

Vector control emergency response to the 2025 Eaton Fire

3/24/2026

AMCA, Portland, OR

Jamie Mangan

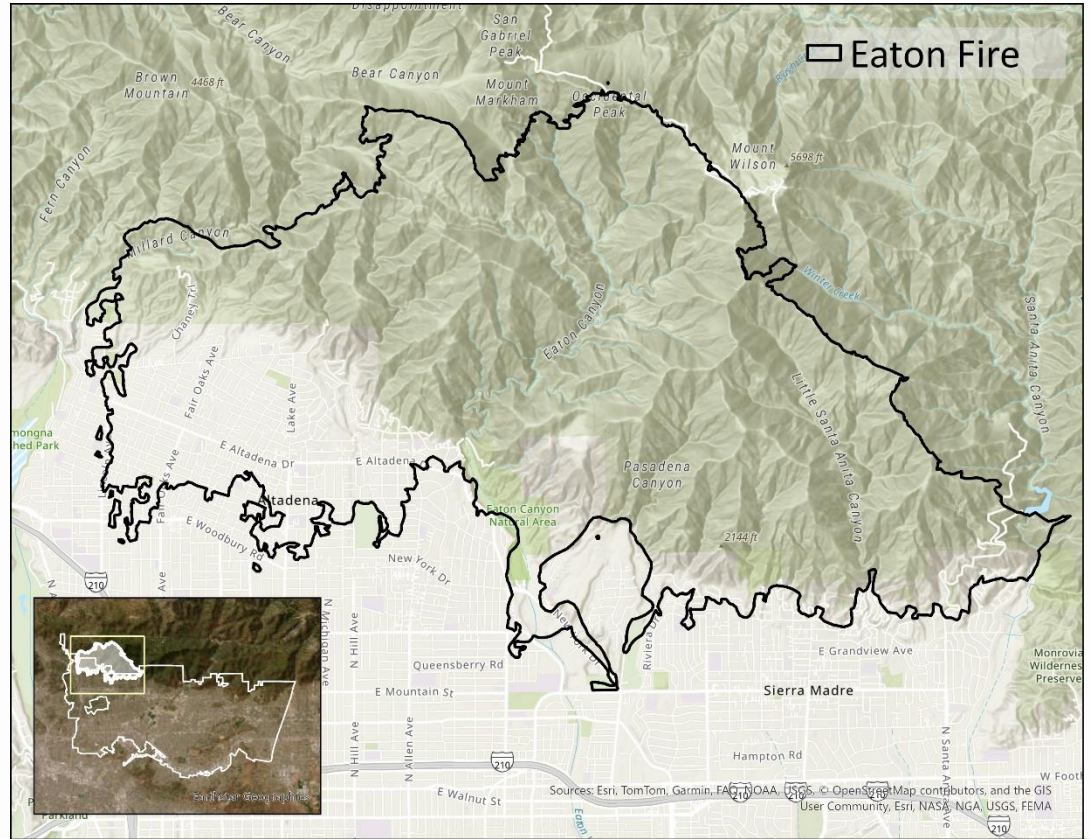
Vector Ecologist

San Gabriel Valley Mosquito and Vector Control District



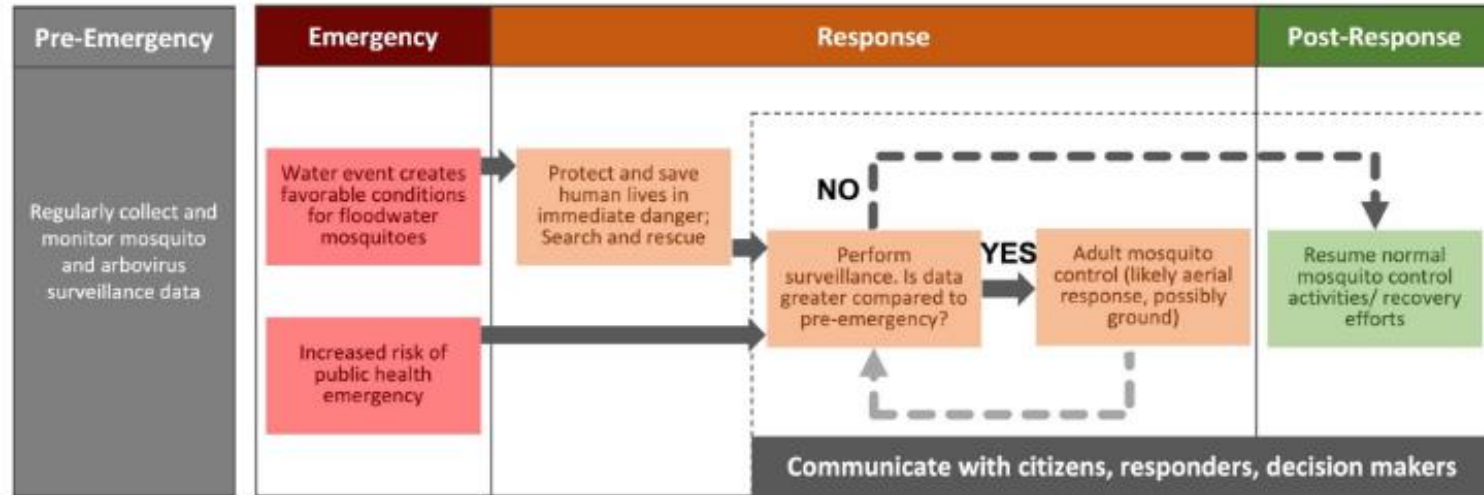
Introduction

- Eaton fire
 - 1/7/25 to 1/31/25
 - Over 14,120 acres
 - Over 9,000 structures
- Swimming pools
 - Over 2,800 suddenly unmaintained swimming pools
 - Prior to the fire, there were 14 unmaintained pools in the area
- Emergency
 - Unmaintained swimming pools are larval habitat for several medically important species
 - By late April, 75% of all inspected pools contained larvae



Mosquito control emergency response

Figure 1. Mosquito Control Emergency Response



Source: American Mosquito Control Association

https://www.mosquito.org/assets/pdf/amca_emergencyresponse_2022/



Mosquito control emergency response

Pre-Emergency

- Baseline surveillance data

Emergency

- Develop response plan

Response

Surveillance

- Continue and expand surveillance
- Compare 2025 data with historical data
- Assess impact of control measures

Public engagement

- Resident outreach
- Press releases
- Digital communications

Control

- Larval control in every unmaintained swimming pool

Post-Response

- Monitor changes in distribution or abundance of mosquito vector species
- Understand long-term impacts



