

Santa Clara County Vector Control District

Operations and Surveillance Report

September 2018



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District Mission

To detect and minimize vector-borne diseases, to abate mosquitoes, and to assist the public in resolving problems with rodents, wildlife, and insects that can cause disease, discomfort, or injury to humans in the County.

Services Provided

- Detection of the presence/prevalence of vector-borne diseases, such as plague, West Nile virus, rabies, and Lyme disease, through ongoing surveillance and testing
- Routine inspections and treatment, as necessary, of known mosquito and rodent sources
- Response to customer initiated service requests for identification, advice, and/or control measures for mosquitoes, rodents, wildlife, and miscellaneous invertebrates (ticks, yellowjackets, cockroaches, bees, fleas, flies, etc.)
- Free educational presentations for schools, homeowner associations, private businesses, civic groups, and other interested organizations
- Free informational material on all vectors and vector-borne diseases

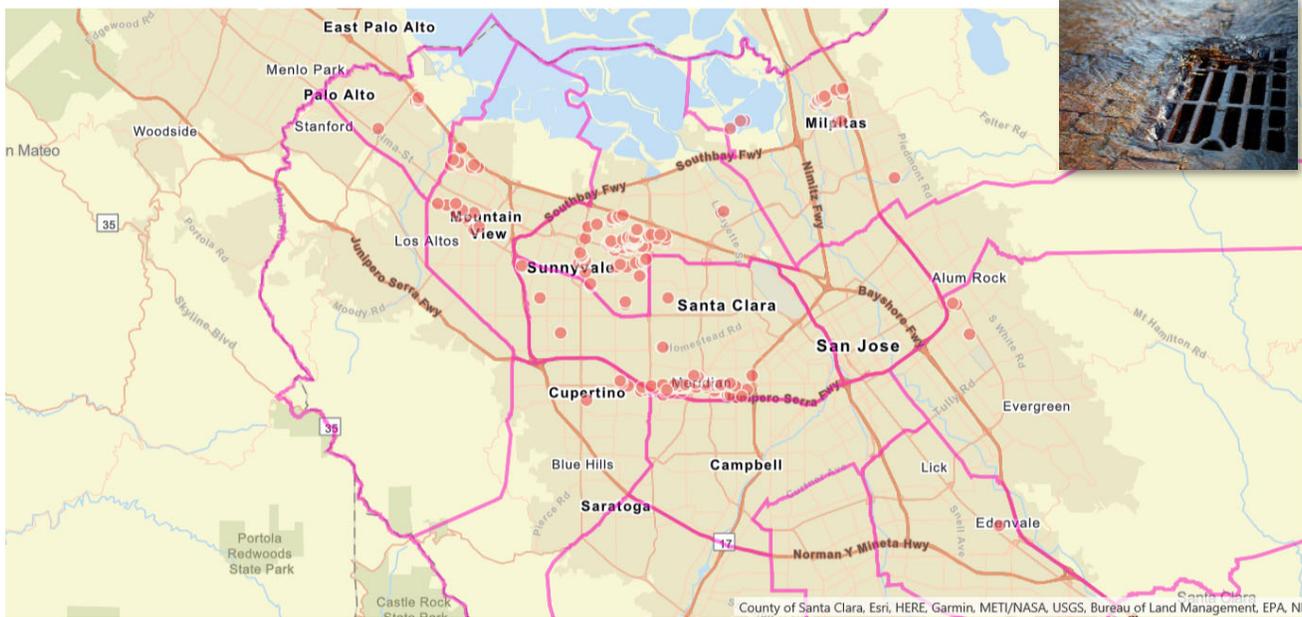
Manager's Message

Part of Santa Clara County Vector Control District's mission is to educate the public about vector-borne diseases. Upon request, district staff are available to give presentation at schools and community organizations.

