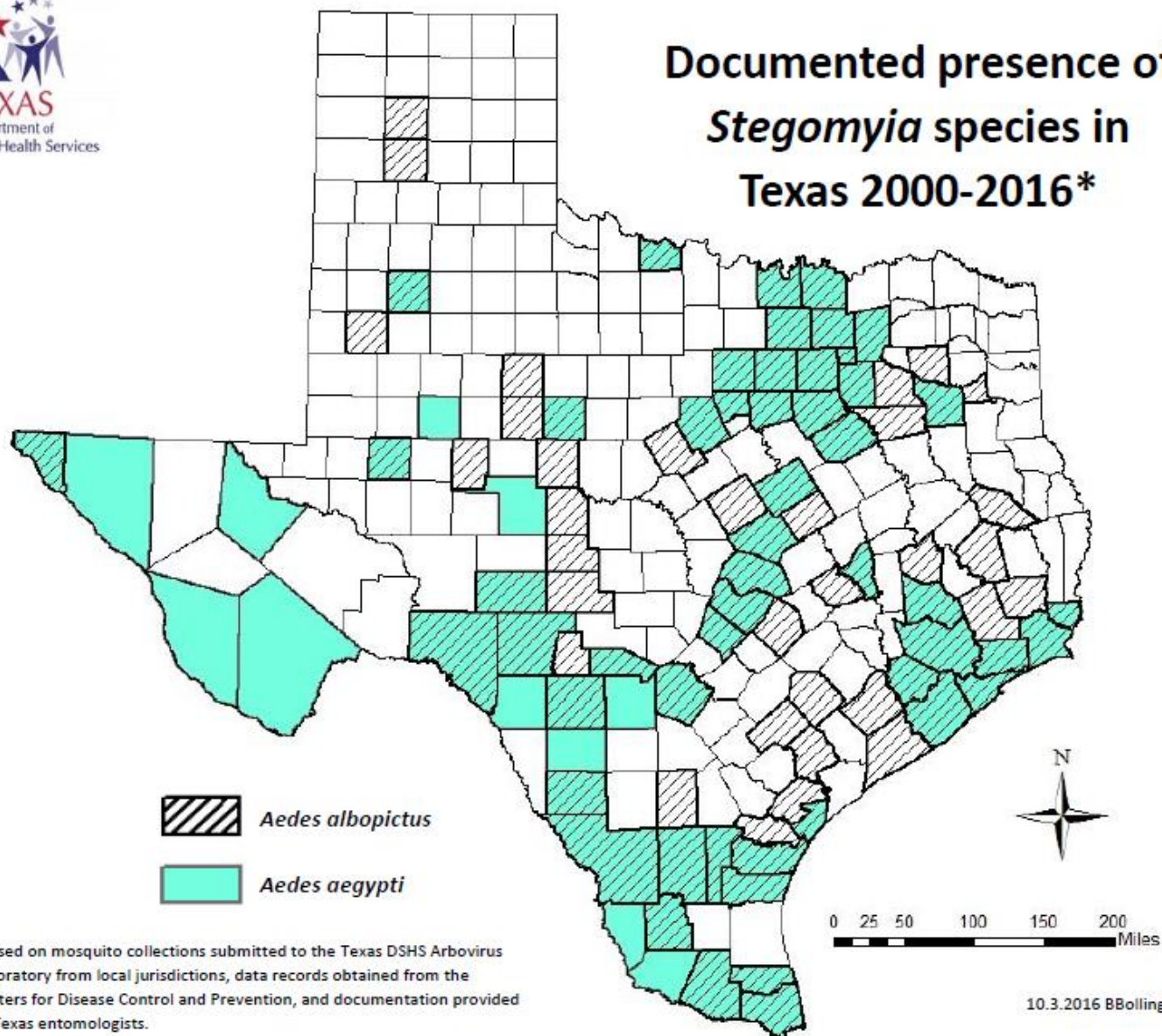
Aedes aegypti
Yellow fever mosquito

Aedes albopictus
Asian tiger mosquito



- Container breeders
- Short flight ranges (650 feet / 2 or 3 blocks)
- Take multiple blood meals – aggressive biters
- Humans are a major source of blood meals

Documented presence of *Stegomyia* species in Texas 2000-2016*



*Based on mosquito collections submitted to the Texas DSHS Arbovirus Laboratory from local jurisdictions, data records obtained from the Centers for Disease Control and Prevention, and documentation provided by Texas entomologists.

