



# Mosquito District Operations in the 2017 Fire-Damaged Zones



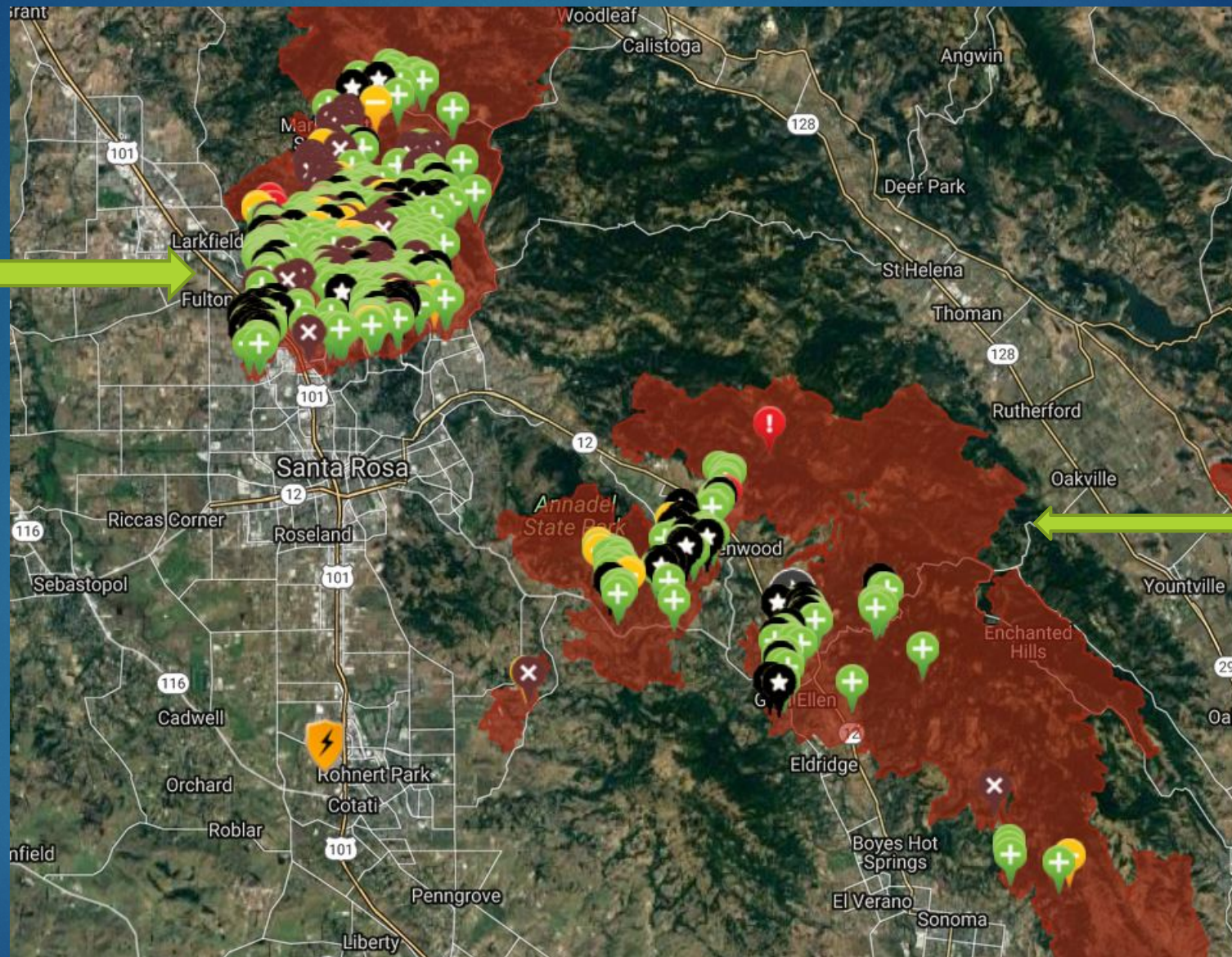


# Sources of Mosquito Production

- ▶ Unmaintained “green” swimming pools
- ▶ Spas & hot tubs
- ▶ Onsite Wastewater Disposal (Septic Tank Systems)
- ▶ Tarps holding water
- ▶ Foundation voids
- ▶ Ornamental pools, ponds and water features
- ▶ 962 total mosquito sources treated



Balloons show  
mosquito sources



Red area shows  
fire footprint



# Fountaingrove Area





# Mapping and Finding Properties

- ▶ District obtained a GIS layer from the County and imported it into MapVison database
- ▶ Onsite, most of the usual landmarks were missing making orientation difficult. Street numbers painted on driveway etc. in some cases.
- ▶ Staff worked in trios initially; pairs later on.
- ▶ Safety precautions were paramount. Proper PPE obtained and worn
- ▶ A few property owners were unfriendly at first. Ultimately we gained access to all areas needing surveillance and treatment and maintained good rapport with agencies and property owners.









