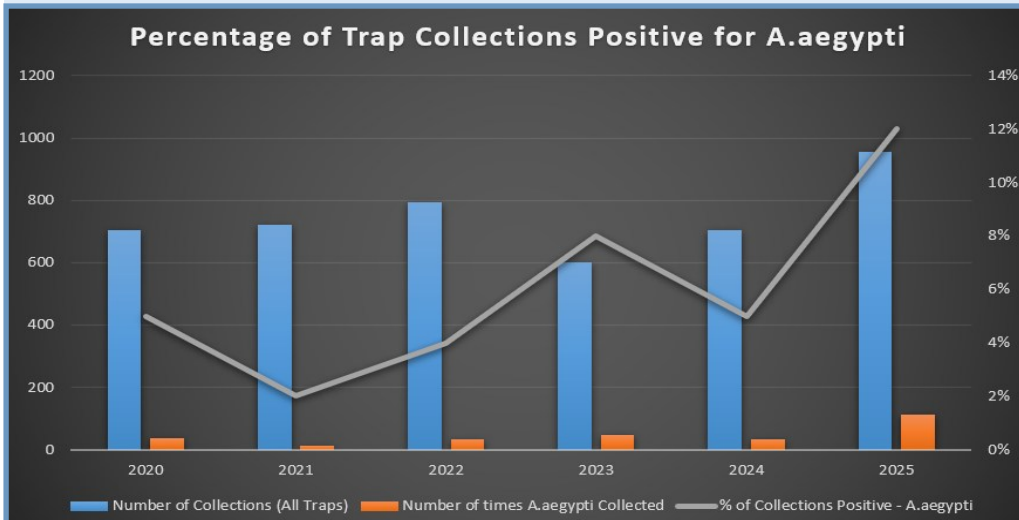


# Vector Control Report 2025



# 2025 - *Aedes aegypti* Mosquitoes on the Move in Ventura County & the 'One Health' Movement



Since the first detection of Invasive *Aedes aegypti* mosquitoes in Ventura County in 2020, this aggressive, day-biting

species has been a steadily increasing presence in the County. Known globally as the 'yellow fever mosquito', *A. aegypti* is also a capable vector of dengue, chikungunya, and zika viruses. In 2025, 12% of all trap collections conducted by the Vector Control Program contained *A. aegypti* mosquitoes. These "ankle biters" were trapped 111 times at 45 different locations for a total of 781 *A. aegypti* collected. Each of these numbers represent the highest totals recorded in Ventura County to date. This invasive species has been adapting and spreading slowly since 2020, but 2025 showed the most widespread activity we've seen. This is concerning not only because these mosquitoes feed on humans and can affect quality of life with their aggressive biting behavior; since 2023, there have been at least 26 confirmed cases of locally transmitted dengue in Southern California, which had never been documented in California prior to 2023.



**Embracing One Health** - One Health is an approach aimed at improving health and well-being through recognizing the interdependence of people, animals, plants, and the environment. Key principles include collaboration, equity, inclusion, and sustainability. One Health has been formally endorsed by the CDC, USDA, CDPH, WHO, and FAO.

Effectively mitigating the threat of vector-borne diseases requires a holistic view. The Vector Program embraces the One Health movement's multidisciplinary approach to prevent, detect, and respond to public health threats. The Division and Vector Program participate in weekly, multiagency, One Health meetings held by Ventura County Public Health that lead to highly beneficial sharing of information and collaboration where a variety of expertise and resources combine to reach common goals. During 2025, Vector Control worked with Public Health and Emergency Medical Services to organize and conduct a Dengue Response table top exercise which led to the development of new interagency response plans, tools, and establishment of relationships that greatly enhance preparedness for a dengue related public health emergency in Ventura County.



# 2025 Report of Vector Control Activities

The Ventura County Environmental Health Division (Division) provides the following summary of Vector Control activities conducted during the calendar year 2025.



## Mosquito Control

Mosquito Control activities consist of Division staff inspecting potential mosquito sources and applying control measures when mosquito eggs, larvae, and pupae are observed. Staff follow the principles of Integrated Vector Management. Control measures may consist of source remediation, biological control, or application of pesticide.

## Source Inspection

The program maintains a dynamic inventory of known mosquito sources (breeding sites).

Sources can vary from intermittent flooding, to manmade sources, to large natural areas with well developed biological systems such as riverbeds and wetland areas.

Inspections vary from weekly to annual, and each source is evaluated based on historical breeding and other factors. Each site is assigned an inspection frequency to control mosquitoes and use program resources efficiently.