10.3.2016 BBolling

2013-2015

Weeks 18-45

Average Mosquitoes per Gravid Trap

Aedes aegypti & *Aedes albopictus*



Average *Aedes aegypti*
and *Aedes albopictus* per trap

0.10 - 1.00

1.01 - 2.00

2.01 - 3.00

3.01 - 4.00

4.01 - 5.00

5.01 - 6.50

6.51 - 7.96

zip codes

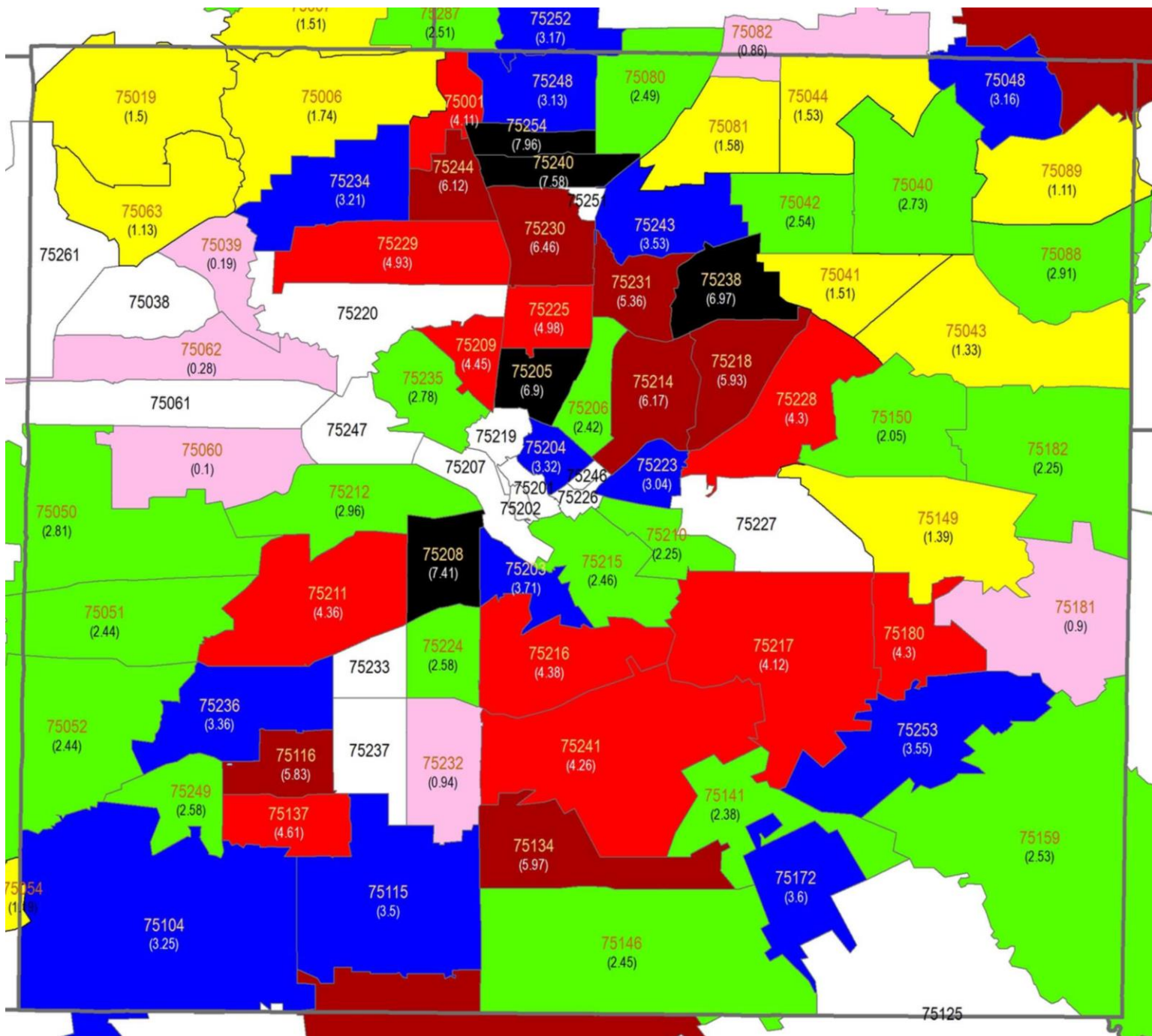
Dallas County boundary



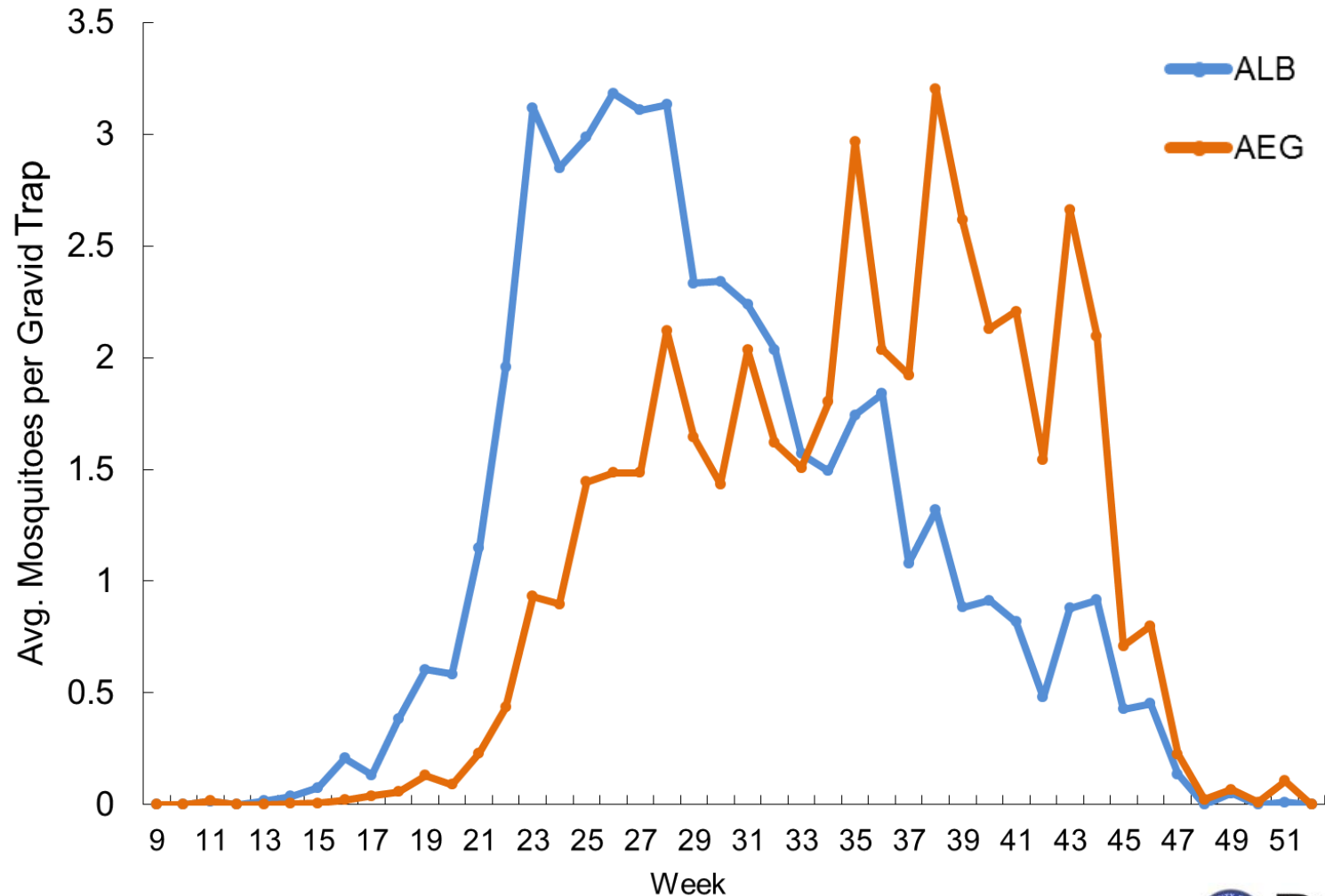
DCHHS

safe families, healthy lives.

