

Dengue Rapid Response

January 23, 2024
MVCAC 92nd Annual Conference

Jason Farned

District Manager

San Gabriel Valley Mosquito and Vector Control District



October 20, 2023

Pasadena Public Health Department reports case of locally acquired Dengue fever.

First confirmed case of Dengue in California not associated with travel.

<https://www.cityofpasadena.net/city-manager/news/pasadena-reports-extremely-rare-case-of-locally-acquired-dengue-exposure-risk-to-local-residents-remains-very-low/>



October 04, 2023

Pasadena Public Health Department notifies District of
possible dengue case with no travel history





Response Recommendations

- Work collaboratively with the local health department and CDPH
- Immediately implement enhanced mosquito surveillance and control within a 150-meter radius of the case patient's residence
- Distribute public relations materials within target area to raise awareness
- Closely monitor target area for 45 days and implement additional control measures if needed
- Engage the public in reducing larval habitat on their properties and taking personal protective measures to prevent mosquito bites
- Escalate and expand all activities in the event of widespread local transmission



Enhanced Neighborhood Support (ENS)

Data driven, focused support for communities with elevated risk of disease.

Mosquito Control

- Door-to-door inspections
- Door hangers
- Adult treatment (if needed)

Surveillance

- Additional trapping and testing

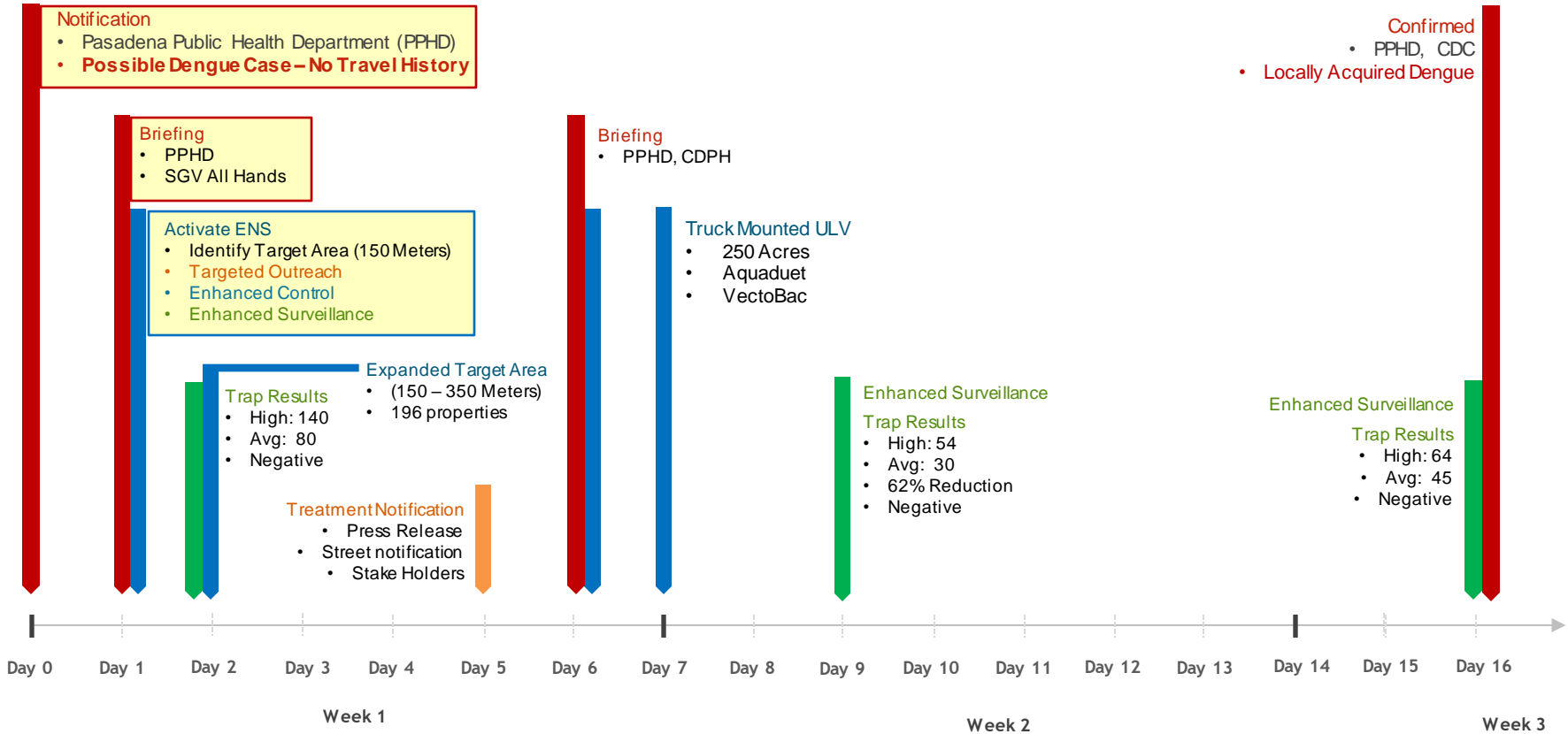
Communication

- Targeted messaging and content
- Media Release(s) (if/when needed)



Dengue Positive – No Travel

- █ Communication
- █ Outreach
- █ Surveillance
- █ Control

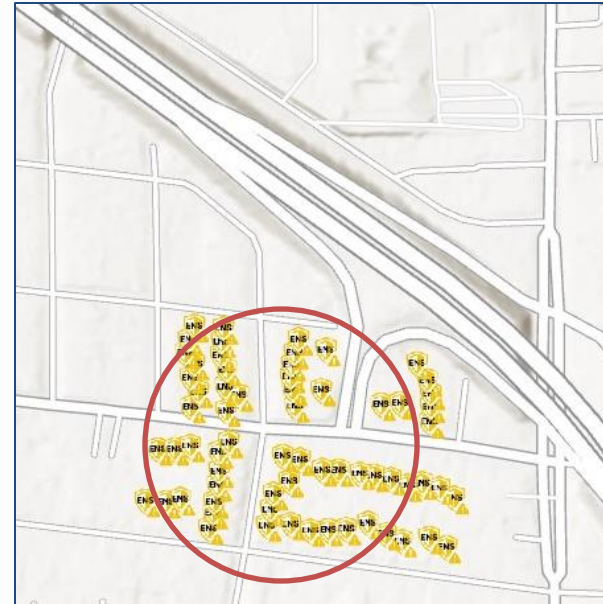


Activated ENS

150 Meter Target Area

Operations

- Identified approx. 60 homes within the target area
- Door-to-door campaign
 - Property inspections
 - Source reduction
 - Handheld adulticide treatments
 - Resident education
- Investigate all known sources
- Inspect and treat underground and flood channels
- Conduct truck mounted treatments



○ 150-meter radius

Activated ENS

150 Meter Target Area

Communications

- Targeted social media campaigns
 - Bite Prevention
 - Tip and Toss
- Educational material for the door-to-door campaign
- Outreach material for the truck-mounted treatments
- Plan for case confirmation

