



MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

DISEASE SURVEILLANCE REPORT

July 2020

Live Mosquito-Borne Virus Surveillance

Mosquito activity along the south coast was low to moderate with a few hotspots but overall trap catches were low.

Location	Date	Number of Mosquitoes	Number of Traps	Mosquitoes per Trap Night	Pools Submitted	Result
Santa Barbara County						
More Mesa at Shoreline Dr. X Orchid Dr.	6/30 – 07/02	15	2**	3.75	1	Negative
Airport at 3470 Hollister	07/07 – 07/10	10	1**	3.33	1	Negative
UCSB West Campus-Devereux Lagoon	07/15–07/16	8	12*	0.66	0	
UCSB North Campus Open Space	07/16-07/18	9	3**	3.1	3	Negative
UCSB North Campus Open Space	07/17–07/18	97	11*	8.8	3	Negative
Carpinteria Creek	07/22--07/24	4	3**	0.67	2	Negative
UCSB/SB Air Bluffs	07/27–07/28	252	12*	21	5	Negative
Sage Hill Campground	07/29–07/30	10	2**	5	1	Pending

*Encephalitis Virus Survey (CO₂) traps.

** Gravid trap

West Nile Virus Activity

Three dead birds in Santa Barbara County were reported to the hotline in July. Only one of the birds was tested, and the result was negative.

There have been seven reported cases of human infection with WNV this year in California in Long Beach (1), Los Angeles (1), Madera (1), and Stanislaus (4) Counties. In the United States, 17 human cases of WNV have been reported as of July 28.

So far this year, 64 birds have tested positive for WNV in California in 12 counties. One horse has tested positive for WNV in California in 2020 (Amador County). A total of 474 positive mosquito pools were reported from 21 counties this year.

No WNV activity of any kind has been detected in Santa Barbara County this year, to date.

St. Louis Encephalitis Virus Activity

No cases of humans infected with SLEV have been reported in California this year. As of 7/31/20, 143 positive mosquito pools were reported from Fresno (44), Imperial (9), Kern (5), and Riverside (85) counties.

Zika Virus and Invasive *Aedes* Mosquito Update

As of August 1, 2020, there have been 748 travel-associated Zika virus infections in California since 2015. The last case in Santa Barbara County occurred in 2017. Neither yellow fever mosquitoes, *Aedes aegypti*, nor Asian tiger mosquitoes, *Ae. albopictus* (both known vectors of the Zika virus) have ever been detected in Santa Barbara County, to date. However, invasive *Aedes* are present in the following counties: Los Angeles, Orange, San Diego, Riverside, San Bernardino, Imperial, Kern, Kings, Fresno, Madera, Merced, San Joaquin, Placer, Sacramento, Stanislaus and Tulare.

Western Equine Encephalitis

There was no reportable WEE activity in California for July.

Sentinel Chicken Flocks

The District currently maintains four sentinel chicken flocks in Santa Barbara County located at the Goleta Sanitary District, Mission Hills Community Services District, the Solvang City Wastewater Treatment Plant, and, now, the U.S. Forest Service Fire Station in Carpinteria. A flock of five sentinel chickens was placed at the fire station (6115 Casitas Pass Rd.) on 7/17. Blood samples collected from chickens at these sites on 7/7, 7/20, and 7/21 tested negative for the presence of WNV, SLEV and WEE viruses. In 2020, 12 chickens from three counties have tested positive for WNV.



Photo from BioQuip.com

Gravid Mosquito Trap

The District has been in possession of three tool-box-style gravid traps for at least ten years, but they haven't been put to use until this year. Gravid traps attract female mosquitoes that are ready to lay eggs on the surface of stagnant water. The oviposition conditions best fit the requirements for mosquitoes in the genus *Culex*, which are the mosquitoes most likely to be carrying West Nile, Western equine encephalitis, or St. Louis encephalitis viruses. Gravid females are also the most likely to be infected with these viruses, since at least one blood meal is required for eggs to develop. The trap is placed over a tray of water that has been infused with organic matter until it has a pungent smell. A battery-powered fan pulls mosquitoes from the space above the water surface into the collection chamber. Gravid traps will be a great tool for the District's disease surveillance program.