## SUMMARY OF 2025 MOSQUITO SOURCE INSPECTIONS AND TREATMENTS BY JURISDICTION



City	Inventoried Sources	Mosquito Source Inspections	Mosquito Source Treatments
<b>Camarillo</b>	<b>312</b>	<b>2,254</b>	<b>622</b>
<b>Fillmore</b>	<b>105</b>	<b>762</b>	<b>323</b>
<b>Ojai</b>	<b>180</b>	<b>1,058</b>	<b>518</b>
<b>Oxnard</b>	<b>266</b>	<b>3,010</b>	<b>1,458</b>
<b>Port Hueneme</b>	<b>23</b>	<b>321</b>	<b>173</b>
<b>San Buenaventura</b>	<b>209</b>	<b>1,471</b>	<b>569</b>
<b>Santa Paula</b>	<b>123</b>	<b>962</b>	<b>408</b>
<b>Simi Valley</b>	<b>749</b>	<b>6,080</b>	<b>2,717</b>
<b>Thousand Oaks</b>	<b>557</b>	<b>5,782</b>	<b>1,986</b>
<b>Unincorporated</b>	<b>232</b>	<b>1,948</b>	<b>684</b>
<b>TOTAL:</b>	<b>2,756</b>	<b>23,648</b>	<b>9,458</b>



## Ventura County Vector Control Program uses mosquito control methods that achieve the optimal long term results while causing the least harmful impacts

- The Division maintains the capability of using pesticides that target adult mosquitoes in the event of a public health emergency, however our program adheres to the principles of Integrated Vector Management to achieve mosquito control with the most effective and least negatively impactful means.
- The Division primarily depends on control strategies such as:
  - physical alteration, prevention, or removal of the breeding source
  - introducing mosquito fish (*Gambusia affinis*) into isolated artificial water bodies such as decorative ponds or inoperable swimming pools
  - applying larvicides containing naturally occurring bacteria like *Bacillus thuringiensis israelensis*
- The Division makes mosquito fish available to the public for use in confined non-natural waters at no charge. Just call the **Mosquito Fish Hotline at 805/662-6582.**



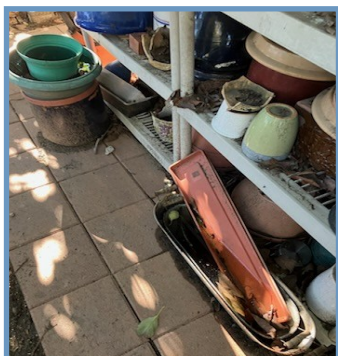
### SERVICE REQUEST RESPONSES

Division staff responded to 475 requests for service within nine cities and the unincorporated area concerning mosquitoes, rodents, and other vectors/nuisance pests. 108 dead birds were reported and 18 birds were submitted for West Nile virus testing. **1 dead bird tested positive for WNV.** Out of the 475 service requests, 169 were reports of day biting behavior indicative of the invasive *Aedes* mosquitoes.

City	Vector-Related Service Requests	Birds Collected for West Nile virus Testing	Invasive <i>Aedes</i> Service Requests
Camarillo	46	0	6
Fillmore	9	1	5
Ojai	41	0	10
Oxnard	17	1	0
Port Hueneme	0	0	0
San Buenaventura	47	3	1
Santa Paula	11	0	2
Simi Valley	121	5	49
Thousand Oaks	161	7	82
Unincorporated	22	1	14
<b>TOTAL:</b>	<b>475</b>	<b>18</b>	<b>169</b>

## ***Aedes aegypti* Information**

*A. aegypti* can transmit dengue, Zika, chikungunya, and yellow fever. This invasive species is now well established in many areas of California and Ventura County. Although previously unprecedented, local dengue transmission has occurred in Southern California for the last three years resulting in 26 human cases. In 2025, the first sample of *A. aegypti* mosquitoes to test positive for dengue virus in California was collected in the Sun Valley area of Los Angeles County, not far from our borders. These occurrences highlight that it is increasingly important to prevent *A. aegypti* breeding and reduce the chances that an infected traveler gets exposed to *A. aegypti* and becomes a source for more locally transmitted dengue virus infections.



*Aedes aegypti* lay eggs in objects/containers that can hold water including yard/area drains in residential areas.

