



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

June 2014

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2014 to date. Two confirmed human cases have been documented in Contra Costa and Tulare Counties. A total of 324 dead birds from 19 counties have tested positive for the disease. 234 WNV positive mosquito pools have been reported from 20 counties. A single sentinel chicken that became infected sometime between bleedings on December 10, 2013 and January 2, 2014 has been reported from El Segundo, Los Angeles County. The bulk of the activity has been recorded from the Central Valley, but 197 of the 324 dead birds and 13 of the mosquito pools were collected in Santa Clara 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.

Live Mosquito-Borne Virus Surveillance

District staff conducted 16 live mosquito trapping surveys during the month of June 2014. The results are shown in the table below. All mosquito sample pools submitted for laboratory analysis for WNV and other mosquito-borne viruses have been negative in 2014 to date. Test results on more pools are pending.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
Pismo Creek, Pismo Beach	6/2-3/14	10	3	3.3	0	N.A.
Chumash Park, Pismo Beach	6/2-3/14	199	4	49.8	2	Negative
Pismo Ecological Reserve, Pismo Beach	6/2-3/14	106	4	26.5	3	Negative
Oceano Campground, Pismo State Beach	6/2-3/14	38	4	9.5	1	Negative
Andree Clark Bird Refuge, Santa Barbara	6/3-4/14	223	11	20.3	4	Negative
Riverview Park, Buellton	6/5-6/14	29	7	4.1	1	Negative
Leroy Park, Guadalupe	6/5-6/14	204	6	34.0	5	Negative
Orcutt Creek @ Bradley Rd., Orcutt	6/9-10/14	17	4	4.3	0	N.A.
Orcutt Creek @ Broadway, Orcutt	6/9-10/14	130	5	26.0	5	Negative
Bradley Channel @ Main St., Santa Maria	6/9-10/14	6	5	1.2	0	N.A.
Bailey Wetland, Lompoc	6/16-17/14	38	4	9.5	1	Negative
Santa Ynez River @ Floradale Ave., Lompoc	6/16-17/14	232	4	58.0	4	Negative
Club House Rd., Vandenberg Village	6/16-17/14	84	3	28.0	3	Negative
E. end of Burton Mesa Blvd., Mission Hills	6/16-17/14	40	4	10.0	1	Negative
UCSB/Santa Barbara Airport Bluffs	6/19-20/14	~1,190	12	~99.2	16	Negative
Andree Clark Bird Refuge, Santa Barbara	6/24-25/14	502	11	45.6	11	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 June 2014. The bird was a Brewer's Blackbird from Solvang. The Blackbird tested negative for WNV.

The dead bird submission protocol has changed as of September 1, 2013. The California Animal Health and Food Safety Laboratory will no longer accept dead bird carcasses. Citizens can still report dead birds to the California Department of Public Health's (CDPH) 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 staff is collecting blood samples from all 5 sentinel chicken flocks every two weeks. All samples have tested negative for WNV and other mosquito-borne viruses in 2014 to date.

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.

Lyme Disease Surveillance

In January 2014 the California Department of Public Health/Vector-Borne Disease Section collected 68 Western Black-Legged Ticks (*Ixodes pacificus*) in Romero Canyon, Montecito. One adult male tick tested positive for *Borrelia burgdorferi sensu lato*. Analysis is being done to determine if it is the Lyme Disease causing *B. burgdorferi sensu stricto*. On June 3, 2014, CDPH and District personnel surveyed Romero Canyon for nymphal *I. pacificus*, the stage that most commonly carries *B. burgdorferi*. Only one nymphal tick was found and only a small number of adult *I. pacificus* were collected.

