



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

July 2014

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2014 to date. Nineteen confirmed human cases (none fatal) have been documented from 8 California counties. A total of 1,014 dead birds from 33 counties have tested positive for the disease. 1,268 WNV positive mosquito pools have been reported from 29 counties. A total of 56 WNV positive sentinel chickens from 23 flocks have been reported from 11 counties. The bulk of the activity has been recorded from the Central Valley, but high levels of WNV are also being detected in Los Angeles, Orange, and Santa Clara Counties. One of the dead birds, a Crow, was reported from the City of Ventura, 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.

Chikungunya Virus Update

The first locally acquired case of Chikungunya Virus in the United States was reported July 17 in Florida. This newly reported case represents the first time that mosquitoes in the continental United States are thought to have spread the virus to a non-traveler. Many cases are being reported on a number of Caribbean islands. This virus is not spread person to person. Chikungunya is transmitted by the Yellow Fever Mosquito (*Aedes aegypti*) and the Asian Tiger Mosquito (*Aedes albopictus*). Symptoms of Chikungunya virus are usually fever and joint pain and can include muscle aches, headaches, joint swelling or rash, but rarely death. There is no vaccine and no specific treatment for infection. Dengue Fever has similar symptoms and is transmitted by the same two mosquito species. Imported human cases of Chikungunya and Dengue are routinely reported in California and other states. Infestations of *Ae. aegypti* and *Ae. albopictus* are still ongoing in Los Angeles, Fresno, Madera, and San Mateo Counties of California.

Live Mosquito-Borne Virus Surveillance

District staff conducted 15 live mosquito trapping surveys during the month of July 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
El Estero Wastewater Plant, Santa Barbara	7/1-2/14	277	13	21.3	6	Negative
Lake Los Carneros, Goleta	7/2-3/14	377	12	31.4	8	Negative
Willow Springs, Goleta	7/7-8/14	~1,200	12	~100.0	22	Negative
Carpinteria Salt Marsh, Carpinteria	7/8-9/14	47	11	4.3	2	Negative
Chumash Park, Pismo Beach	7/17-18/14	140	4	35.8	2	Negative
Pismo Creek, Pismo Beach	7/17-18/14	80	3	26.7	0	N.A.
Pismo Ecological Reserve, Pismo Beach	7/17-18/14	107	4	26.8	2	Negative
Oceano Campground, Pismo State Beach	7/17-18/14	40	4	10.0	2	Negative
Sage Hill Campground, Santa Ynez Valley	7/21-22/14	54	4	13.5	2	Negative
Cachuma Village, Santa Ynez Valley	7/21-22/14	49	3	16.3	2	Negative

Santa Ynez River @ Refugio Rd., Santa Ynez	7/21-22/14	7	2	3.5	0	N.A.
Santa Ynez River @ Fjord Dr., Solvang	7/21-22/14	29	4	7.3	1	Negative
Alamo Pintado Creek, Los Olivos	7/21-22/14	6	2	3.0	0	N.A.
Andree Clark Bird Refuge, Santa Barbara	7/29-30/14	318	13	24.5	6	Pending
UCSB/Santa Barbara Airport Bluffs	7/30-31/14	434	11	39.5	8	Pending

***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 July 2014. All dead bird samples submitted in 2014 to date have tested negative for WNV.

Citizens can 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.



Dorsal View



Actual Size



Side View

HOUSE FLY (*Musca domestica*) Diptera: Muscidae

This species is the common fly that is found around just about any type of decaying organic matter.

The District recently received a citizen complaint about fly problems at Tucker’s Grove County Park in the Goleta Valley. District technicians investigated and determined that a large part of the problem was dog droppings in the free dog run area. The County Parks Department was advised to keep the area clean of dog droppings.