## **SERVICES SPECIFIC TO INVASIVE AEDES MOSQUITOES IN 2025**

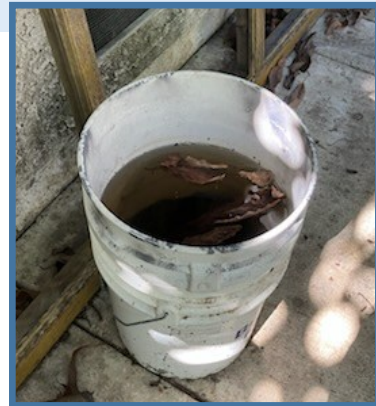
### **INCLUDED:**

- Performing **169** complaint responses
- Conducting **71** surveillance trappings
- Deploying **46** In2Care® mosquito traps that attract and kill both adult and larval stage mosquitoes
- Direct mailing **29,971** Invasive Aedes educational outreach postcards
- Hand delivering Invasive Aedes outreach materials to **89** neighborhoods



## PREVENT Mosquito Breeding

- Eliminate standing water by emptying any containers that are holding water
- Remove or modify containers altogether to prevent future problems
- Reduce overwatering so excess water doesn't collect in plant saucers, gutters, or drains



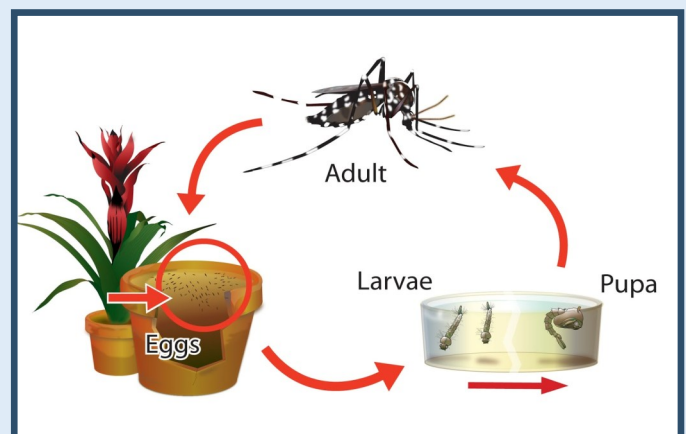
## PROTECT from Mosquito Bites

- Wear insect repellent with EPA registered ingredients such as DEET, picaridin, oil of lemon eucalyptus, or IR3535 (as directed on the label)
- Check the condition of door and window screens to prevent mosquitoes from entering your home



## REPORT Mosquito Activity

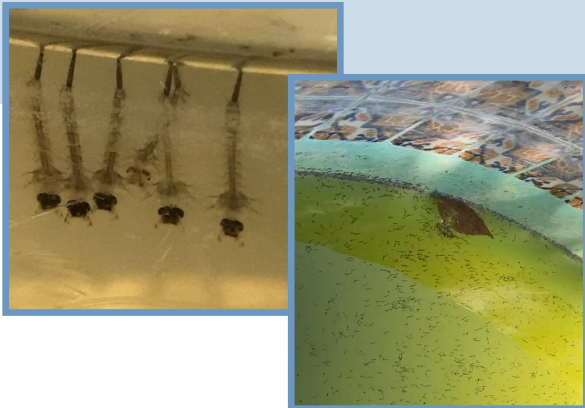
- Report mosquitoes and unusual behavior such as indoor or day-biting mosquitoes by calling (805) 658-4310



# RESPONSE TO POOLS DAMAGED IN MOUNTAIN FIRE

Following the Mountain Fire event in November 2024, the Environmental Health Division identified 70 swimming pools at properties that were affected. An unmaintained swimming pool can produce large amounts of adult mosquitoes throughout the year if not treated, and the Vector Control Program began inspections and control measures 16 days after the event. In order to knock down initial mosquito breeding and begin the process of controlling mosquitoes long term, tools such as mosquito fish and 'extended release' larvicides were used. Still, many of these pools require multiple inspections each year to re-apply chemicals and monitor effectiveness of the control efforts in place. Other challenges include safety, access, and water levels that change throughout the year due to heat or rain. Pools are monitored and treated until they are no longer a potential mosquito breeding site. In 2025, VCVCP staff performed 257 inspections at properties involved in the Mountain Fire.

Sadly, the Vector Control Program has experienced these challenges before, with pools damaged in the 2017 Thomas Fire and the 2018 Woolsey Fire. Some of these pools are still actively being inspected. As of March 2026, there are 68 swimming pools damaged by fires in Ventura County that are currently being inspected and treated to control mosquito breeding.