Continued Surveillance

Pre-Emergency

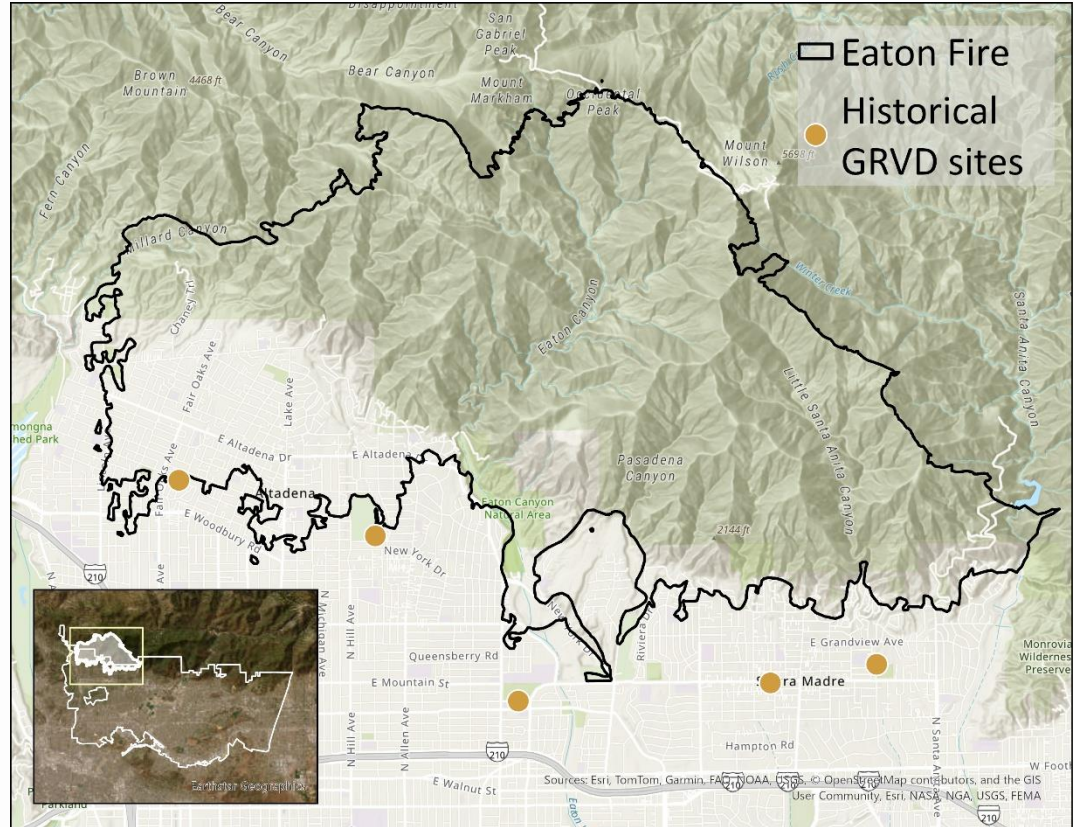
Response

Baseline surveillance

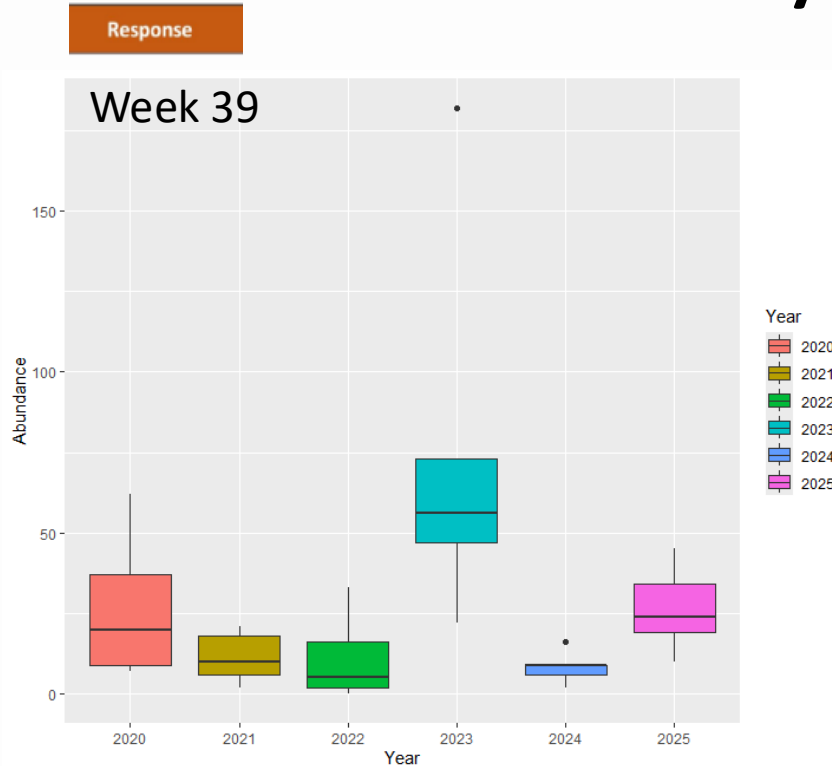
- Regular collection of *Culex quinquefasciatus* via modified Reiter style gravid traps
- 5 historical sites near the area

Data analysis

- Abundance comparison
 - Compare abundance each week with the same epiweek in previous years
- Infection rate comparison
 - Compare arboviral testing results for WNV