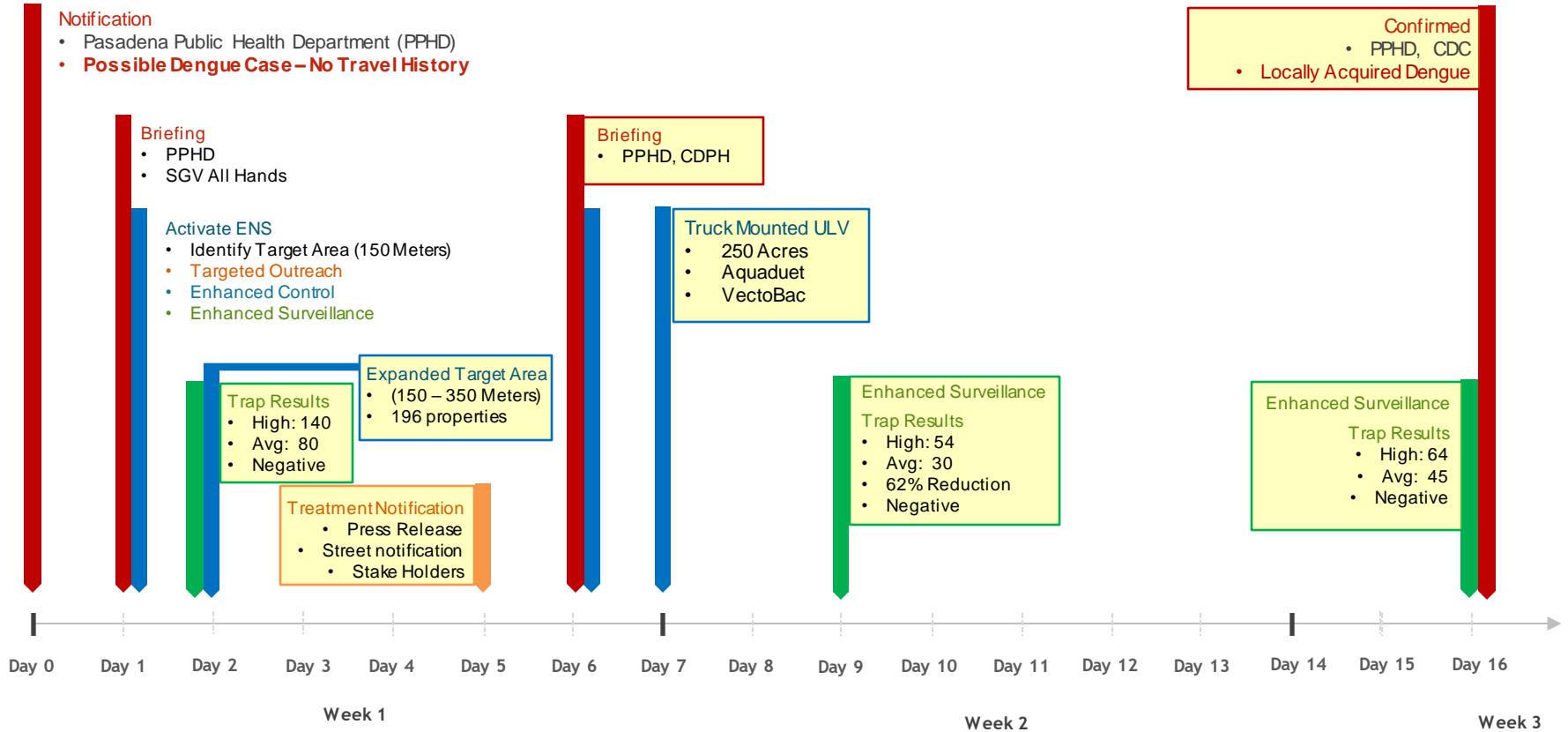
Surveillance

- Trap target area immediately (day 1)
- Weekly trapping in target area and around hospital
- Test all samples for dengue, Zika, and Chikungunya