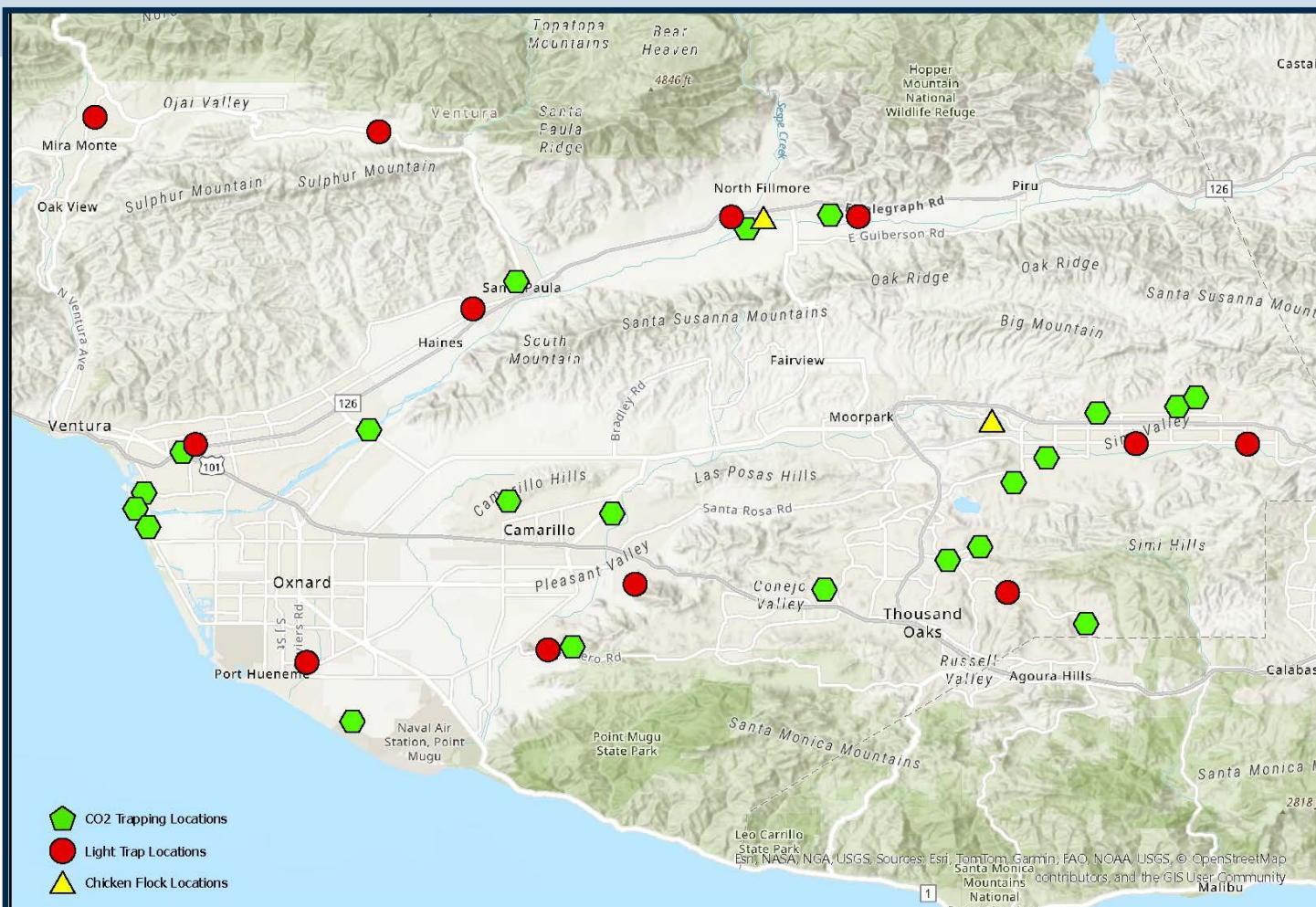
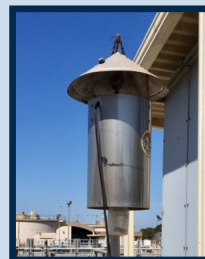
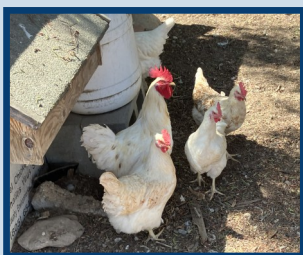


## Neglected Swimming Pools

Unmaintained pools and other water features such as ornamental ponds or fountains can produce ideal conditions for mosquito development. Lack of water circulation, aeration, mosquito eating fish, and/or chemical treatments can turn a water feature into a mosquito hotspot. The Vector Control Program will work with residents that have unmaintained pools or water features to prevent mosquito breeding and reduce the risk of vector borne illness in the area. To request free mosquito fish to control mosquito breeding in water features, call **805/662-6582**.

# ENCEPHALITIS AND WEST NILE VIRUS SURVEILLANCE

St. Louis Encephalitis virus, Western Equine Encephalitis virus, and West Nile virus are mosquito-borne viruses which can be transmitted to humans. These viruses can cause mild to very serious illness in humans. The purpose of the encephalitis and West Nile Virus surveillance program is to prevent transmission of encephalitis and West Nile viruses by mosquitoes to humans. Mosquito species commonly found in Ventura County can transmit Saint Louis Encephalitis, Western Equine Encephalitis, and West Nile Virus. The surveillance program has many facets, which include mosquito population and species monitoring, virus testing of adult mosquitoes, serological analysis of sentinel chickens, and dead bird surveillance for West Nile Virus.