Weekly analysis



- Abundance comparison
 - *Culex quinquefasciatus* abundance at historic sites compared to the same week in previous years

Sharing weekly surveillance data

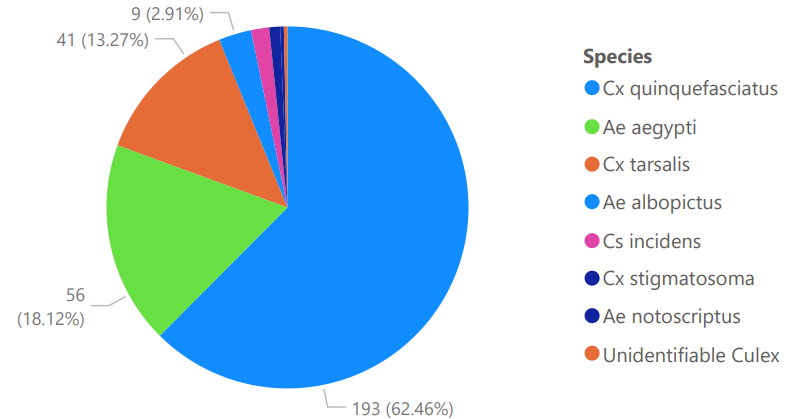
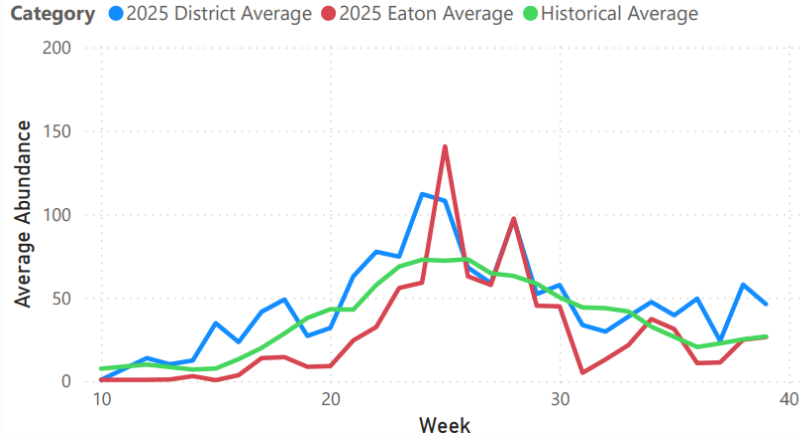
Response

Eaton Burn Area Traps: Female *Culex quinq*

Week
39

This week's abundance is not higher than expected.