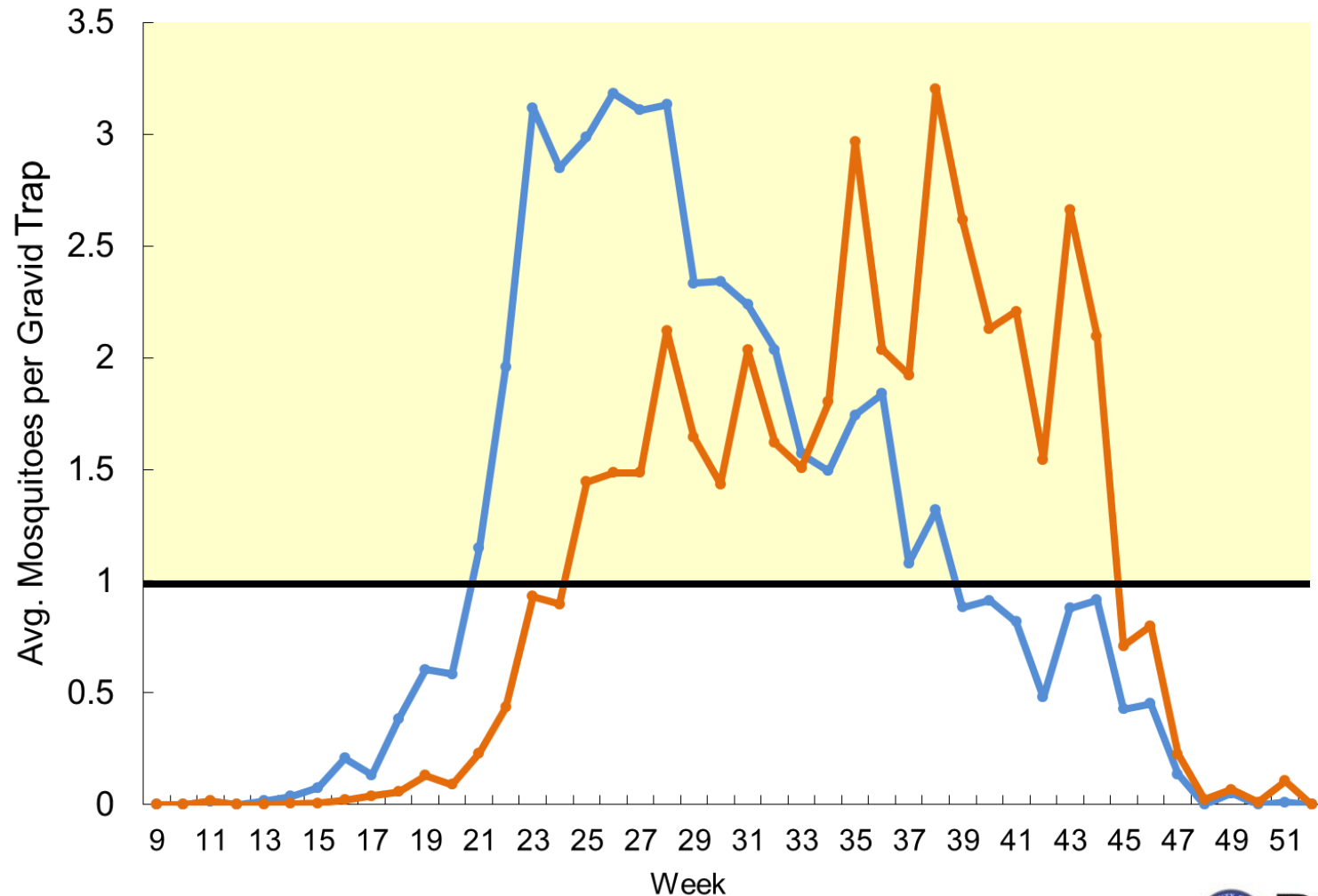
Dallas County Health and Human Services



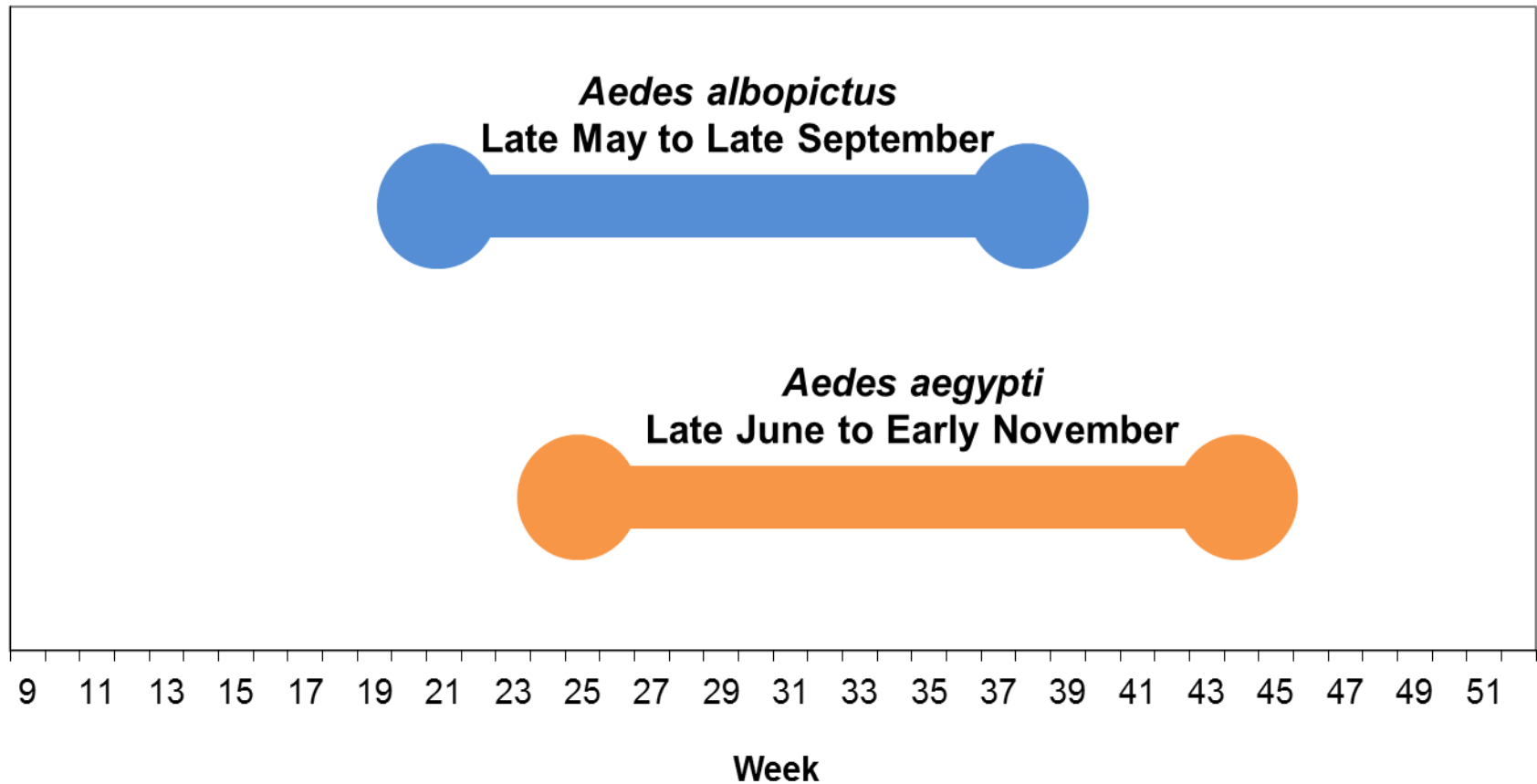
Aedes albopictus & *aegypti* per Gravid Trap Tested by Dallas County 2013 - 2016



