



**MOSQUITO and VECTOR MANAGEMENT DISTRICT
of SANTA BARBARA COUNTY**

DISEASE SURVEILLANCE REPORT
July and August 2024

Santa Barbara County Vector-borne Disease Surveillance*

Location	Date	Number of Mosquitoes	Type of Trap**	# of Traps	Mosquitoes per Trap Night	Pools Submitted	WSW*** Virus Test Result
Lake Marie, Santa Maria/Orcutt	7/2-7/3	230	EVS	3	76.7	5	Negative
Orcutt Creek, Orcutt	7/2-7/3	45	EVS	6	7.5	2	Negative
Rice Ranch Rd pond, Orcutt	7/2-7/3	5	EVS	2	2.5	1	Negative
Lompoc Valley	7/11-7/12	9	EVS	2	4.5	3	Negative
Mission Hills Community Service District	7/11-7/12	7 61 black flies	EVS	2	3.5	1	Negative
Burton Mesa X Clubhouse Road, Lompoc Valley	7/11-7/12	14	EVS	2	7	1	Negative
River Park, Lompoc	7/11-7/12	2	EVS	3	0.7	1	Negative
Vandenberg Village	7/11-7/12	0 22 black flies	EVS	3	0	0	--
Andree Clark Bird Refuge, Santa Barbara	7/16-7/17	5	EVS	5	1	1	Negative
El Estero Wastewater Treatment Plant, Santa Barbara	7/16-7/17	118	EVS	6	19.7	4	Negative
Lake Los Carneros	7/18-7/19	20	Gravid	3	3.3	2	Negative
Lake Los Carneros	7/18-7/19	122	EVS	11	11.1	2	Negative
UCSB/SBAir Bluffs	6/29-7/26	2	BGS2	1		0	--
UCSB/SBAir Bluffs	7/25-7/26	586	EVS	9	65.1	13	Negative
UCSB/SBAir Bluffs	7/24-7/26	9	Gravid	2	2.25	1	Negative
Shoreline/More Mesa, Goleta Valley	7/30-7/31	37	EVS	9	4.1	2	Negative

Shoreline/More Mesa, Goleta Valley	7/30-8/1	248	Gravid	3	41.3	7	Negative
Crescent Drive, 93105	8/1-8/2	9	EVS	9	1	2	Negative
Crescent Drive, 93105	8/1-8/2	44	Gravid	3	14.7	2	Negative
Carpinteria Creek	8/8-8/9	1	EVS	4	0.25	0	--
Carpinteria Creek	8/7-8/9	24	Gravid	2	6	2	Negative
Garrapato Creek, Carp Valley	8/8-8/9	1	EVS	2	0.5	0	--
County Rd	8/8-8/9	179	EVS	3	59.7	2	Negative
County Rd	8/8-8/9	77	Gravid	1	77	3	Negative
Lake Los Carneros	8/13-8/14	194	EVS	12	16.2	3	Negative
Solvang Sanitary District	8/15-8/16	14 250 black flies	EVS	6	2.3	0	--
Solvang Sanitary District	8/15-8/16	2	Gravid	1	2	2	Negative
Santa Ynez County Park	8/15-8/16	3	EVS	3	1	2	Negative
Santa Ynez County Park	8/15-8/16	12	Gravid	1	12	2	Negative
Ballard	8/15-8/16	1	EVS	1	1	0	--
Ballard	8/15-8/16	3	Gravid	1	3	1	Negative
UCSB/SBAir Bluffs	8/19-8/20	488	EVS	11	44.4	11	Negative
El Estero Wastewater Treatment	8/27-8/28	126	EVS	6	21	4	Pending
Andree Clark Bird Refuge	8/27-8/28	5	EVS	6	0.83	2	Pending
El Estero Wastewater Treatment	8/27-8/30	28	EVS	1	9.3	2	Pending
Andree Clark Bird Refuge	8/27-8/30	29	EVS	1	9.7	2	Pending

** BGS2=Biogents Sentinel 2; BGP=Biogents Pro; EVS=encephalitis surveillance trap (CO²)

*** WSW=West Nile Virus; St. Louis Encephalitis Virus; and Western Equine Encephalitis

*Color indicates the virus-transmitting ability of some or all of the mosquito species caught in the traps:

Purple = high (example: *Aedes aegypti*, *Culex tarsalis*); Aqua = moderate; Tan = low.