Dengue Positive – No Travel

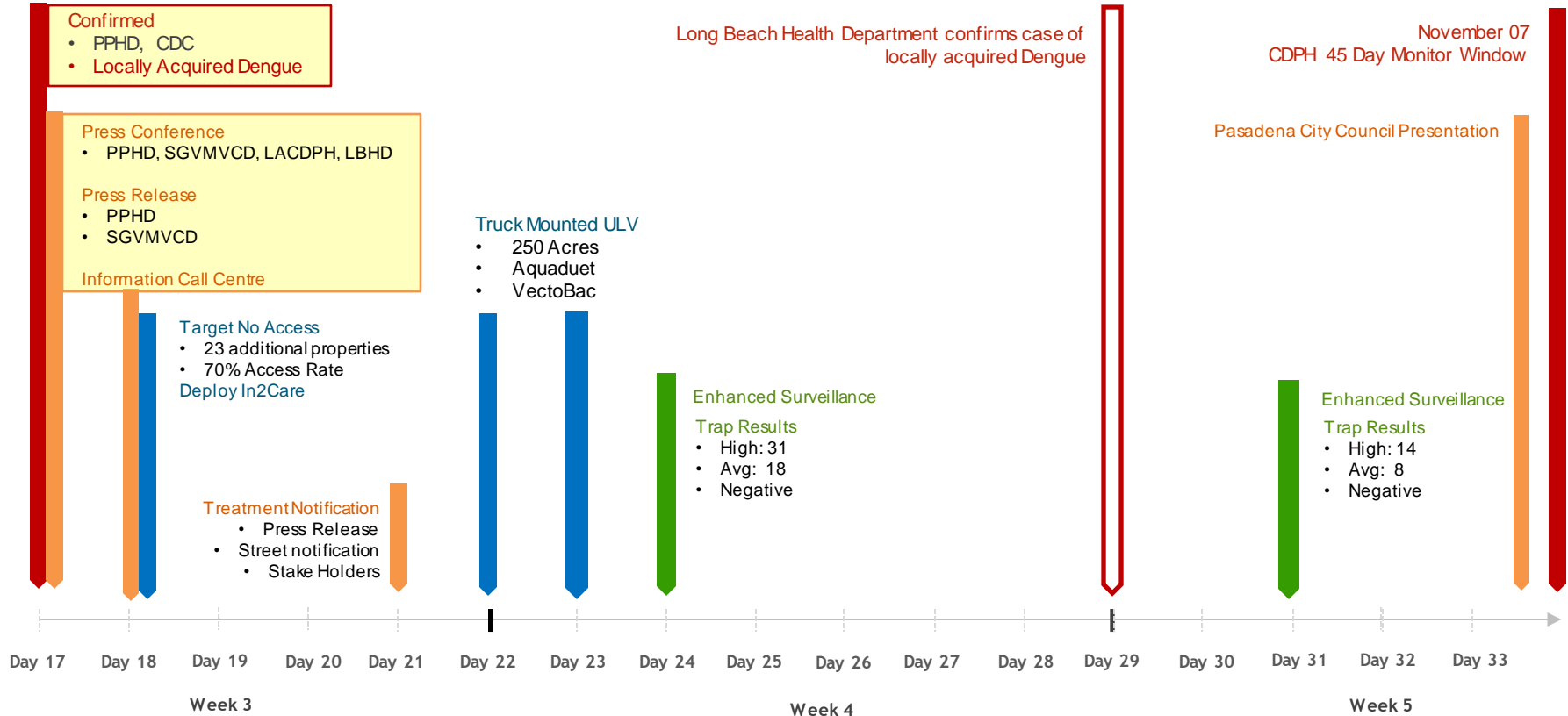
- Communication
- Outreach
- Surveillance
- Control





Dengue Positive – No Travel

- Communication
- Outreach
- Surveillance
- Control



FOR IMMEDIATE RELEASE
10/21/23

Media Contact:

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Vector Control Response to Locally Acquired Case of Dengue

Vector control has not identified or collected any Dengue infected Aedes mosquitoes.

West Covina, Calif. (October 21, 2023) — The [San Gabriel Valley Mosquito & Vector Control District](#) (SGVMVCD/District) is working collaboratively with the [Pasadena Public Health Department \(PPHP\)](#) to conduct additional surveillance, mosquito control, and educational outreach in the Pasadena community where a locally acquired case of Dengue has been confirmed. Testing of locally captured *Aedes* mosquitoes has not identified any Dengue infected mosquitoes.

District staff have expanded surveillance by deploying additional traps and increased the frequency of testing to identify the presence of mosquito-transmitted diseases in local mosquito populations. Additionally, field staff have conducted property inspections to reduce mosquito breeding sources and performed mosquito control treatments in the area.

“The District has acted as quickly as possible to enhance surveillance and perform mosquito control in the area,” said District Manager Jason Farned. “The District will continue its surveillance and control efforts in the coming weeks, including additional backpack and truck mounted mosquito treatments.”

District representatives will be conducting property inspections in the area beginning this weekend. Additional representatives will be available Saturday, October 21st from 7:00 AM to 7:00 PM to answer any questions or concerns relating to mosquito activity.

Mosquito control is a shared responsibility. While Dengue is not actively transmitted by local mosquitoes, the District urges residents to take an active role in reducing the threat of Dengue in their community by taking the following actions to stay healthy and bite-free:

- Tip out stagnant water around the home weekly;
- Toss unused containers that can hold stagnant water; and
- Protect against bites by using insect repellent containing any one of the following [CDC-recommended](#) ingredients: Picaridin, DEET, Oil of Lemon Eucalyptus (or PMD), or IR3535.