Aedes albopictus & *aegypti* per Gravid Trap Tested by Dallas County 2013 - 2016



Weeks with Avg. ≥ 1 *Aedes albopictus* or *aegypti*



Zika Case Response

Travel-associated

- Patient returned from an area where Zika is endemic
- Symptomatic within the last 28 days
- *Ae. aegypti* and/or *albopictus* active in Dallas County

Local transmission

- Patient with no recent travel history to an area where Zika is endemic
- No likely sexual transmission of Zika

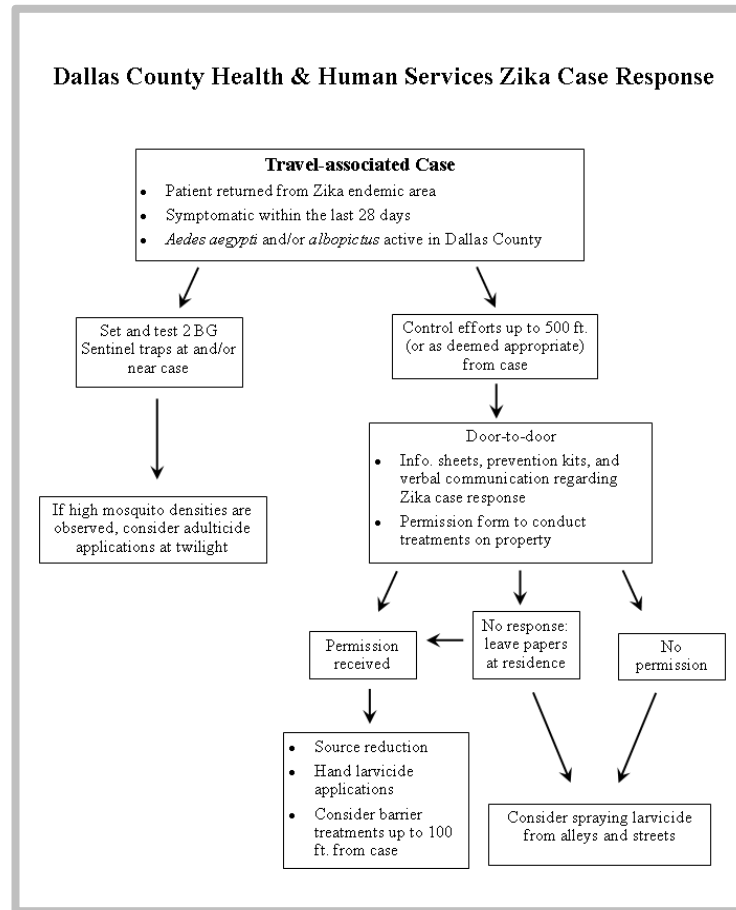
Zika Case Response

Travel-associated

- Set and test 2 BG Sentinel traps at or near case
- Control efforts up to 500ft radius
 - Door-to-door education with residents
 - Treatments on properties
 - Source reduction
 - Hand larvicide applications
- Consider options such as:
 - Barrier treatments
 - Spraying larvicide from alleys and streets
 - Adulticide applications at twilight



Zika Case Response: Travel-associated Case



ZIKA CASE RESPONSE: LOCAL TRANSMISSION

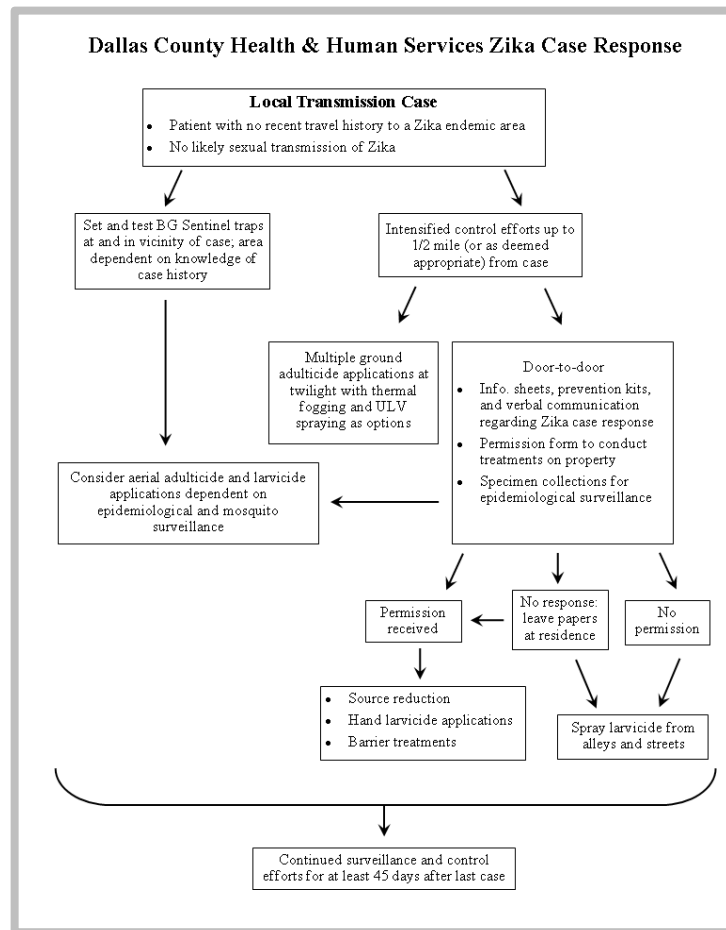
Zika Case Response



Local transmission

- More **extensive** trapping
- Control efforts up to ½ **mile** radius
 - Door-to-door education with residents
 - Treatments on properties
 - Source reduction
 - Hand larvicide applications
 - **Barrier treatments**
 - **Specimen collections**
- **Multiple ground adulticide applications**
- Consider options such as:
 - Spraying larvicide from alleys and streets
 - **Aerial adulticide and larvicide applications**

Zika Case Response: Local Transmission



Zika Case Response: Local Transmission

1. Epidemiologist reports case
2. Dallas County coordinates with cities to establish an area of intensified control and trapping (up to ½ mile from case)
3. Begin trapping and control efforts as soon as feasible

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Zika Case Response: Local Transmission

Alerted to Local Transmission

Zika Case Response: Local Transmission

Alerted to Local Transmission



Intensified control efforts up to 1/2 mile (or as deemed appropriate) from case



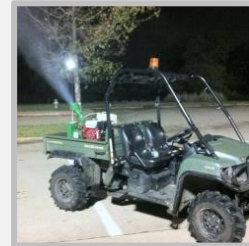
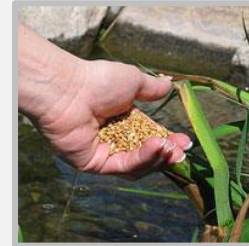
Set and test BG Sentinel traps at and in vicinity of case

