

Santa Clara County Vector Control District Operations and Surveillance Report February 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 of medical significance.

Services Provided

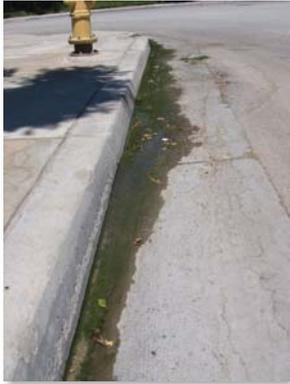
- Detection of the presence/prevalence of vector borne diseases, such as Plague, West Nile Virus, rabies, & Lyme disease, through ongoing surveillance and testing
- Routine inspections, and treatment as necessary, of known mosquito and rodent sources
- Response to customer initiated service requests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

Manager's Message

For more than 30 years, Santa Clara County Vector Control District provide services consistent with an awareness and concern for environmental protection and maintain a safe and effective public health pest management program.

Operations Report: Curbs and Catchbasins

Street curbs



Stormwater Catchbasins



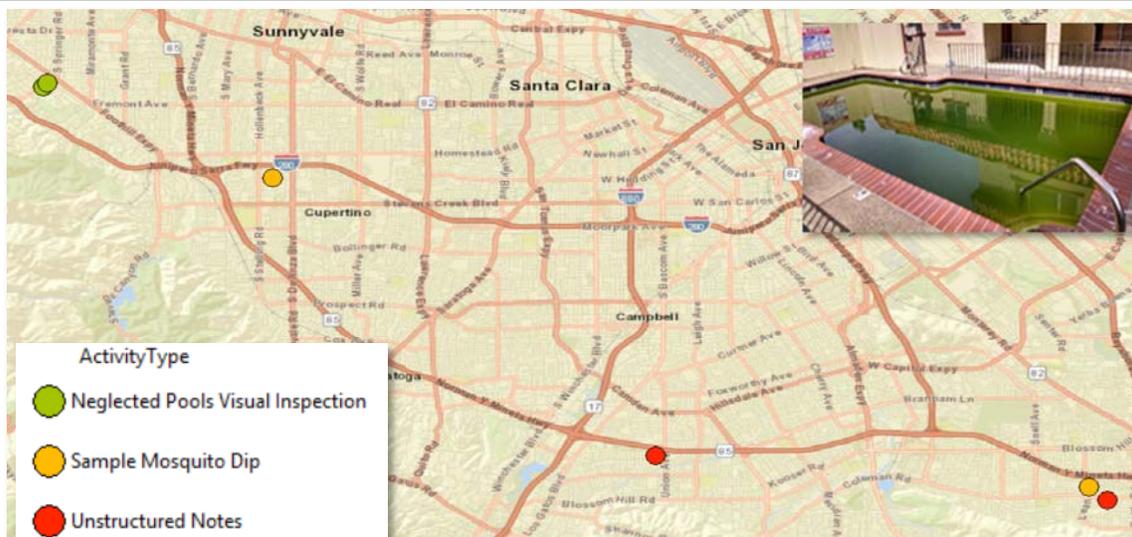
The District employs seasonal staff to check and treat mosquitoes in flooded street curbs and stormwater catchbasins. These sites hold standing water due to rainfall or urban runoff from domestic water usage. No operations in these habitats were conducted during February 2018.

Operations Report: Aerial Mosquito Control



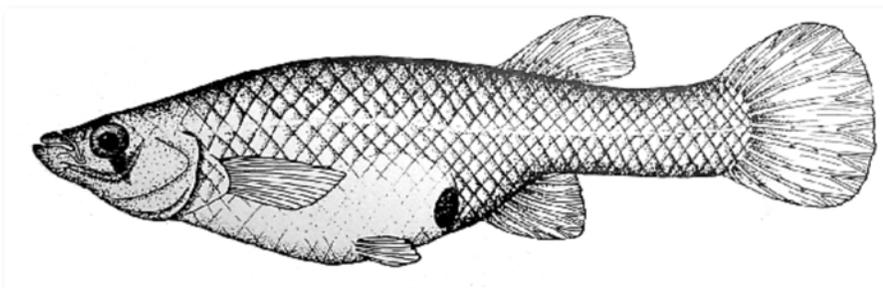
On February 14th, aerial operations were performed in Palo Alto and Alviso to control a severe nuisance from the Winter Saltmarsh Mosquito, Aedes squamiger. A total of 325 acres were covered.