County of Ventura  
Environmental Health Division  
**Encephalitis Surveillance, 2025**

0 1 2 4 Miles  
Disclaimer: This map was created by the Ventura County Resource Management Agency Information Systems (GIS), which is designed and operated solely for the convenience of the County and related public agencies. The County does not warrant the accuracy of this map and no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

# MOSQUITO MONITORING AND TESTING

During 2025, 12 mosquito light traps were located in representative areas of the County to monitor mosquito population densities. One or more traps are located in each city, and adult mosquito specimens are collected once per week throughout the year to evaluate the effectiveness of mosquito control measures and the potential for disease transmission.

Additionally, 6 encephalitis vector survey traps, used to collect live adult mosquitoes, were deployed throughout the County. These traps were placed on 28 different occasions. Mosquitoes from these traps were collected and submitted to the California Department of Public Health, Vector-Borne Disease Section (CDPH) for Saint Louis Encephalitis, Western Equine Encephalitis, and West Nile Virus testing. None of the samples of mosquitoes collected in Ventura County during 2025 tested positive for vector borne diseases.

Within the State in 2025, 2,759 of 51,802 mosquito pools tested positive for West Nile Virus and 105 of 47,791 mosquito pools tested were positive for Saint Louis Encephalitis. There were no positive mosquito pools for Western Equine Encephalitis. 1 of 1,610 mosquito pools tested positive for dengue virus and none tested positive for Chikungunya or Zika. ***This is the first time that a mosquito pool has tested positive for dengue virus in California.***



## SENTINEL FLOCK MONITORING AND TESTING

In 2025, two sentinel chicken flocks were deployed for serological monitoring of Saint Louis Encephalitis, Western Equine Encephalitis and West Nile Virus. These flocks were located in the areas of Simi Valley and Fillmore.

