



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

April 2014

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2014 to date. However, 13 dead birds from 5 counties have tested positive for the disease. Six of the dead birds were collected in Santa Clara County. Four WNV positive mosquito pools have been reported from San Bernardino County. 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.

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.

Sentinel Chicken Flocks

The 2014 sentinel chicken bleeding season is underway. District staff is collecting blood samples from all 5 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.

Live Mosquito-Borne Virus Surveillance

District staff conducted 10 live mosquito trapping surveys during the month of April. 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.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
Andree Clark Bird Refuge, Santa Barbara	4/10-11/14	50	10	5.0	1	Negative
UCSB/Santa Barbara Airport Bluffs	4/16-17/14	420	11	38.2	10	Negative
Chumash Park, City of Pismo Beach	4/17-18/14	181	4	45.3	0	N.A.
Pismo Ecological Reserve, Pismo State Beach	4/17-18/14	38	4	9.5	0	N.A.
North Beach Campground, Pismo State Beach	4/17-18/14	51	3	17.0	0	N.A.
Oceano Campground, Pismo State Beach	4/17-18/14	88	4	22.0	0	N.A.
Lake Los Carneros, Goleta	4/23-24/14	106	11	9.6	3	Negative
Orcutt Creek @ Bradley Rd., Orcutt	4/29-30/14	13	4	3.3	0	N.A.
Orcutt Creek @ Broadway, Orcutt	4/29-30/14	66	5	13.0	3	Pending
Bradley Channel @ Main St., Santa Maria	4/29-30/14	8	3	2.7	0	N.A.

*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 did not submit any dead bird samples in April 2014. One problem was that the California Department of Public Health had all Santa Barbara County zip codes closed for reporting dead birds. CDPH has been contacted and the problem should now be rectified.

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.