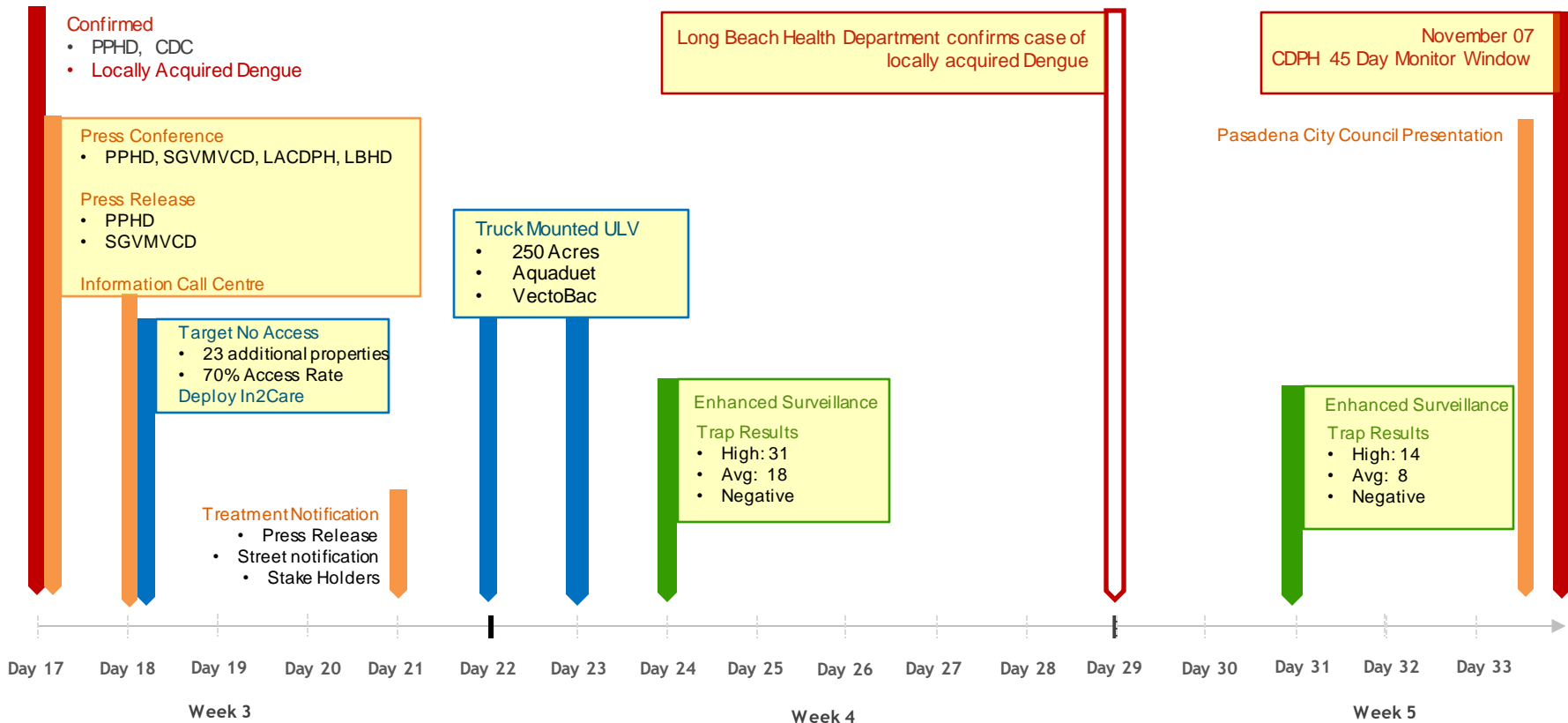
For more information, residents can contact the San Gabriel Valley Mosquito and Vector Control District at 626-814-9466, online at SGVmosquito.org, or on social media: [Facebook](#), [Twitter](#), and [Instagram](#).