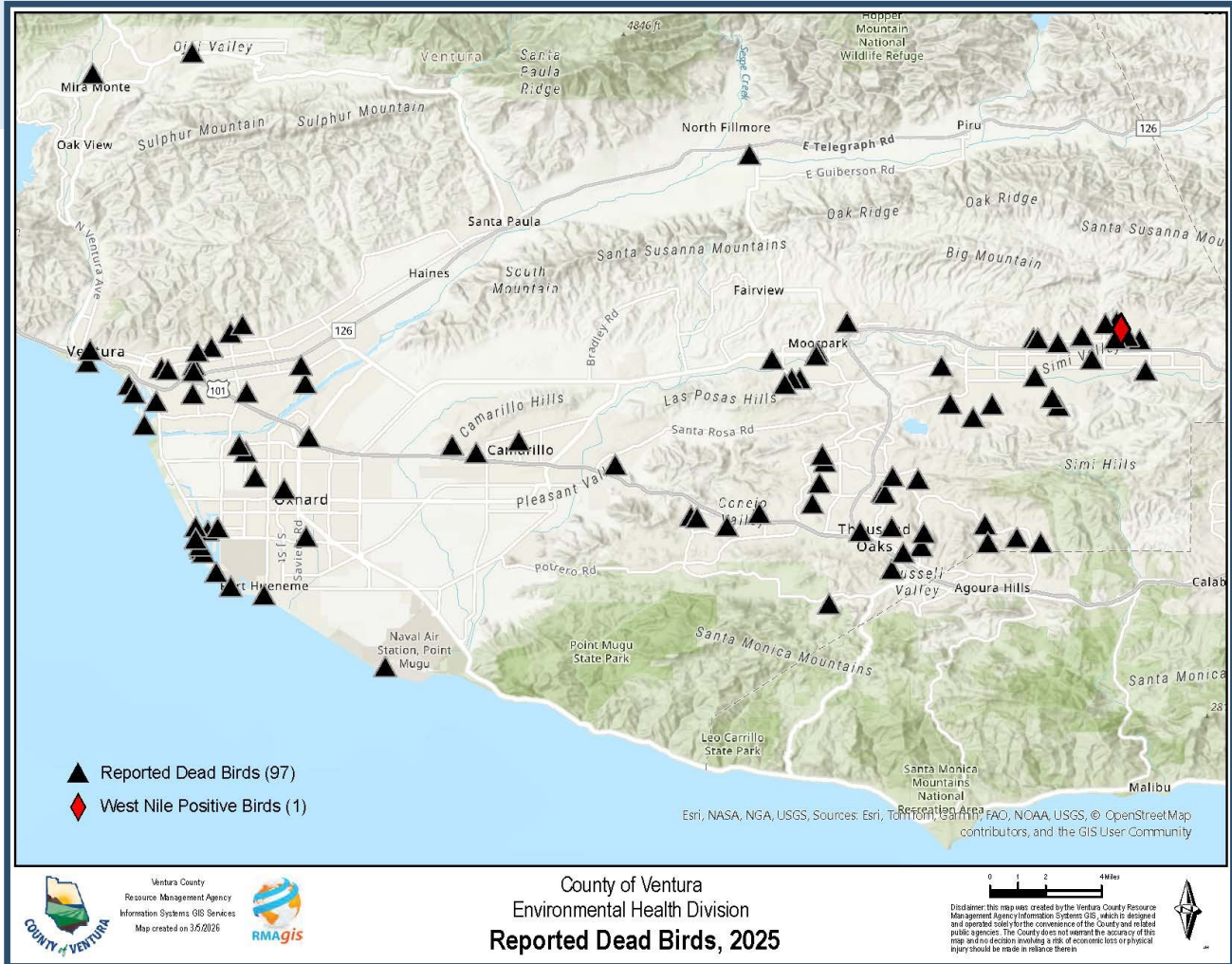


Flocks consisting of 11 chickens each were placed at these locations in April and regularly tested every other week through mid-November. A total of 298 serological (blood) samples were submitted to CDPH for Saint Louis Encephalitis, Western Equine Encephalitis, and West Nile Virus testing.

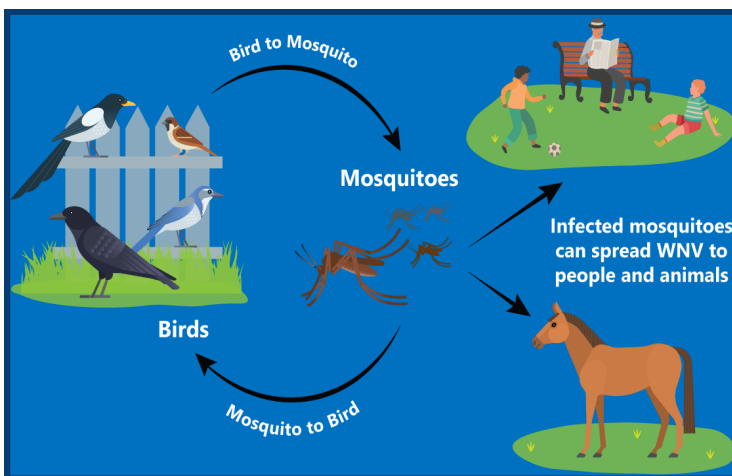
No chicken blood samples collected within Ventura County tested positive during the 2025 season. Throughout the State, 65 of 4,142 chicken blood sera samples tested positive for West Nile Virus.

# WILD BIRD COLLECTION AND TESTING

In Ventura County during 2025, a total of 97 dead birds were reported to the West Nile Virus dead bird hot line; 18 were collected and submitted for testing; one bird tested positive for West Nile Virus. Throughout the state, a total of 7,737 dead birds were reported to CDPH; 1,908 were tested, and 154 (8%) were positive for West Nile Virus.



## Help Monitor for West Nile Virus



Dead bird reporting helps public health agencies track where WNV could be spreading. Mosquitoes often acquire WNV from birds. A WNV positive dead bird indicates that the virus is circulating in that area and the potential for human infection may increase. Ventura County Vector Control Program uses this information to focus surveillance and control efforts in the area of a positive dead bird, enabling us to use our resources efficiently and reduce the risk of human illness from WNV. Report recently deceased birds to **877-WNV-BIRD** or submit a report online at [westnile.ca.gov](http://westnile.ca.gov).