Operations Report: Neglected Pools



Stagnant water in neglected swimming pools can produce hundreds of mosquitoes and cause a local nuisance to neighborhoods. The District inspected 6 pool locations during February. To date in 2018, 17 pool locations have been inspected. There are currently 3,684 neglected pool locations logged in the District's data system.

Operations Report: Biological Control with Mosquitofish



*The mosquitofish is a topminnow (*Gambusia affinis*) that is a natural predator of larval and pupal stage mosquitoes. District staff deliver fish for stocking backyard sites like fountains, ponds, and rain barrels. There were no fish deliveries during February, 2018. The new fish facility continues to produce fish fry for use in future operations.*

Tick-borne Disease Assessment

Adult Tick Surveillance

Ticks can carry and transmit a wide variety of diseases known to infect people including lyme disease, ehrlichiosis, babesiosis, anaplasmosis, relapsing fever and tularemia. Each winter season, the District conducts countywide surveys for ticks and tick-borne disease, particularly within certain county, state and city parks frequented by hikers and bicyclists. This year the District has adopted use of the cell phone application, GAIA to assist in the collection process for ticks. GAIA is a hiking app that records your progress along park trails including distance traveled, elevation and trail name. The app also notifies staff when to begin and end sampling intervals along the trail. Once the ticks have been tested for lyme disease and *Borrelia miyamotoi*, we will have a rich data set to report.



A tick flag is dragged along a trail.

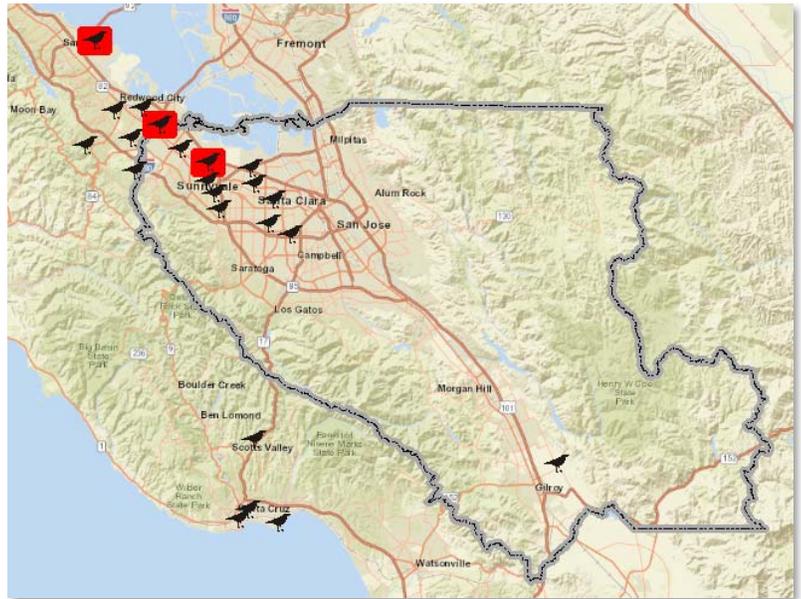


Above: Sample of tick surveillance map using ArcGIS 10.4.1 for Desktop. Line indicates GAIA application data acquired during tick collection by dragging a “tick flag” along the trail edge for 0.25 kilometer increments (denoted by yellow pushpins). Numbers identify vials of live ticks collected along the way. Right: Western Black-legged ticks (left to right) adult female, adult male, nymph and larva.

WNV/SLE Surveillance

Birds Sampled to Date in 2018
(positive birds are highlighted red)

Count of bird_id		WNV status		
county	species	Neg	Pos	Total
Santa Clara	American Crow	6	2	8
	Cooper's Hawk	1		1
	Dark-eyed Junco	1		1
	Hawk	1		1
	House Finch	1		1
	House Sparrow	1		1
Total		11	2	13



West Nile Virus Update

Statewide:

As of March 1, 2018, three dead birds have tested positive for West Nile Virus (WNV) in California (see map at right). At this time last year, zero positive birds had been reported.