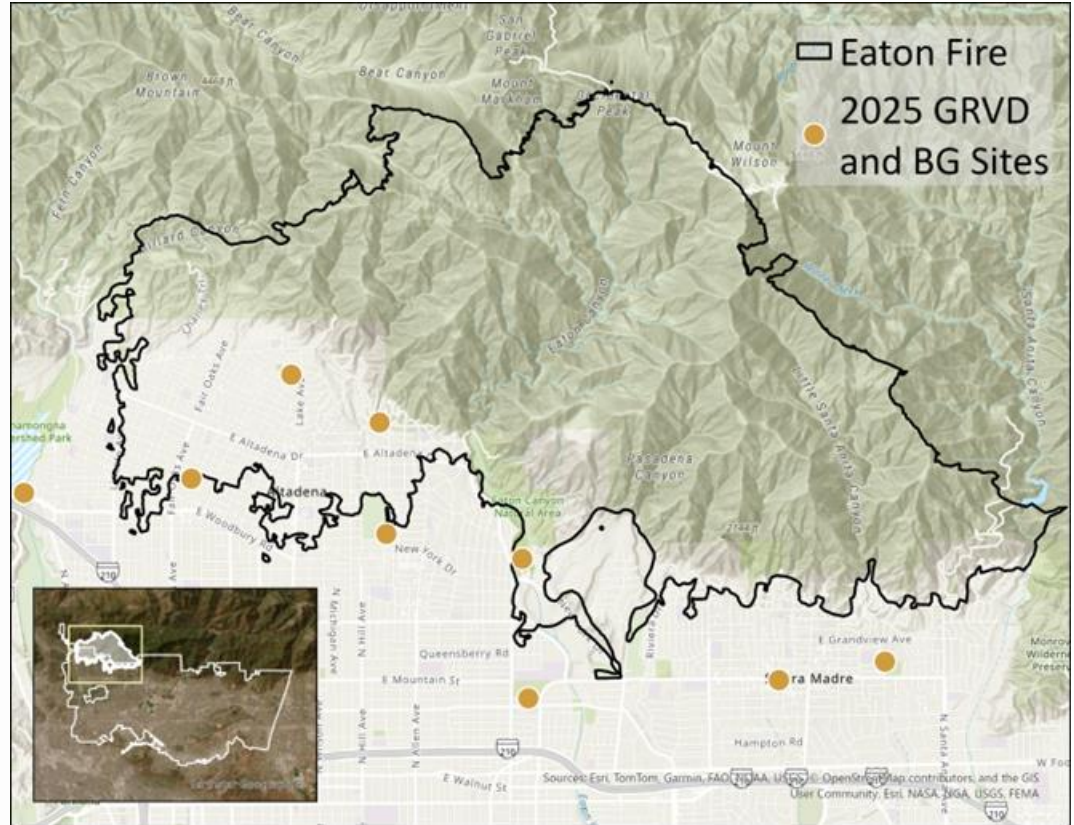
Eaton Area Species



Expanded Surveillance

Response

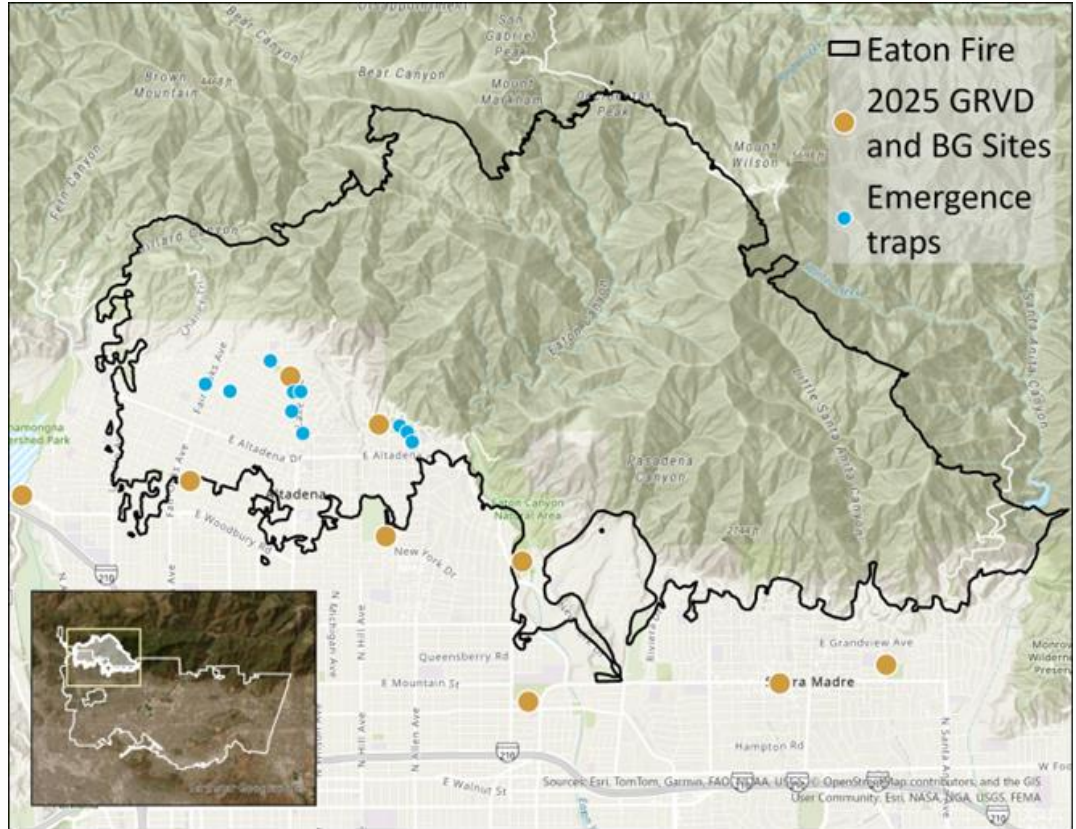
- Gravid traps
 - 4 sites in addition to historical sites
- BG Sentinels
 - All 9 gravid trap sites