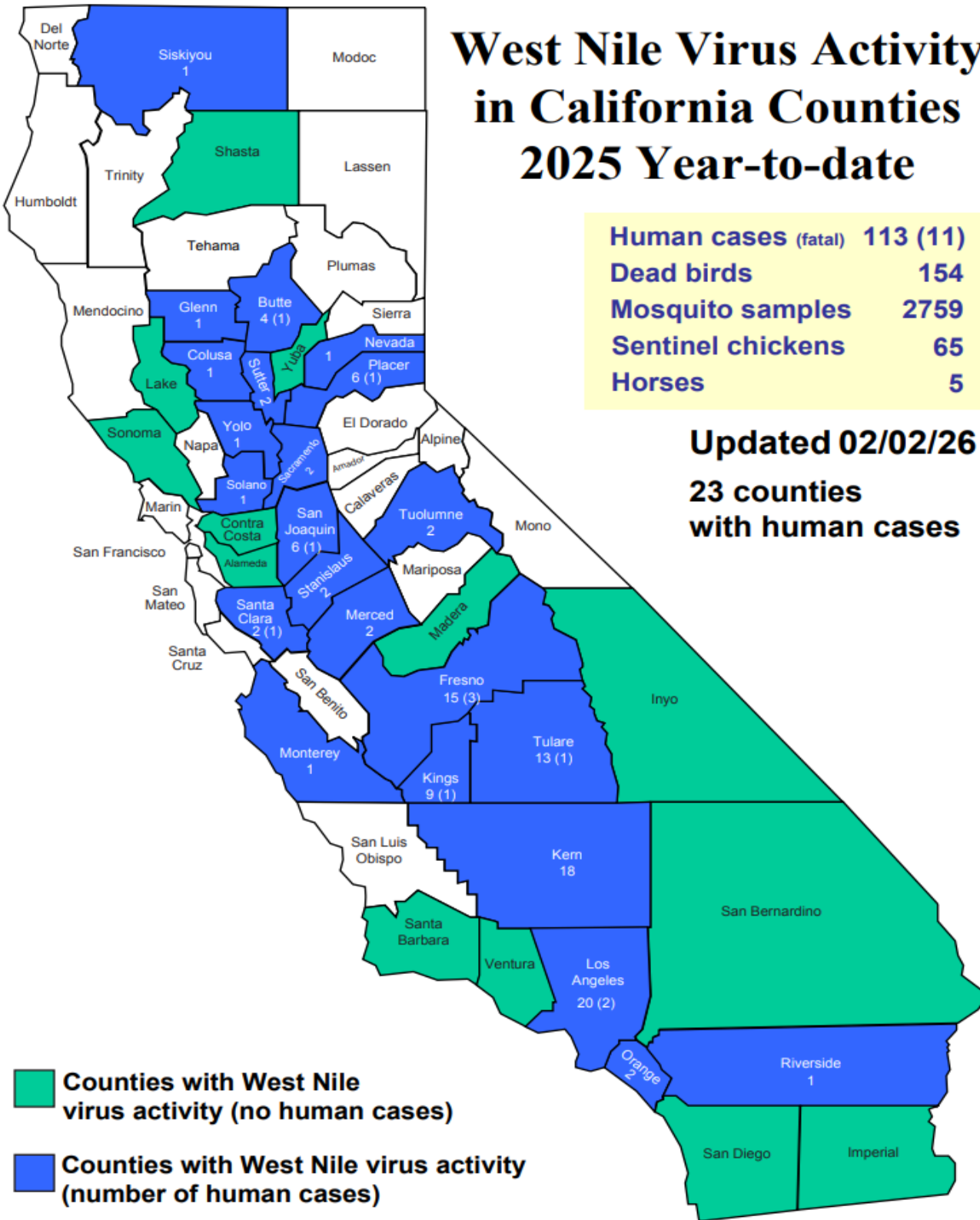
# INCIDENCE OF WEST NILE VIRUS AND ENCEPHALITIS

In 2025, one dead bird tested positive for West Nile Virus in Ventura County. Statewide, there were 113 human cases reported, resulting in 11 fatalities.

## West Nile Virus Activity in California Counties 2025 Year-to-date

Human cases (fatal)	113 (11)
Dead birds	154
Mosquito samples	2759
Sentinel chickens	65
Horses	5

**Updated 02/02/26**  
**23 counties**  
**with human cases**





## PLAGUE SURVEILLANCE

Plague is a highly infectious disease, caused by the bacteria *Yersinia pestis*, which primarily affects rodents. Humans and their pets (dogs, and especially cats) can get plague if they visit or live in areas where wild rodents are naturally infected. Although the hazard to the public is generally low, the potential for disease transmission increases significantly when large outbreaks (epizootics) occur among susceptible rodent populations.

Plague positive animals have consistently been found within the north half of Ventura County. In 2025, there were no reported plague cases in the County.

## HANTAVIRUS

Hantavirus Pulmonary Syndrome is a rare but often fatal illness caused by *Sin Nombre* virus which is carried by wild mice. Most cases occur when airborne particles of dried rodent urine, droppings, or saliva contaminated with the virus are inhaled. In 1997, the Division conducted a survey of the deer mouse population for the presence of Hantavirus in Ventura County. Results indicated an infection rate of 10% to 15%. This rate is consistent with the most recent Hantavirus infection rate found throughout California and reported by CDPH.

In 2025 there were no human cases of Hantavirus infection reported within Ventura County.

### Hantavirus Prevention

Deer mice are common in rural, suburban, and agricultural areas of Ventura County. Prevent rodent infestations by sealing entry points where they could get into homes or outbuildings. It is also important to remove food sources that could make the property inviting to rodents.