Hazardous  
conditions  
underfoot







**Access challenges  
included cyclone  
fencing**








12/01/2017 10:30





Septic System  
Tank and Lids  
Damaged by Fire

12/01/2017 10:31



**Mass of  
Mosquitoes  
found in septic  
tank**





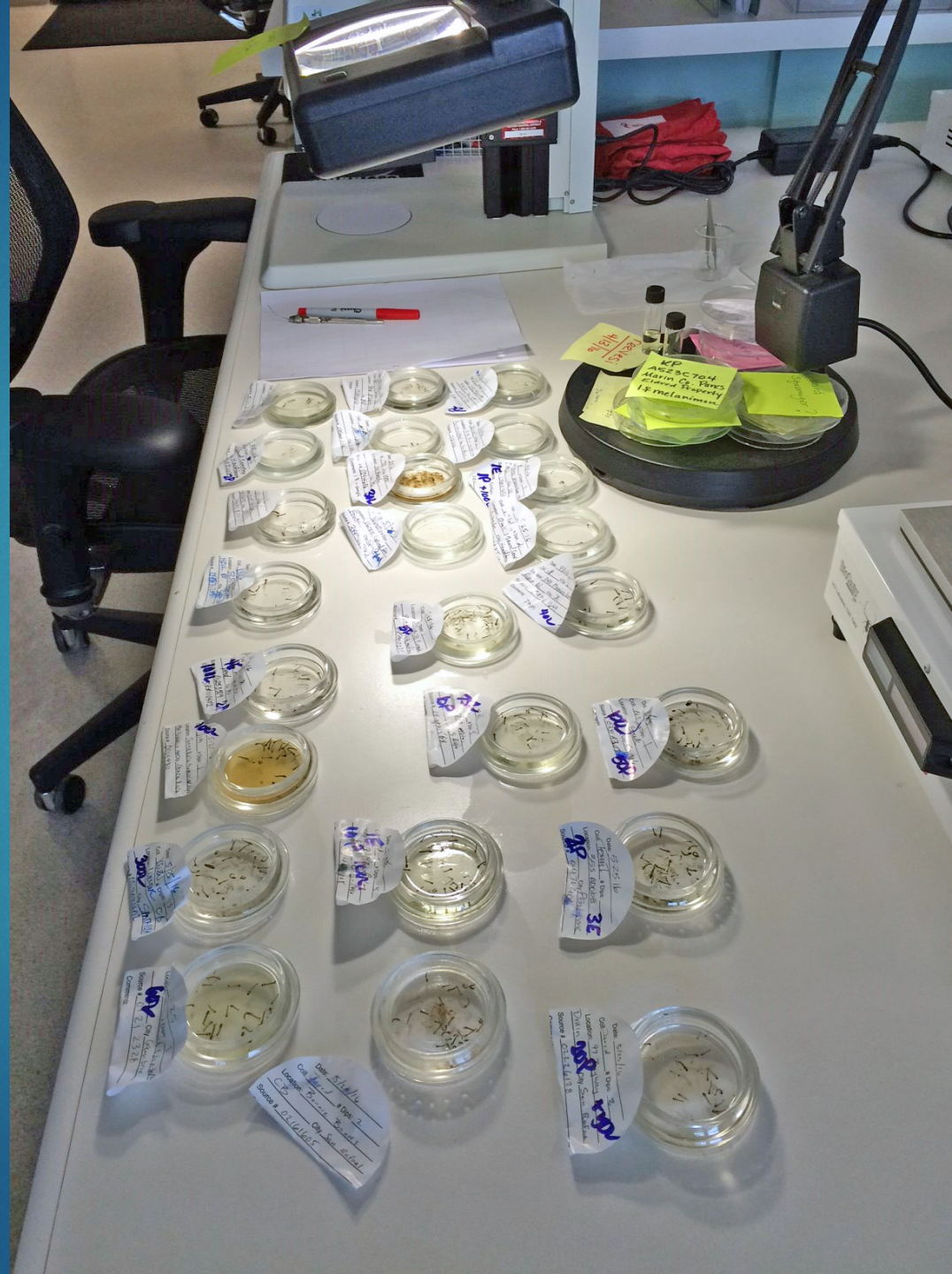
# Health Concerns from Mosquitoes

- ▶ Several of the species we find in mosquito traps, pools etc. are efficient vectors of West Nile virus
- ▶ Discomfort and infections caused by bites
- ▶ Safety of agency and contractor staffs





# Samples of mosquito larvae awaiting identification in the Laboratory





# Estimated Financial Impact to District

- ▶ Potential loss of property tax revenue:
  - ▶ Property Tax Reduction for 2017-18 was backfilled by state
  - ▶ Future budgets?
- ▶ Over \$580,000 in labor and materials costs
- ▶ FEMA financial assistance denied due to special rules applicable to Mosquito Districts



# Current Challenges

- ▶ Demand for services is rising each year
- ▶ Climate shifts are increasing mosquito & tick habitat & causing seasonal population shifts
- ▶ Invasive Yellow Fever mosquitoes are now established in Merced, CA
  - ▶ These *Aedes aegypti* mosquitoes can transmit Zika, Dengue Fever & Chikungunya)





Thanks for your attention!

Any Questions?