



## MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

# DISEASE SURVEILLANCE REPORT

February 2016

### West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County or anywhere else in California in 2016 to date.

Statistics for California WNV activity can be found online at [www.westnile.ca.gov](http://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](http://www.cdc.gov).

### West Nile Virus Dead Bird Submissions

The District submitted one dead bird sample in February 2016, a Goldfinch from the City of Santa Barbara. Laboratory results on the Goldfinch are pending. A Crow from the City of Lompoc, collected in January 2016, tested negative for WNV.

The CDPH West Nile Virus Dead Bird Hotline closed down for the winter season on October 15, 2015. However, citizens can still report dead birds at [www.westnile.ca.gov](http://www.westnile.ca.gov). In light of the late season positive birds, the District has made arrangements with CDPH to continue testing approved dead birds through the winter season. The Hotline will resume full operations in spring 2016.

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](http://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 the first mosquito trapping surveys of the season in late-February 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 recently took delivery of six new and improved BG-Sentinel 2 traps, giving the District a total inventory of 10.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS <sup>^</sup>	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
residence, N. Kellogg Rd., Goleta	2/22-23/16	0	1 BG	0	0	N.A.
UCSB/Santa Barbara Airport Bluffs	2/24-25/16	32	11EVS/2BG	2.5	0	N.A.
El Estero Wastewater Plant, Santa Barbara	2/25-26/16	23	11EVS/3BG	1.6	1	Pending

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

<sup>^</sup> EVS = CO<sub>2</sub> 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 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.

## Sentinel Chicken Flocks

District personnel are sampling the chicken flocks at Carpinteria, Goleta, Solvang, and Mission Hills once per month during the winter season. All samples submitted in 2016 to date have been negative.

The District is working on purchasing 30 chickens from Demler Egg Ranch in San Jacinto. These chickens will replace the two year old chickens at Goleta and Mission Hills as well as restart the flock at the U.S. Forest Service's Paradise Road Ranger Station. Every two week chicken blood sampling is expected to begin the week of April 1, 2016.

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.

