



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

July 2015

West Nile Virus Activity

No further West Nile Virus (WNV) activity has been detected in Santa Barbara County since a sample pool of mosquitoes collected at Lake Los Carneros, City of Goleta on April 1-2, 2015 tested positive for the disease. High levels of WNV have been reported in some parts of California, particularly Riverside and San Diego Counties as well as the San Joaquin Valley. Eight human cases (one fatal) have been confirmed from 5 counties. A total of 301 WNV positive dead birds have been collected in 34 counties along with 1,056 WNV positive mosquito pools from 27 counties. Also, 45 WNV positive sentinel chickens in 16 flocks have been reported from 9 counties. Two of the dead birds were collected in Simi Valley and Moorpark, Ventura County.

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.

Bubonic Plague Human Case

A child from Los Angeles County became ill from Bubonic Plague after visiting the Stanislaus National Forest and Yosemite National Park in mid-July 2015. This is the first human case of Plague in California since 2006. Since 1970 there have been 42 confirmed human cases (9 fatal) of Bubonic Plague in California.

Live Mosquito-Borne Virus Surveillance

The District conducted 12 mosquito trapping surveys in July 2015. The results are shown in the table below. No more sample pools have tested positive since a pool of 50 Encephalitis Mosquitoes (*Culex tarsalis*) collected at Lake Los Carneros, Goleta on April 1-2, 2015 tested positive for WNV.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
Lake Los Carneros, Goleta	7/6-7/15	30	11	2.7	1	Negative
Carpinteria Salt Marsh, Carpinteria	7/13-14/15	206	12	17.2	4	Negative
Orcutt Creek @ Bradley Rd., Orcutt	7/16-17/15	21	5	4.5	1	Negative
Orcutt Creek @ Highway 135, Orcutt	7/16-17/15	37	4	9.3	0	N.A.
Orcutt Creek @ Broadway, Orcutt	7/16-17/15	172	5	34.4	6	Negative
Lake Marie Subdivision, Orcutt	7/22-23/15	118	6	19.7	3	Negative
Leroy Park, Guadalupe	7/22-23/15	5	6	0.8	0	N.A.
Bailey Wetland, Lompoc	7/27-28/15	51	4	12.8	2	Negative
Santa Ynez River @ Floradale Ave., Lompoc	7/27-28/15	55	4	13.8	1	Negative
Club House Rd., Vandenberg Village	7/27-28/15	75	4	18.8	2	Negative
E. end of Burton Mesa Blvd., Mission Hills	7/27-28/15	20	3	6.7	1	Negative
El Estero Wastewater Plant, Santa Barbara	7/29-30/15	322	14	23.0	7	Negative

*Mosquitoes Per Trap Night = Number of Mosquitoes ÷ (Number of Traps x 1 Night)

This surveillance technique utilizes battery-powered traps that use dry ice as a source of carbon dioxide 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 U.C. Davis Center for Vector-Borne Diseases at Davis, California where they are analyzed for the presence of live mosquito-borne viruses including WNV.

West Nile Virus Dead Bird Submissions

The District submitted one dead bird sample in July 2015, a sparrow from the City of Santa Barbara. The sparrow tested negative for WNV. All dead bird samples submitted in 2015 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 U.C. Davis Center for Vector-Borne Diseases where the samples will be analyzed for West Nile Virus.

Sentinel Chicken Flocks

District personnel are obtaining blood samples from the District's 5 sentinel chicken flocks every two weeks. In 2015 to date all samples have tested negative for WNV and other mosquito-borne encephalitis 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 viruses.

