



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

June 2016

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2016 to date. However, 372 WNV positive dead birds have been reported from 19 California counties. A total of 433 WNV positive mosquito pools have been reported from 16 counties along with 7 WNV positive sentinel chickens from 3 counties. Ventura County has reported 5 WNV positive dead birds, all from Simi Valley. San Diego and Sacramento counties have been reporting the highest levels of WNV activity.

Statistics for California WNV activity can be found online at www.westnile.ca.gov. National statistics for WNV can be found at the National Centers for Disease Control and Prevention website at www.cdc.gov.

Saint Louis Encephalitis Virus Activity

A total of 20 mosquito pools from Bakersfield, Kern County and two from the Coachella Valley, Riverside County have tested positive for St. Louis Encephalitis (SLE). SLE had seemed to disappear from California after the arrival of WNV in 2003 until it was detected in the Coachella Valley in 2015. SLE is a native mosquito-borne virus that is very similar to WNV. Both are in the family Flaviviridae.

Zika Virus and Invasive *Aedes* Mosquito Update

Invasive *Aedes* spp. mosquitoes have now been found in at least 84 cities and communities in 12 California counties. Significant activity has been reported for all three invasive *Aedes* species in most areas with known infestations. There have been imported cases of Zika virus into California, but no locally transmitted cases. Zika virus information can be found at <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx> and at <http://www.cdc.gov/zika/>.

West Nile Virus Dead Bird Submissions

The District submitted one dead bird sample in June 2016, a Western Scrub Jay from the City of Buellton. The Jay was negative for WNV. All dead bird samples submitted by the District in 2016 to date have been negative for WNV.

Citizens can report dead birds to the California Department of Public Health's toll free West Nile Virus Dead Bird Hotline (1-877-968-2473 or 1-877-WNV-BIRD) or online at www.westnile.ca.gov. Local agencies will pick up the dead birds and collect samples via oral swabs that are transferred to RNase cards. The RNase cards are dried outdoors for at least two hours then mailed to the Davis Arbovirus Research and Training laboratory on the U.C. Davis campus where the samples will be analyzed for West Nile Virus.

Live Mosquito-Borne Virus Surveillance

The District conducted 19 mosquito trapping surveys in June 2016. The surveys include the use of both carbon dioxide baited Encephalitis Virus Surveillance (EVS) traps and the human scented BG-Sentinel traps. The results of the surveys are shown in the table below. The District has submitted 99 sample mosquito pools in 2016 to date. All pools tested have been negative for WNV and other mosquito-borne viruses.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS^	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
El Estero Wastewater Plant, Santa Barbara	5/31-6/1/16	274	12 EVS	22.8	5	Negative
El Estero Wastewater Plant, Santa Barbara	5/31-6/2/16	6	3 BG	1.0	0	N.A.
2300 block of Shelby St., Summerland	5/31-6/2/16	0	1 BG	0	0	N.A.
Andree Clark Bird Refuge, Santa Barbara	6/2-3/16	18	12 EVS/2 BG	1.3	1	Negative

UCSB/Santa Barbara Airport Bluffs	6/9-10/16	381	12 EVS	31.8	10	Negative
UCSB Main Campus	6/9-16/16	37	4 BG	1.3	0	N.A.
Orcutt Creek @ Broadway, Orcutt	6/13-14/16	110	5 EVS/2 BG	15.7	6	Negative
Orcutt Creek @ Highway 135, Orcutt	6/13-14/16	19	4 EVS	4.8	0	N.A.
Orcutt Creek @ Bradley Rd., Orcutt	6/13-14/16	8	4 EVS/1 BG	1.6	0	N.A.
Lake Los Carneros, Goleta City	6/16-17/16	84	12 EVS	7.0	2	Pending
2500 block of Lillie Ave., Summerland	6/17-24/16	3	1 BG	0.4	0	N.A.
1500 block of Santa Monica Rd., Carpinteria	6/17-24/16	2	1 BG	0.3	0	N.A.
Lake Marie Subdivision, Orcutt	6/22-23/16	611	7 EVS/2 BG	67.9	9	Pending
Leroy Park, Guadalupe	6/22-23/16	27	7 EVS	3.9	2	Pending
Sage Hill Cmpgrnd., upper Santa Ynez Valley	6/28-29/16	302	4 EVS	75.5	6	Pending
Santa Ynez River @ Fjord Dr., Solvang	6/28-29/16	18	3 EVS	6.0	0	N.A.
Riverview Park, Buellton	6/28-29/16	2	3 EVS/ 1 BG	0.5	0	N.A.
Alamo Pintado Creek, Los Olivos	6/28-29/16	17	3 EVS/1 BG	4.3	0	N.A.
Jalama Beach County Park	6/28-29/16	1	3 BG	0.3	0	N.A.

* Mosquitoes Per Trap Night = Number of Mosquitoes ÷ (Number of Traps x Number of Nights)

^ EVS = CO2 trap BG = BG-Sentinel invasive *Aedes* mosquito trap

This surveillance technique utilizes battery-powered Encephalitis Virus Surveillance (EVS) traps that use dry ice as a source of carbon dioxide along with human scented BG-Sentinel traps to attract adult female mosquitoes that are actively seeking a blood meal. The live female mosquitoes are taken into the District’s laboratory where they are anesthetized with triethylamine under the fume hood. They are then separated by species using a stereo zoom microscope and placed into “pools.” The pools (1 pool = up to 50 adult female mosquitoes of a single species collected at one place at one time) are stored in the District’s ultra-low temperature freezer at -70°C until they can be submitted to the Davis Arbovirus Research and Training laboratory on the U.C. Davis campus where they are analyzed for the presence of live mosquito-borne viruses including WNV.

Sentinel Chicken Flocks

District personnel are taking samples from all five sentinel chicken flocks every two weeks. All samples submitted in 2016 to date have been negative for WNV and other mosquito-borne viruses.

Samples of blood are collected from each chicken on strips of filter paper and dried overnight. They are then submitted to the California Department of Public Health Vector-Borne Disease Laboratory at Richmond, California where they are analyzed for antibodies to WNV and other mosquito-borne encephalitis viruses.