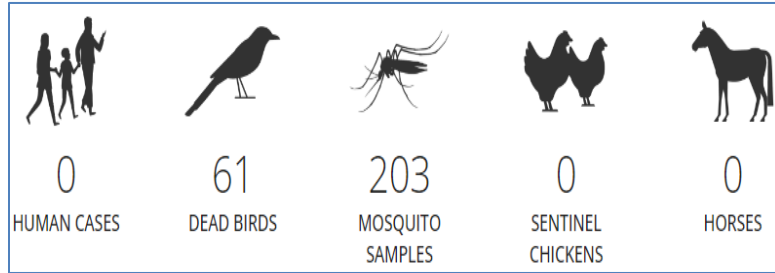
For specific trap collection data, please email a request to: info@mvmDistrict.org.

Four dead birds were reported in Santa Barbara County in July and August, but only one was accepted for WNV testing; the result was negative. There have been no detections of West Nile virus (WNV) in the County in 2024. St. Louis encephalitis virus (SLE) and Western equine encephalitis virus (WEE) have never been documented in the County.

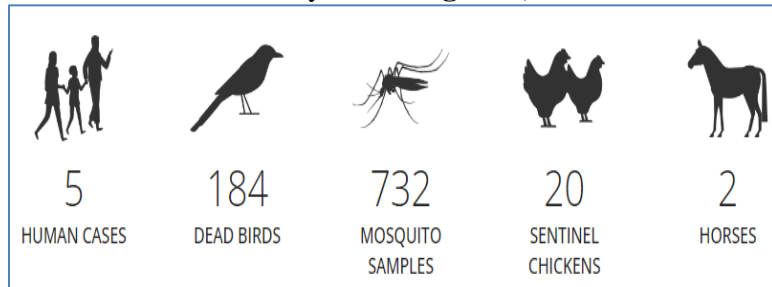
California Vector-borne Disease Surveillance

Twenty-nine counties have reported samples positive for West Nile virus in 2024. Of the 27 human cases of WNV, three were fatal. There were an additional seven asymptomatic blood donors. The number of WNV-positive dead birds in California jumped from 61 to 352, but more than half were from Santa Clara County. Fifteen mosquito pools from four counties have tested positive for SLE; at this time last year there were 302 positive WNV samples. There have been no detections of WEE.

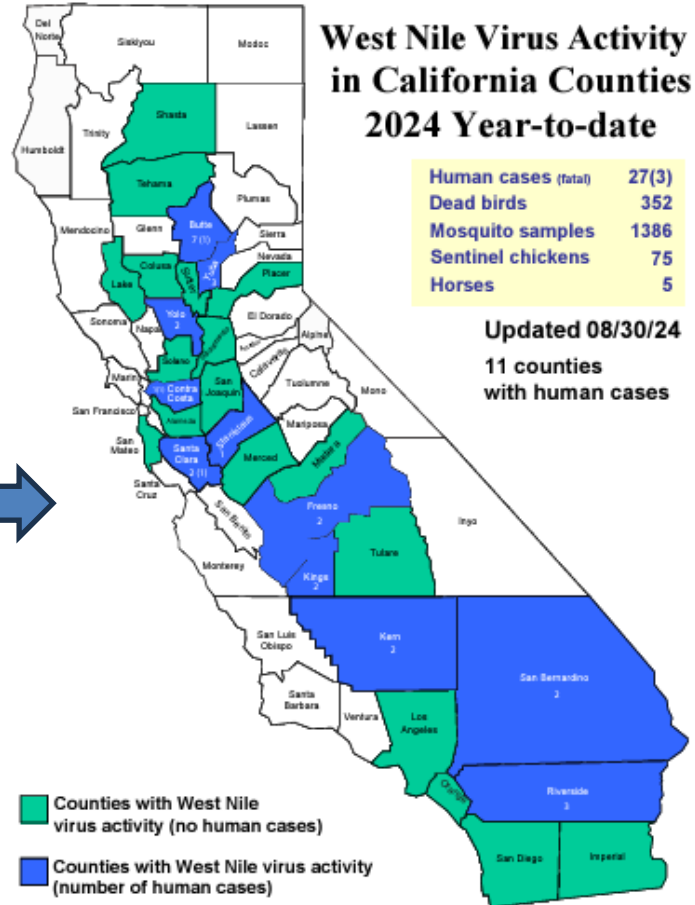
California WNV activity as of **June 28, 2024**