Zika Case Response: Local Transmission

Alerted to Local Transmission



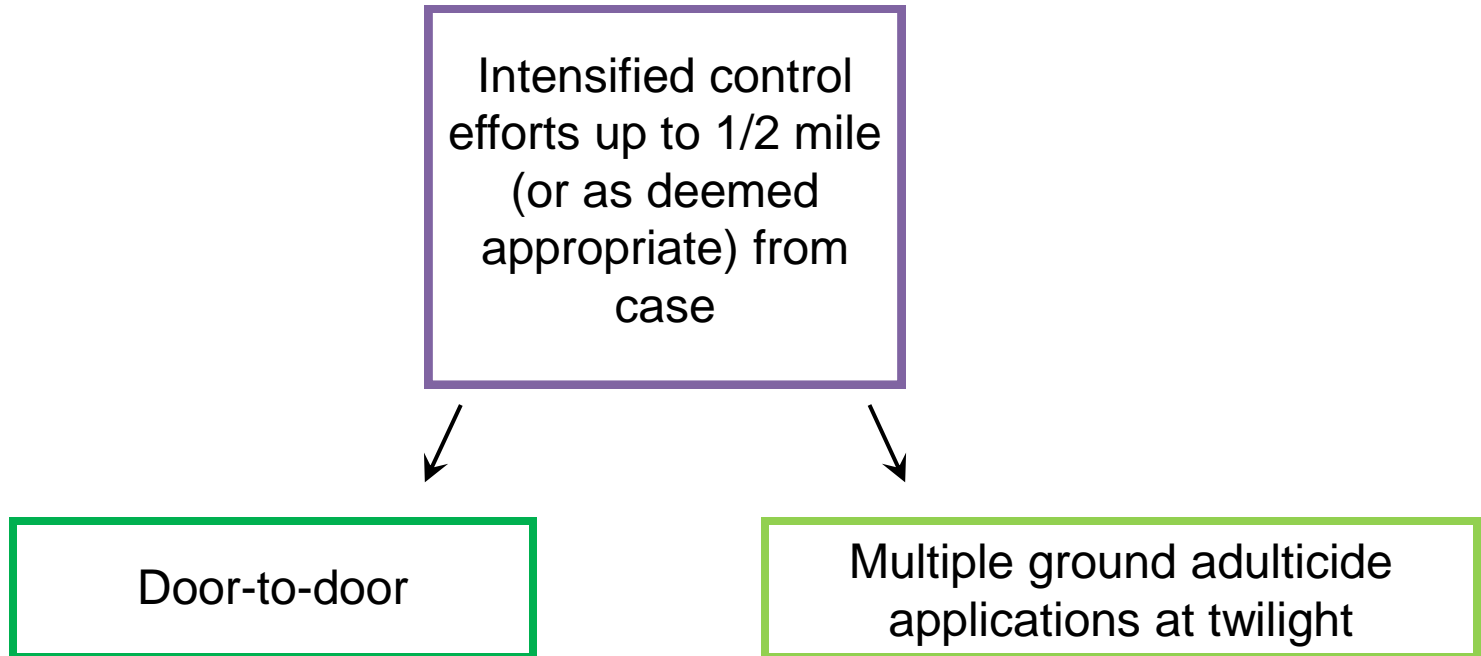
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Zika Case Response: Local Transmission

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Zika Case Response: Local Transmission



Zika Case Response: Local Transmission

Door-to-door:

1. Distribute info sheets and prevention kits
2. Attempt to gain permission to conduct treatments on property
3. Collect specimens for epidemiological surveillance

Zika Case Response: Local Transmission

Cooperative
effort of
county and
city staff

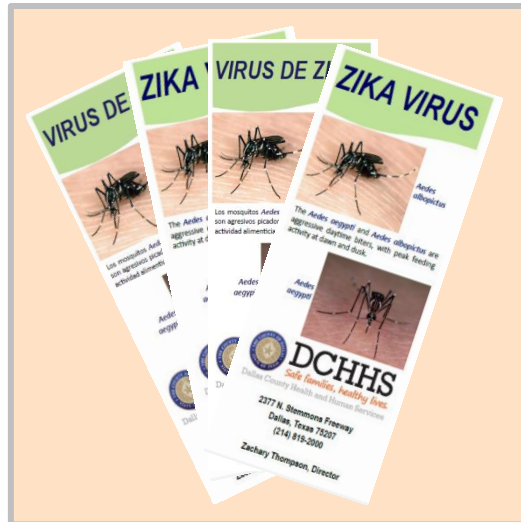
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 **Dallas County Mosquito Control**

PERMISSION TO ENTER AND POSSIBLY TREAT PRIVATE PROPERTY

Permission is hereby granted to authorized employees or contracted personnel of Dallas County to enter the property and, if necessary, to treat for mosquitoes at the property located at:

_____ for the purpose of control and management of mosquitoes. I am a lawful adult and have full authority to grant such permission.

This permission will remain in force from (date) _____ until (date) _____.

Signature: _____ Print Name: _____

Please contact us to return this form and answer any questions at:
972-225-8993 or MosquitoLab@dallascounty.org

Zika Case Response: Local Transmission

Door-to-door:

1. Distribute info sheets and prevention kits
2. Attempt to gain permission to conduct treatments on property
3. Collect specimens for epidemiological surveillance

Based on response:

Permission granted

No permission

N Villard Ave

2924-2940	2900-2906
7342	7337
7332	7325
7320	7315
7312	7305
7300	7235
7228	7225
7216	7211
2925	7207

N Atlantic Ave

7334	7405
7334	7333-7335
7326	7325
7316	7313
7304	7305
7234	7237
7224	7225
7214	7211
7204	7205

7412-7414

7336

7312

7226
7212
7204

	7405
7336	7335
7324-7326	7325
7312	7315
7308-7310	7307
7232-7234	7235
7226	7225
7212	7217
7204	7205

7406	7409		
7332	7337		
7326	7325		
2635	2625	2615	7309

N Gammans Pl

Gammans
Park

7412	7411
7338	7337
7326	7327
7316	7319
7306	7239
7234	
7224	7229
7216	7219
7204	7209