If you would like to schedule a Vector Control presentation in your community, please reach out to us at:

(408) 918-4770
sccvector.org

Operations Report: Curbs and Catch Basins

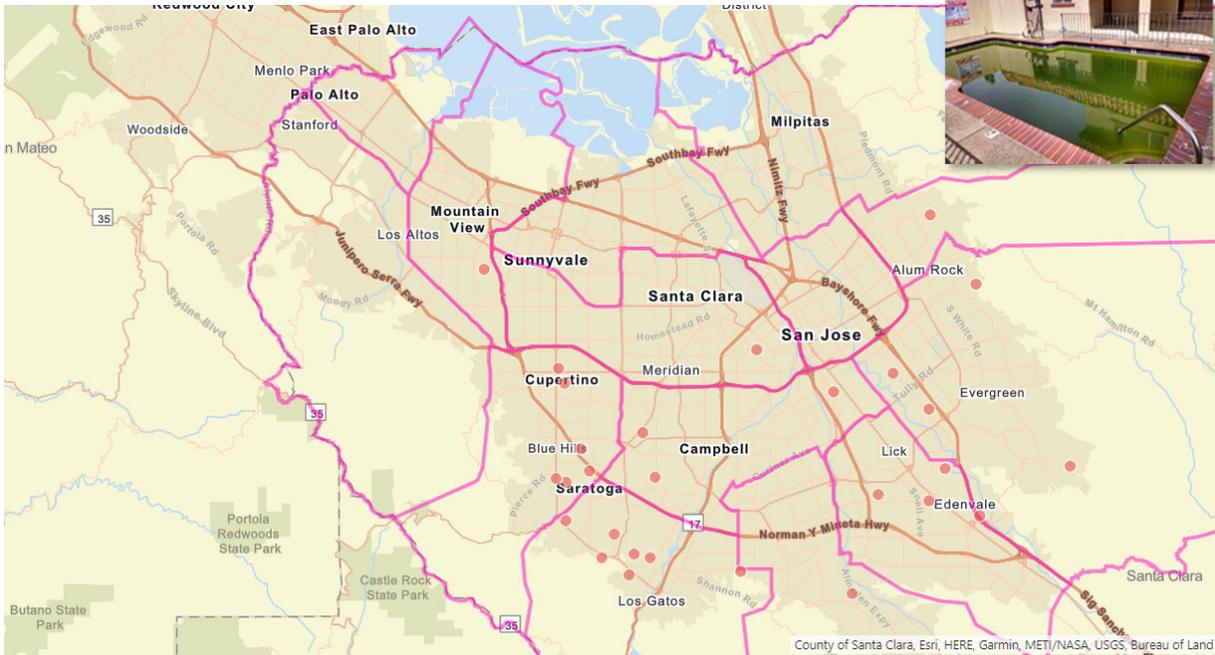


The District employs seasonal staff to check and treat mosquitoes in flooded street stormwater catch basins. These sites hold standing water due to rainfall or urban runoff from domestic water usage. **During September, our staff inspected 4,024 basins treating 284 of them, mainly in hot zones where West Nile virus was detected in birds.**