Dengue Positive – No Travel

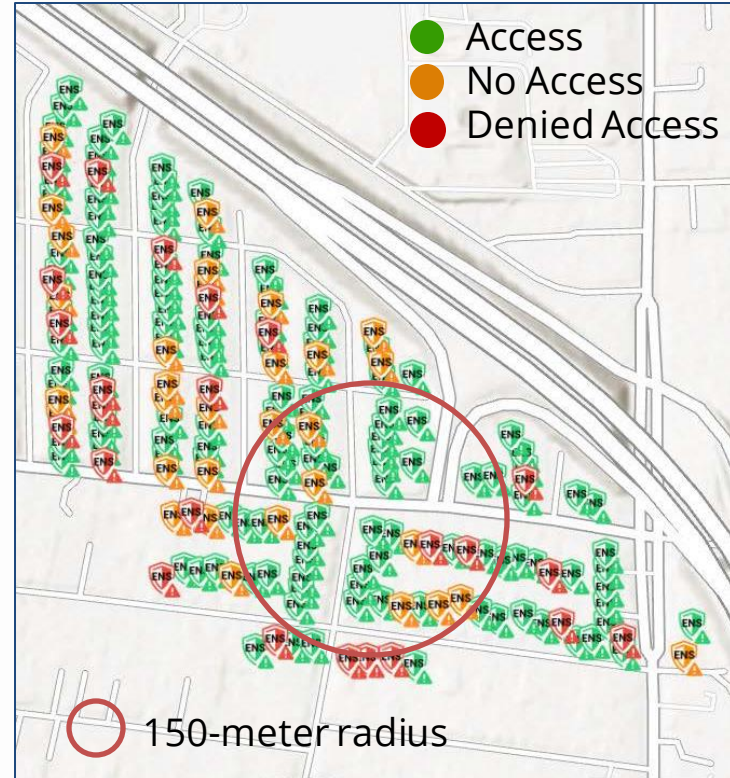
- Communication
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Response Analysis

Target area: 150 – 350 meters around target location

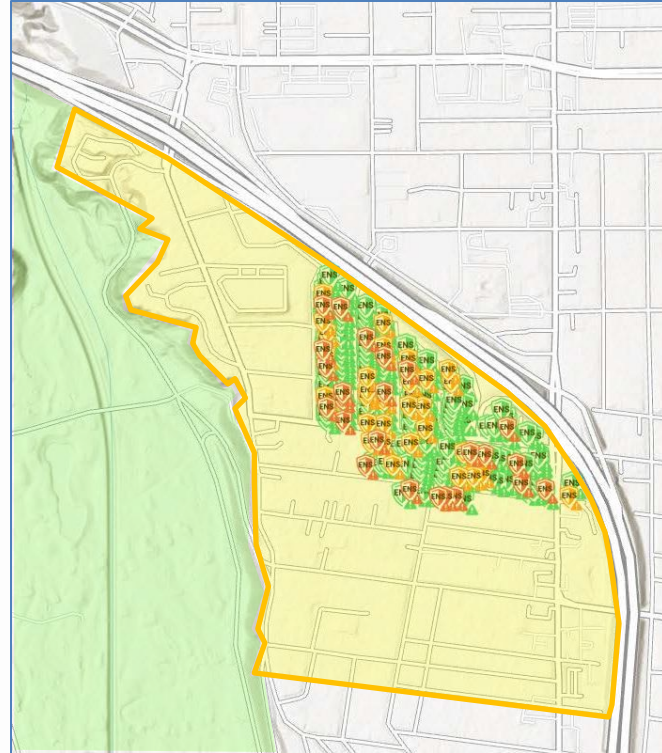
- 196 properties – Door-to-door education, inspections, and treatment
 - 141 access (72%)
 - 55 no access
- 121 backpack adulticide treatments
- Cost: \$26,003



Response Analysis

Truck mounted pesticide treatments: 250 acres

- 4 adulticide treatments
- 2 larvicide treatments
- Cost: \$17,742



Response Analysis

Enhanced surveillance: 5 weeks

- 25 trap incidences
 - Target area
 - Hospital
- 140 samples collected and tested
- Cost: \$7,758

Enhanced outreach

- 2 press releases
- 1 press conference, media tool kit
- 12-hour call center (2 days)
- 200+ door hangers
- 204 neighborhood treatment notifications
- 11 social media campaigns (20,043 impressions, 1,000+ clicks)
- Cost: \$7,121

Total Cost: \$58,625



Lessons Learned

- Critical to Success
 - Building trust and a solid relationship with our local health departments
 - Getting timely information from our public health partners
 - Having and practicing a multi-departmental and scalable rapid response plan
 - Having and practicing a crisis communication plan
 - Begin trapping immediately after case notification



Lessons Learned cont.

- We need to develop population thresholds for *Aedes*-borne disease transmission
- Immediately obtain access warrants for all properties in the control area
- There is a significant cost to “regular work”
- Prepare for both single incident exposure and mass exposure events
- Prepare for both single location and multiple location scenarios





THANK YOU

Jason Farned

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