N Buffalo St

N Buffalo St

N Burrage Ave

N Wilbur Ave

7134	7153
	7145
7118	7135
7108	7125
7072	7117
7062	7105
7052	7055
7044	7047

2828	7155
7144	7145
7132	7137
7124	7125
7116	7115
7104	7105
7056	7057
7046	7047

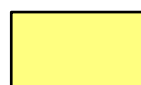
Breeley Ave

7154	7125
7146	7117
7134	7105
7124	7083
7116	7075
7104	7065
7054	7053
7046	7043

N Mather Pl

2634	2624	7071
		7063
7052		7055
7042		7045

7124	7155
7114	7145
7110	7135
7084	7125
7076	7115
7064	7105
7052	7055
7046	7047

Signed
PermissionPending/Posted
PermissionDenied
Permission



Zika Case Response: Local Transmission

If permission granted:

1. Source reduction
2. Hand larvicide applications
3. Barrier treatments



Zika Case Response: Local Transmission

If no permission:
Spray larvicide from alleys and
streets



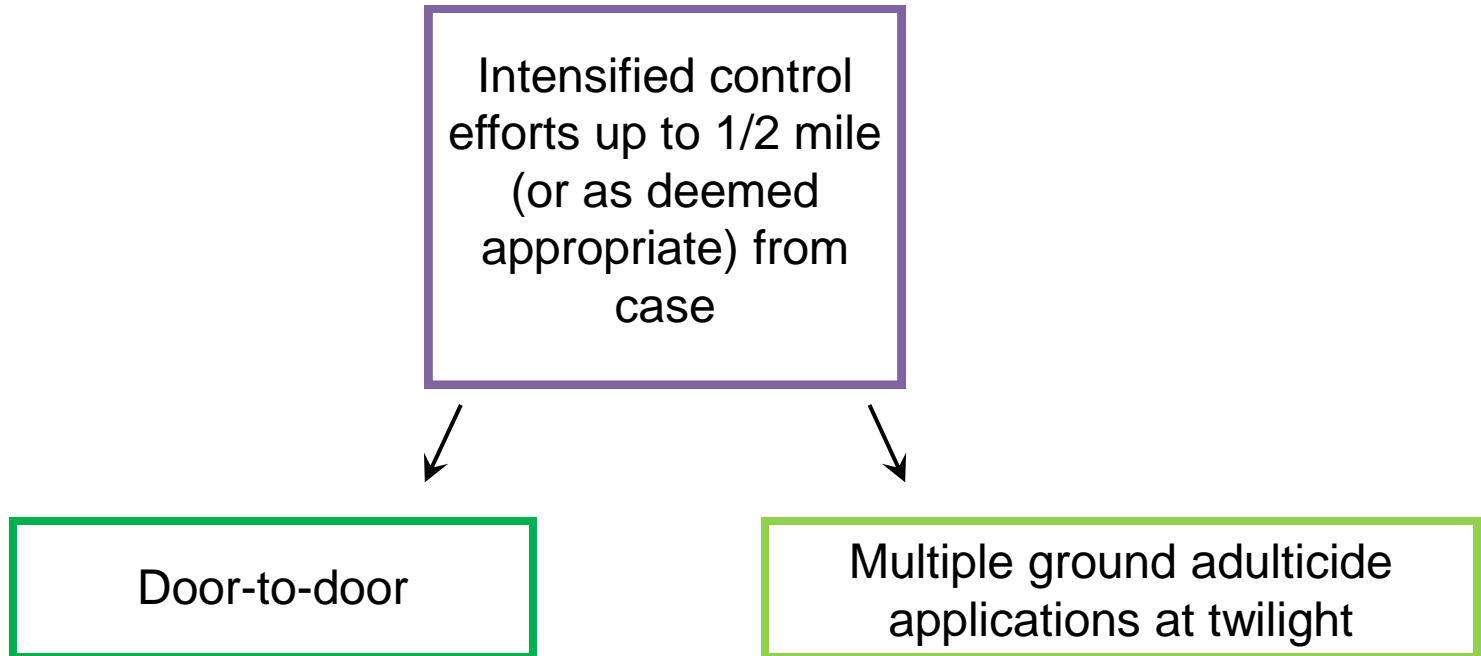
Zika Case Response: Local Transmission

Door-to-door:

1. Distribute info sheets and prevention kits
2. Attempt to gain permission to conduct treatments on property
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Zika Case Response: Local Transmission