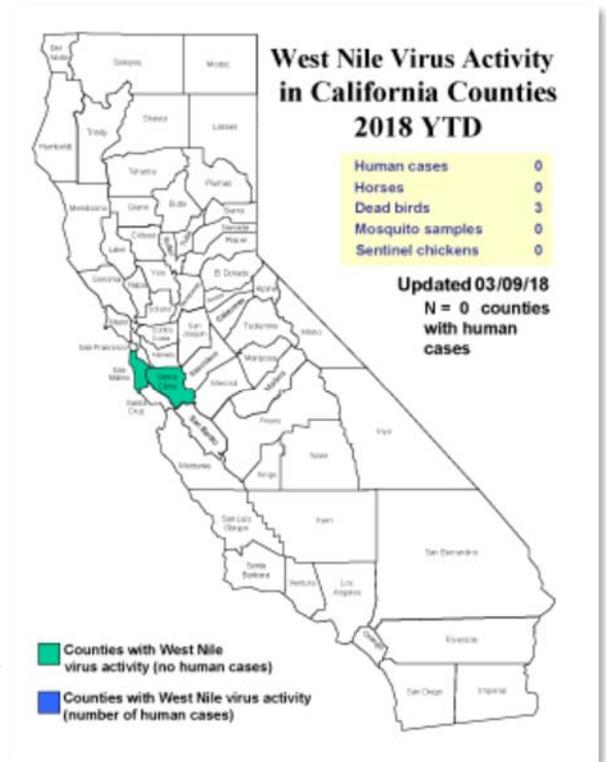
No positive mosquito samples have been reported to the state so far this year. To date, no human cases have been reported.

Santa Clara County:

As of March 1, 2018, 13 dead birds have been reported in Santa Clara County. Of these reported birds, 2 were found positive for West Nile virus. The Sentinel Chickens Program was concluded last year were at the end of October. This year, sampling will resume in April.

San Mateo County

One positive bird was reported for San Mateo County from Foster City on February 5th. The positive American crow was one of eight birds sampled in San Mateo County thus far this year.



Public Service Requests

Row Labels	Count of ItemID
Bed Bug	4
Bees	3
Cockroaches	1
Coyote	18
Gambusia (Mosquito Fish)	3
Midges/Gnats	1
Mosquitoes	21
Neglected Pool	7
Opossum	5
Other (see description)	3
Other Invertebrate	2
Other Vertebrate	1
Raccoons	7
Rodents	54
Skunk	7
Snake	1
Squirrels	2
Wasps/Yellowjackets	2
Grand Total	142

During February there were 142 calls for service among a wide range of issues including mosquitoes, rodents, requests for mosquitofish, stinging insects (bees and yellowjackets) and wildlife. Services provided include home inspections for rodents and wildlife and phone consultations. Calls regarding rodents and mosquitoes were highest in frequency. The map below shows wildlife service calls for February.



Insect Identification Service



Insect Identification	9
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Arthropods submitted by residents for identification during February included: bedbugs, rat mites, cat flea (shown on left), Western black-legged tick and fungus gnats.

Invasive Mosquito Operations

Planning continues on the District’s operational response to invasive Aedes or local transmission of Aedes-borne diseases such as Zika virus. Unlike West Nile virus, these diseases are transmitted from humans to mosquitoes to humans. Invasive Aedes also cause severe day-time nuisance problems.



Invasive Mosquito Detection Methods

Detection Method	Trap Nights	Positive Detections
Ovicup Trap 	0	0
Biogents Sentinel Trap (BG-Sentinel) 	53	0
Autocidal Gravid Trap (AGO or MAGO) 	14	0
Public Submission of Day-biting mosquitoes Travel Cases (Zika, Chikungunya, dengue)	0 1	0 0



Santa Clara
County Vector
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Our District Mission is to detect and minimize vector-borne diseases, to abate mosquitoes, and to assist the public in resolving problems with rodents, wildlife, and insects of medical significance in Santa Clara County.



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