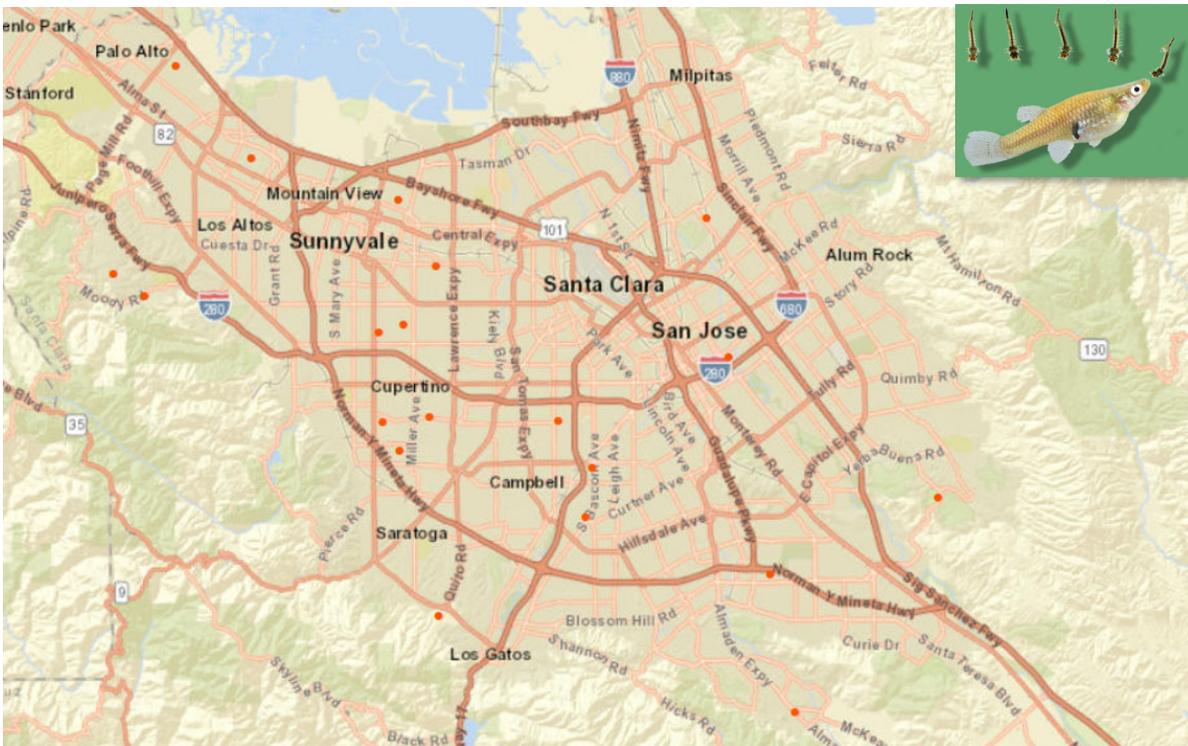
The District also employs seasonal staff to check and treat mosquitoes in flooded curbs. These sites hold standing water because of obstructions or depressions in the curbs. **Mosquito larvae were found and treated in 7 of the fifteen inspected curbs during September.**

Operations Report: Neglected Pools



Stagnant water in neglected swimming pools can produce mosquitoes and cause a local nuisance to neighborhoods. The District inspected 302 pools and treated 29 during September.

Operations Report: Mosquitofish Service Requests



The mosquitofish is a topminnow (*Gambusia affinis*) that is a natural predator of larval and pupal stage mosquitoes. District staff deliver free fish for stocking backyard sites like fountains, ponds, and rain barrels. A total of 22 mosquitofish service requests were fulfilled during September.

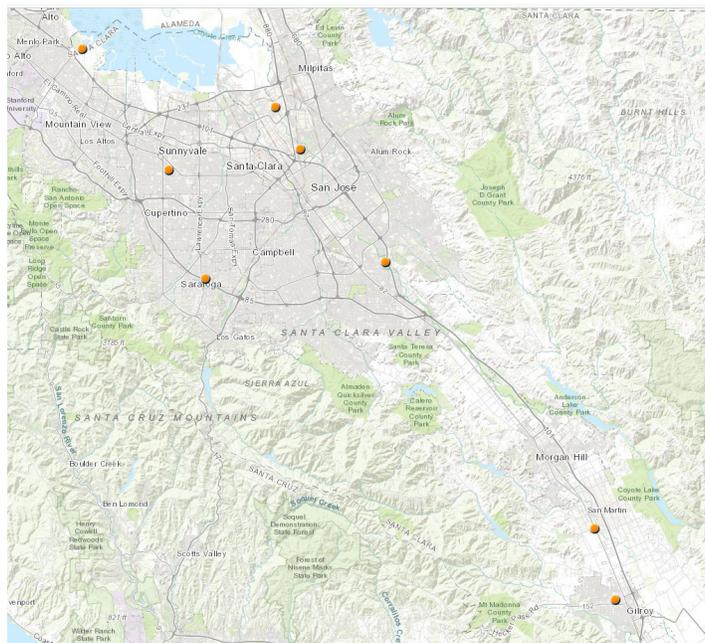
Continued Education

The District values continued staff education through online and live seminars. In September, five online webinars were organized and presented to the Vector Control team. The webinars included, Winterizing Your Home to Keep Out Pests, Don't Let Bed Bugs Hamper Your Vacation Plans!, New and Expanding Tick Threats, Glyphosate and Communicating Risk, and Using GIS for Zika Case Investigations in Florida.

The District is a sustaining member of important international professional organizations such as Mosquito and Vector Control Association of California (MVCAC), Society for Vector Ecology (SOVE), and American Mosquito Control Association (AMCA). District staff will attend and present at conferences organized by these professional organizations, gaining more knowledge in the field and sharing our experiences with others.