Zika Case Response: Local Transmission



Intensified control efforts up to 1/2 mile (or as deemed appropriate) from case



Multiple ground adulticide applications at twilight

Options include thermal fogging and ULV spraying



Zika Case Response: Local Transmission

Alerted to Local Transmission



Intensified control efforts up to 1/2 mile (or as deemed appropriate) from case



Set and test BG Sentinel traps at and in vicinity of case

Zika Case Response: Local Transmission

Alerted to Local Transmission



Set and test
BG Sentinel traps at
and in vicinity of case



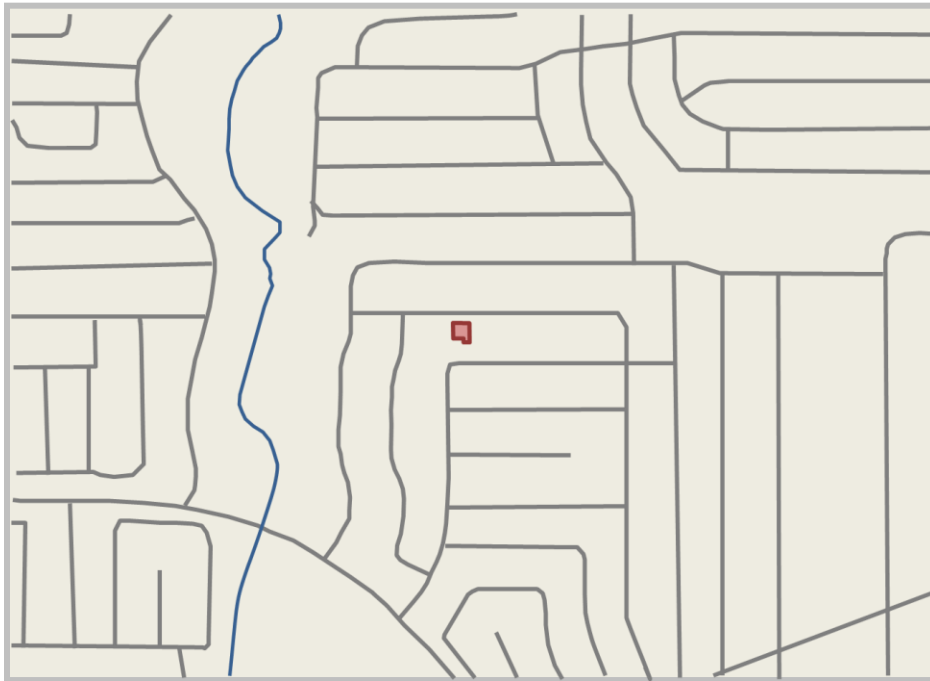
Zika Case Response: Local Transmission

Alerted to Local Transmission



Set and test
BG Sentinel traps at
and in vicinity of case

Area will be
dependent on
knowledge of case
history



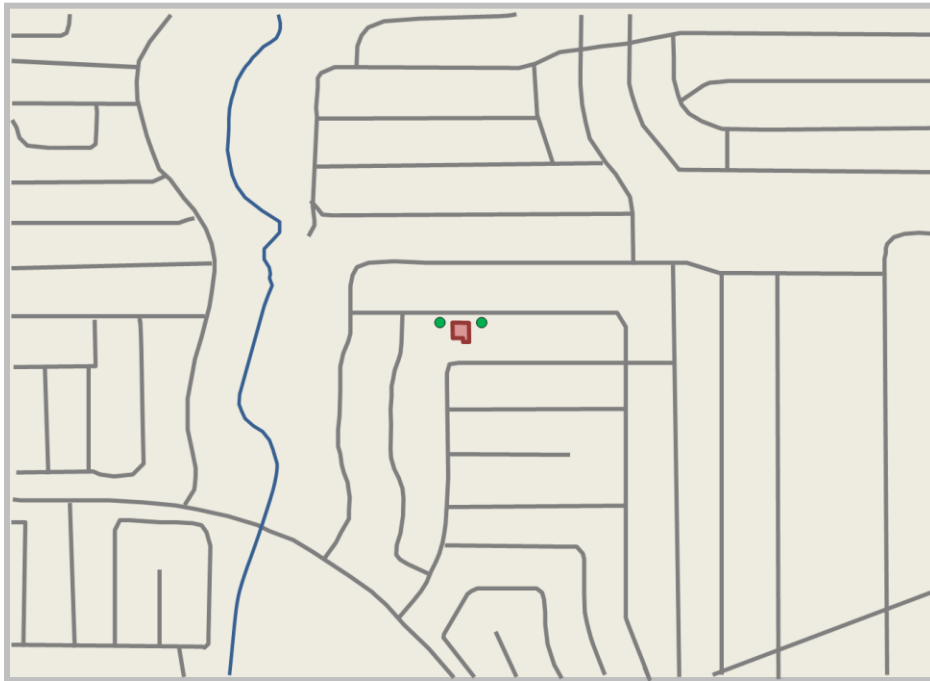
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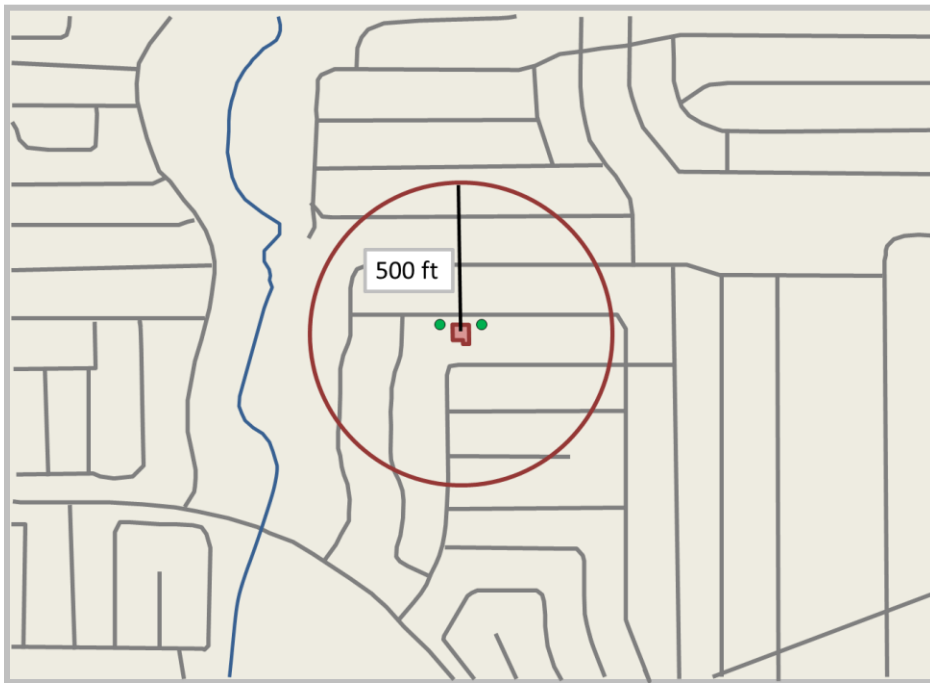
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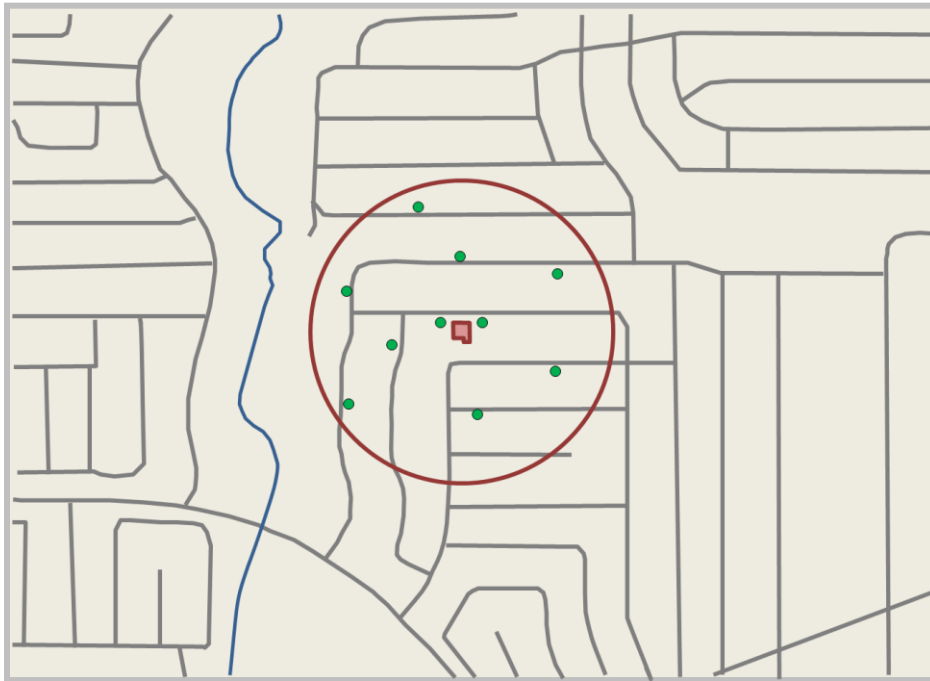
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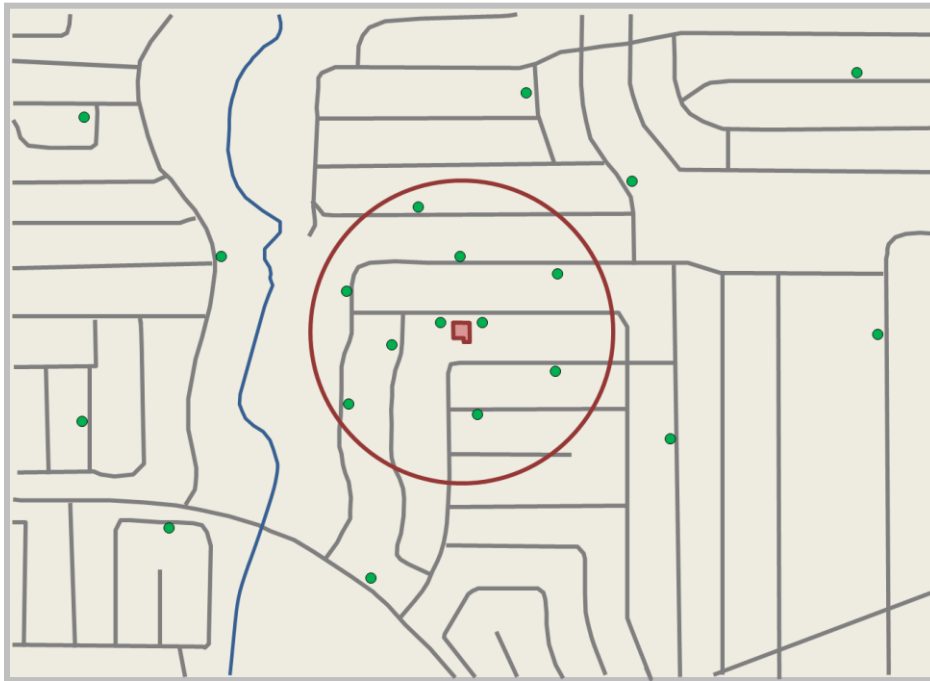
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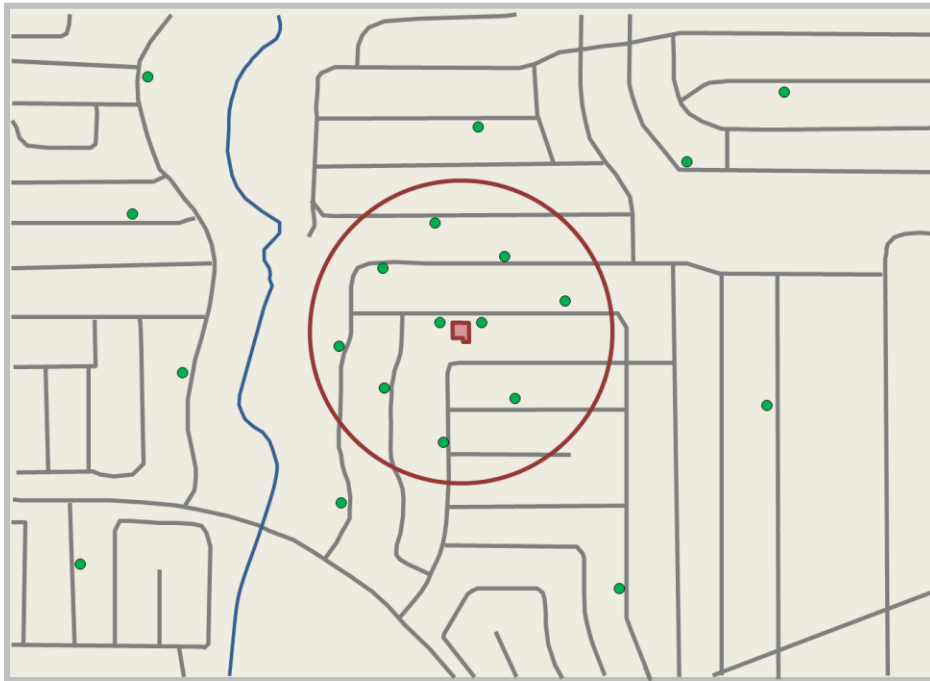
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Zika Case Response: Local Transmission