California WNV activity as of **August 2, 2024**



<https://westnile.ca.gov>



Update on Invasive *Aedes* Mosquito in California

No invasive *Aedes* species have been detected in Santa Barbara County since May 2021. Santa Barbara, along with four other coastal Counties, have been removed from the invasive *Aedes* map because more than two years has passed since the last collection. *Aedes aegypti* is found in 24 California counties, and *Aedes albopictus* is found in five.

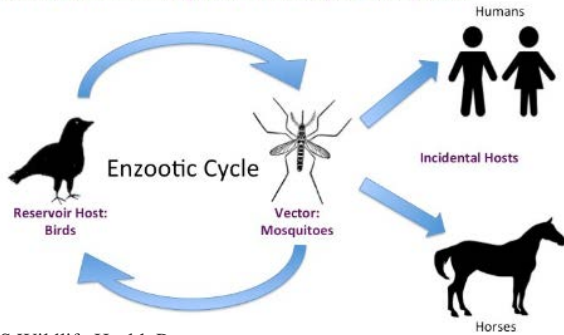
Two human cases of locally transmitted dengue virus were discovered in Long Beach and Pasadena in October of 2023. Non-native *Aedes* mosquitoes, capable of vectoring dengue, Zika, chikungunya, and yellow fever are common in the LA area. In 2024, there have been 88 travel-related human dengue cases in California; there have been three travel-related cases of chikungunya virus and two travel-related cases of Zika virus. This year in California, 549 mosquito pools have tested negative for DENV, CHIKV, and ZIKA.

Vector-borne Viruses in the News

Eastern Equine Encephalitis virus (EEE)

Massachusetts, New Hampshire, New Jersey, Vermont, and Wisconsin have had a total of seven cases of EEE in 2024 so far. The United States has had outbreaks in the recent past—19 cases in 2020 and 38 cases in 2019.

Disease Transmission Cycle of Eastern Equine Encephalitis



NYS Wildlife Health Program

Much like West Nile virus, most cases are asymptomatic. However, the case fatality rate is 30%, and one patient has died. A New Hampshire man has been hospitalized for EEE, WNV, and SLE at the same time! Two horses have also been infected. The mortality rate for horses is 75-90%, but there is a vaccine for horses as well as for birds. In California, Western equine encephalitis (WEE) is potentially present, but the last human case was recorded in 1999.

Oropouche virus

An outbreak of Oropouche virus in South America (7800 cases) is spreading outside the region. The CDC reported that 21 infected travelers returned to the U.S. from Cuba. Oropouche virus has also appeared in Canada and Europe. Also known as “sloth fever,” the disease causes joint pain similar to dengue fever, and, like Zika virus, can lead to miscarriage in pregnant women or babies born with microcephaly. In July, two patients died of Oropouche fever in Brazil. Mosquito (genus *Culex*) and no-see-um midge (genus *Culicoides*) vectors are present in the U.S., including California, so local transmission is possible.



A species of midge, left, the main vector spreading Oropouche virus, is seen with a *Culex quinquefasciatus* mosquito. (Bruna Lais Sena do Nascimento, Laboratório de Entomologia Médica/SEARB/IEC/PAHO)