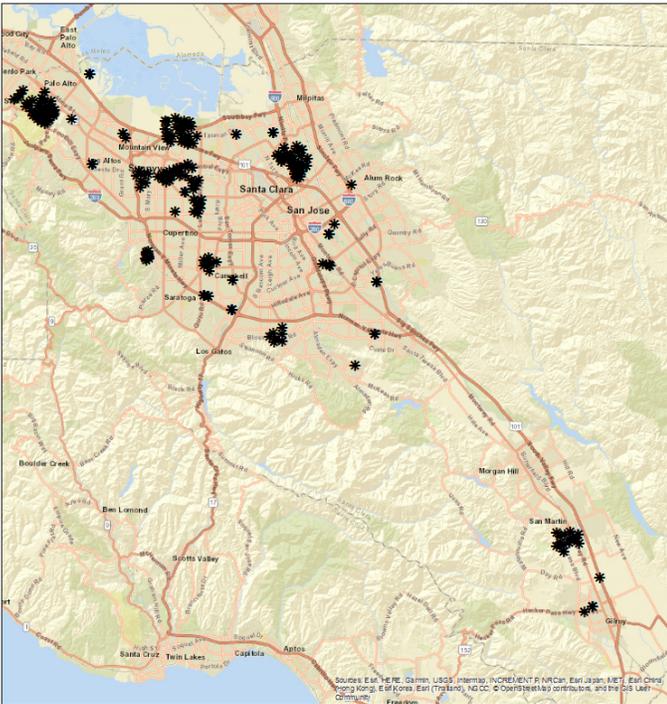
West Nile Virus Surveillance: Sentinel Chicken Program

Many Vector Control programs rely on sentinel chickens for detection of West Nile virus (WNV), St. Louis Encephalitis (SLE), and Western Equine Encephalitis (WEE). A chicken's immune response can help it survive the disease while leaving traces of antibodies (IgM) in chicken serums. Every two weeks, small blood samples from chickens are sent to the California Department of Public Health (CDPH) to be tested for WNV, SLE, and WEE. This is a sensitive program because SLE is not deadly to birds. The District maintains eight chicken flocks (below map), with seven chickens per flock, throughout the County. The program is active between April and November of each year. At the end of each year, the chickens are donated to local farms.



Carbon Dioxide Baited Traps

Mosquito Collections in September 2018



Sampling for arthropod-borne viruses (Arbovirus) via dead birds continues throughout the year, but mosquito trappings are primarily from April through October when they are more active. In September, trappings for mosquitoes yielded 870 mosquitoes in seven species.

Mosquito Species	Count of females - mixed
<i>Aedes dorsalis</i>	3
<i>Aedes squamiger</i>	2
<i>Culex pipiens</i>	384
<i>Culex stigmatosoma</i>	8
<i>Culex tarsalis</i>	336
<i>Culiseta incidens</i>	124
<i>Culiseta inornata</i>	13
Grand Total	870