Mosquito data from
BG Sentinel traps

Zika Case Response: Local Transmission

Door-to-door:

1. Distribute info sheets and prevention kits
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Mosquito data from
BG Sentinel traps

Zika Case Response: Local Transmission

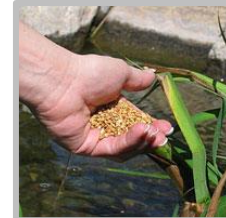
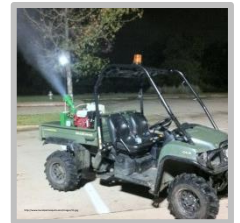
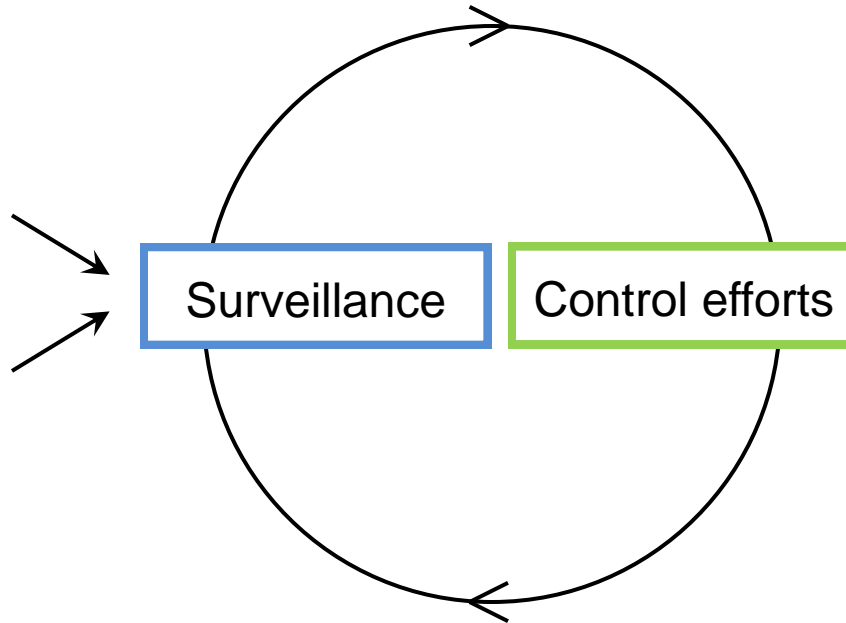
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Mosquito data from
BG Sentinel traps

Consider additional control
including aerial adulticide and
larvicide applications

Zika Case Response: Local Transmission



DCHHS
Safe families, healthy lives.
Dallas County Health and Human Services

This presentation provide by:

Dallas County Mosquito Control