Expanded Surveillance

Response

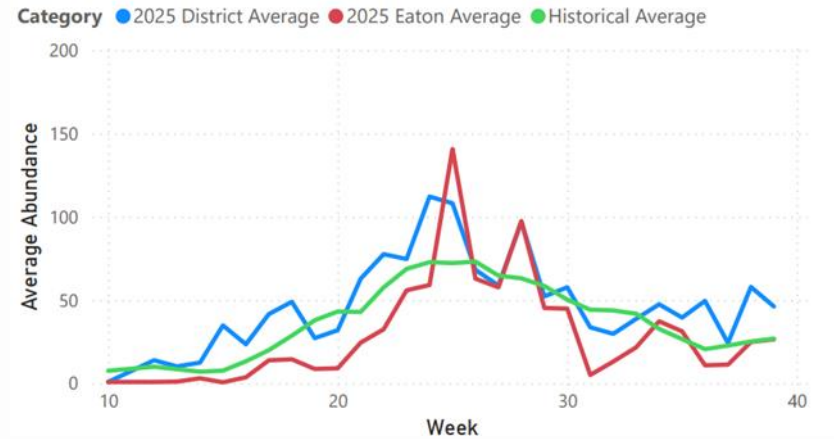
- Gravid traps
 - 4 sites in addition to historical sites
- BG Sentinels
 - All 9 gravid trap sites
- Emergence traps
 - Placed in unmaintained swimming pools
 - Pools treated individually with mosquitofish, Altosid XR, or Natular XRT



Results

Post-Response

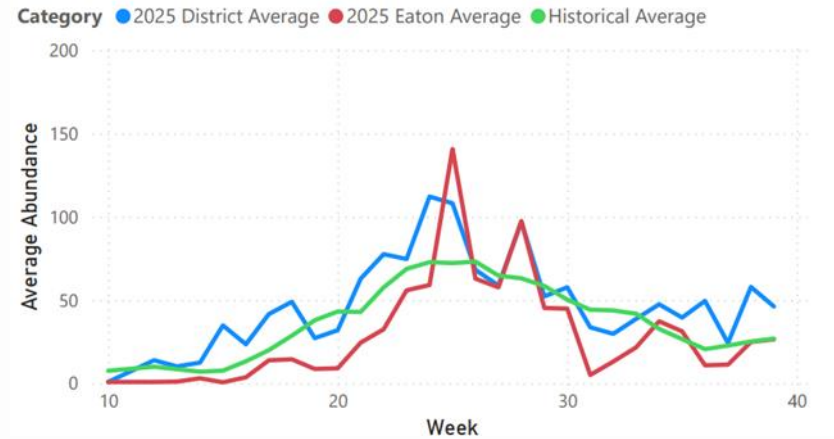
- Weekly analysis
 - *Cx. quinquefasciatus* abundance was never higher than the expected range
 - No arboviral positives



Results

Post-Response

- Expanded surveillance
 - Higher abundance of WNV vector species
 - *Culex tarsalis*
 - *Culex stigmatosoma*
 - Expansion of *Aedes notoscriptus*
 - Detection of *Anopheles franciscanus* and *An. occidentalis*



Lessons learned and looking forward

- Years of historical surveillance data give context to the present
- Increased species diversity reflects the change in larval habitat
- Continued surveillance is necessary for understanding the lasting impacts of the Eaton fire





THANK YOU

Jamie Mangan

Vector Ecologist

San Gabriel Valley Mosquito and
Vector Control District

jmangan@SGVmosquito.org

626-814-9466

@SGVmosquito