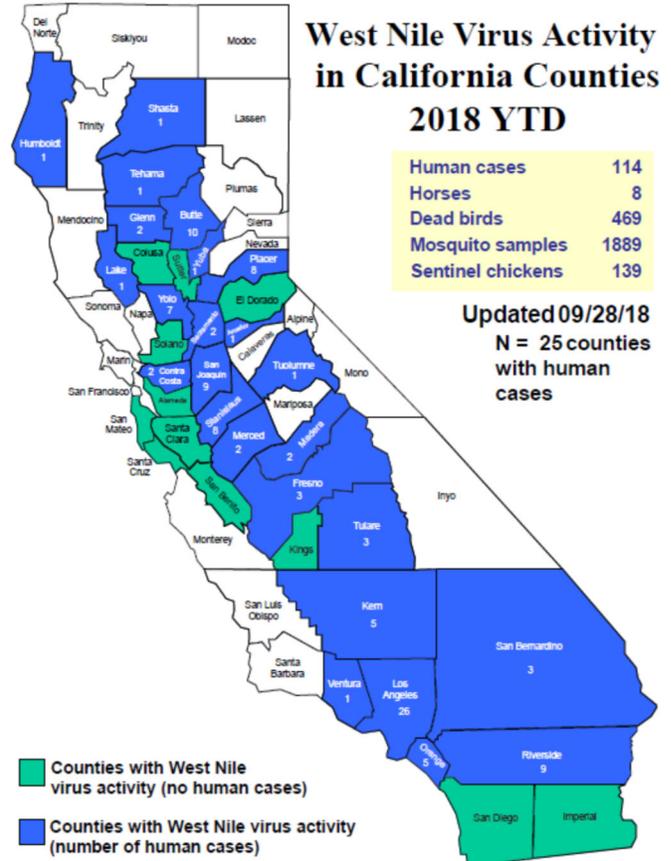
West Nile Virus Update

Statewide:

As of September 28, 469 dead birds had tested positive for West Nile Virus (WNV) in California (see map at right). At this time last year, 428 positive birds had been reported in 43 counties. Thus far in 2018, 1,889 positive mosquito samples were reported to the state. To date, 114 human cases have been reported this year.

Santa Clara County:

As of September 28, 596 dead birds had been reported in Santa Clara County. Of these reported birds, 200 have been tested for WNV and 47 were positive. In September, the Sentinel Chicken Program had 2 new positive chickens at the San Martin flock.



Public Service Requests

Issue	Total
Bats	7
Bed Bug	7
Bees	1
Cockroaches	5
Coyote	8
Gambusia (Mosquito Fish)	23
Mosquitoes	15
Neglected Pool	6
Opossum	10
Other (see description)	5
Other Invertebrate	7
Other Vertebrate	8
Raccoons	33
Rodents	82
Skunk	16
Snake	4
Squirrels	4
Wasps/Yellowjackets	22
Grand Total	263

During September, there were 263 service calls among a wide range of issues, including rodents, mosquitoes, requests for mosquitofish, stinging insects (bees and yellowjackets), and wildlife. Services provided include home inspections for rodents or wildlife and phone consultations.

Calls regarding rodents and raccoons were the most common.



Insect Identification

Eighteen samples were submitted by residents for identification during September including, rat mites, bedbugs, spiders, ants, booklice and, cockroaches.

Bedbugs Continue to Bite

During September, the District received several requests for bedbug assistance in owned and rental properties. Bedbugs continue to be an expensive pest to eradicate due to their cryptic indoor infestations that require thorough inspection and monitoring. In some cities, renters can report issues to Code Enforcement to ensure property managers are in compliance with the State Housing code requiring a habitable living condition be provided to tenants—that includes treating for bedbugs and vermin.



Outreach Programs

Outreach Visits

During the month of September, the Vector Control District participated in multiple community events and school visits. Labor Day was celebrated at the SEIU Labor Day Fair on September 1. Later in the month, Vector Control staff members were a part of the CISCO Safety Fair to promote employee health, safety, and preparedness on the San Jose Campus. Andrew Hill and James Lick high schools, along with Pioneer Family Academy, were among the on-site school educational visits. If you would like schedule the Vector Control District to attend an event or to speak to your school/community, please email hung.pham@cep.sccgov.org or call 408.918.4794.



Internship

Canine Heartworm in the Santa Clara County

Nidhi Bandrapalli from Santa Clara University has been conducting a survey in collaboration with veterinary clinics in the County to assess the prevalence of canine heartworm disease in dogs, and its correlation with heartworm disease in coyotes. She completed the first phase of her project in September 2018. The results will be presented at conferences such as Society for Vector Ecology this fall.

Stanford Student Visit

On September 24, a group of students from Stanford University visited the District office. Dr. Tietze presented the scope of the surveillance program, and Dr. Ebrahimi delivered a tour to the laboratory where insect identification and molecular diagnosis of vector-borne diseases are conducted.





Santa Clara
County Vector
Control District

1580 Berger Dr.
San José, CA
95112

Vector Control History

The Vector Control District was formed in 1988 and is one of 12 special districts located in the greater San Francisco Bay Area charged with providing vector control per California health, safety, and government codes. The District is one of six in the State where the County Board of Supervisors acts as the trustee and oversees operations. Funding for District work comes from a county-wide property tax assessment.



“A VECTOR is any animal that can transmit disease to animals or people.”