### Safe Cleanup

Do not sweep, vacuum, or otherwise stir up rodent urine, droppings, or nesting materials. Spray surfaces that may be contaminated with urine and droppings with disinfectant until saturated and let soak for 5 minutes. Use paper towels to wipe up and then discard carefully. Wash gloved hands before removing gloves and wash hands after removing gloves.

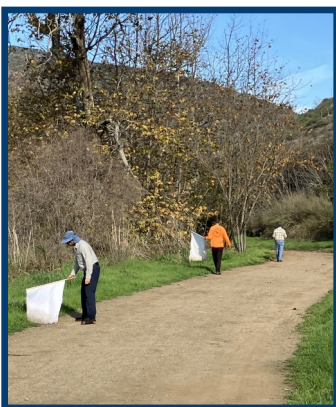


# LYME DISEASE

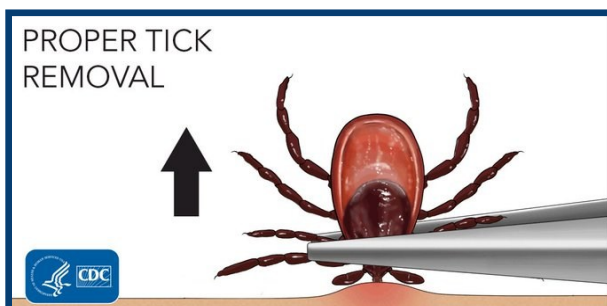
Lyme disease is an infectious disease transmitted by the bite of a specific species of tick. It is caused by a spirochete (a spiral shaped bacterium) that may persist in the human body for several years if not treated with antibiotics. The Western Black Legged Tick, *Ixodes pacificus*, is the primary vector of Lyme Disease in California. This tick is found throughout Ventura County especially in the more humid areas of the coastal canyons, inland creeks, and heavily irrigated grass areas.

According to the Centers for Disease Control and Prevention, since 1991, the incidence of Lyme Disease cases has almost tripled in the United States. Just over 9,000 cases were reported in 1991, compared with nearly 26,203 cases in 2016. The majority of these cases were from northern states. The number of cases in Ventura County and California has remained relatively constant. The rising number of cases elsewhere is likely a result of both increased awareness and exposure. At the time this report was posted, CDPH's provisional numbers for 2025 were 83 confirmed and 43 suspect cases of Lyme disease in California and 1 confirmed case in Ventura County.

<u>Tick Collections</u>	Sycamore Canyon 3/17/2025	Emma Wood SB 3/17/2025	Wendy Trail 12/03/2025	Sycamore Canyon 12/03/2025	Soule Park 12/15/2025
<i>Ixodes pacificus</i>	6	6	9	1	0
<i>Dermacentor occidentals</i>	73	1	41	6	13
Total	79	7	50	7	13



Division staff provides information on Lyme Disease, other tick-borne diseases, personal protection against ticks, and methods of tick control. The County also provides warning signs about ticks and Lyme Disease to operators of parks and campgrounds. In 2025, Ventura County Vector Control Program, along with CDPH, performed 5 tick collection surveys to determine tick population and species density. This helps to evaluate the potential for Lyme disease transmission in those areas surveyed. No *Ixodes pacificus* ticks collected in Ventura County tested positive for the causative agent of Lyme Disease in 2025.



Use fine-tipped tweezers to grasp the tick as close to the skin as possible and pull upward with steady even pressure. Do not twist, jerk, or use excessive force. This can cause parts of the tick to break off in the skin. After removing the tick, clean the bite area and your hands.

# 2025 VECTOR CONTROL PROGRAM STAFF



The Division also provides consultative services upon request for the cities of Ventura County on topics such as nuisance insects, rodents, and bedbug infestations. City representatives may contact us at **805/654-2816**.

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**Alex Gaskill**

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Vector Control Technician

**Eli Hernandez**

Vector Control Technician

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Vector Control Program Lead

## IMPORTANT PHONE NUMBERS

**Mosquito Complaint Hotline: 805/658-4310**

**Mosquito Fish Request Hotline: 805/662-6582**

You can also submit a complaint online at: [eco.vcrma.org](http://eco.vcrma.org)

**Report a Dead Bird for WNV Testing: 877/WNV-BIRD (968-2473)**

or [westnile.ca.gov](http://westnile.ca.gov)



**COUNTY of VENTURA**  
Resource Management Agency  
Environmental Health Division

**Resource Management Agency  
Environmental Health Division**  
**800 S. Victoria Ave, Ventura, CA 93009-1730**  
**TEL: 805/654-2813 • FAX: 805/654-2480**  
**[rma.venturacounty.gov/divisions/environmental-health](http://rma.venturacounty.gov/divisions/environmental-health)**