



MOSQUITO and VECTOR MANAGEMENT DISTRICT of SANTA BARBARA COUNTY

DISEASE SURVEILLANCE REPORT

October 2019

Live Mosquito-Borne Virus Surveillance

Mosquitoes remained very active in some areas near sources of standing water at local marshes, creeks, and drainages due to warm to hot daytime temperatures that occurred throughout the month. Tule mosquitoes (*Culex erythrothorax*), known to vector West Nile Virus, accounted for 92% of the trap catches in Santa Barbara County. Only 17 western encephalitis mosquitoes (*Cx. tarsalis*) were trapped, accounting for only 0.6% of the total mosquitoes caught. The remaining trap catches consisted of *Culiseta* species and 3 *Anopheles hermsi* mosquitoes.

Location	Date	Number of Mosquitoes	Number of Traps*	Mosquitoes per Trap Night	Pools Submitted	Result
Santa Barbara County						
North Campus Open Space, UCSB	10/2 – 10/3	705	12	59	12	Negative
El Estero Wastewater Treatment Plant (East Yanonali St.)	10/3 - 10/4	86	12	7	2	Negative
North Campus Open Space, UCSB ^a	10/16 – 10/17	1,075	12	90	11	Negative
Lake Los Carneros ^b	10/16 – 10/17	15	10	1.5	None	---
UCSB/SB Airport Bluffs ^c	10/28 – 10/29	951	12	79	11	Negative
San Luis Obispo County						
Islay Park, SLO	10/22 – 10/23	20	6	3.3	None	---
Laguna Lake Park, SLO	10/22 – 10/23	81	4	20	2	Negative
SLO Water Treatment Plant, Stenner Rd.	10/22 – 10/23	70	2	35	None	---
Sinsheimer Park, SLO	10/22 – 10/23	0	0	0	None	---

*Encephalitis Virus Survey (CO₂) traps.

^a 185 *Culicoides* (biting midges) and 22 black flies (biting flies).

^b 5 *Culicoides*

^c 5 *Culicoides*

West Nile Virus Activity

No dead birds in Santa Barbara County were reported to the Dead Bird Hotline or the online Dead Bird reporting website http://www.westnile.ca.gov/report_wnv.php.

The number of human WNV cases in California increased from 112 to 178 this month. There have been 114 cases of neuroinvasive disease and 5 fatalities so far this year. Colusa (1), Sacramento (2) and Ventura (1) counties each reported their first human cases of WNV infection for 2019. As of November 1, 17 other counties have reported human WNV infection: Amador (1), Butte (5), Fresno (46), Imperial (3), Kern (19), Los Angeles (24), Madera (2), Merced (8), Orange (5), Riverside (10), San Bernardino (5), San Diego (2), San Joaquin (7), San Luis Obispo (2), Solano (1), Stanislaus (17), and Tulare (17).

There have been 15 reported cases of infected horses in 12 counties this year: Fresno (2), Kern (2), Madera (1), Merced (1), Riverside (1), Sacramento (1), San Bernardino (1), San Joaquin (1), Stanislaus (2), Tulare (1) Tuolumne (1) and Ventura (1).

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

St. Louis Encephalitis Virus Activity

California Department of Public Health (CDPH) did not report any new cases of humans infected with SLEV. There have been 5 reported cases of SLEV illness this year from 3 counties: Fresno (2), Imperial (2), and Kern (1). Positive mosquito pools were reported for the first time from L.A., Madera, Merced, Orange, and San Bernardino counties. A total of 355 positive mosquito pools have been reported in 2019 from 12 counties: Fresno (58), Imperial (5), Kern (56), Kings (4), Los Angeles (2), Madera (5), Merced (2), Orange (3), Riverside (107), San Bernardino (4), Stanislaus (13), and Tulare (96). SLEV activity has never been confirmed in Santa Barbara County, to date.

Zika Virus and Invasive *Aedes* Mosquito Update

CDPH releases their Zika reports on the first Friday of the month. As of November 1, there have been 735 travel-associated Zika virus infections in California since 2015 with 30 cases reported so far in 2019. Two new infections in California were reported in October. 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 October.

Sentinel Chicken Flocks

The District currently maintains 5 sentinel chicken flocks in Santa Barbara County located at the Carpinteria Sanitary District, Goleta Sanitary District, Mission Hills Community Services District, Los Prietos Ranger Station in the Los Padres National Forest and the Solvang City Wastewater Treatment Plant. Blood samples collected from chickens on 10/1, 10/2, 10/14, 10/15, 10/28 and 10/29 all tested negative for the presence of WNV, SLEV and Western Equine Encephalitis virus.



Biting midge, *Culicoides* species

These flies are very small – measuring only 3 mm (1/10 inch) long – and because of their small size they are also known as “no-see-ums”. Biting midges can be very irritating because though you might feel them biting they are very hard to see, especially when they are flying. Biting midge bites produce small, red welts that are extremely itchy. Multiple bites can result in an intense, burning itch over the affected area. Various *Culicoides* species are known to vector a variety of viruses and roundworms to humans and animals worldwide. Although, *Culicoides* are not known to vector pathogens to humans here in North America, they do vector pathogens to animals. The most serious of these is bluetongue virus which can cause a serious, debilitating, even fatal illness in cattle and sheep.