



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

August 2014

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2014 to date. As of the end of August, 129 confirmed human cases (6 fatal) have been documented from 19 California counties. A total of 1,733 dead birds from 34 counties have tested positive for the disease. 2,485 WNV positive mosquito pools have been reported from 29 counties. A total of 242 WNV positive sentinel chickens from 64 flocks have been reported from 20 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. Two of the dead birds, both Crows, have been 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.

Yellow Fever Mosquitoes Found in Kern and Tulare Counties

Two new infestations of the Yellow Fever Mosquito (*Aedes aegypti*) have been discovered in the City of Arvin, Kern County and the City of Exeter, Tulare County. Infestations discovered in 2013 in Fresno, Madera and San Mateo Counties are still ongoing. *Aedes aegypti* is a potential vector of Yellow Fever, Dengue, and Chikungunya viruses and prefers to live in association with humans. An infestation of Asian Tiger Mosquito (*Aedes albopictus*) is still ongoing in El Monte and South El Monte, Los Angeles County.

Live Mosquito-Borne Virus Surveillance

District staff conducted 14 live mosquito trapping surveys during the month of August 2014. The results are shown in the table below. Complaints from residents led to the finding of a serious mosquito nuisance problem at the Lake Marie subdivision in Orcutt. District technicians have treated the subdivision's lake twice in the month of August and are planning to do a more extensive treatment using the boat. 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
Bailey Wetland, Lompoc	8/6-7/14	106	4	26.5	3	Negative
Santa Ynez River @ Floradale Ave., Lompoc	8/6-7/14	386	4	96.5	7	Negative
Club House Rd., Vandenberg Village	8/6-7/14	67	3	22.3	3	Negative
E. end of Burton Mesa Blvd., Mission Hills	8/6-7/14	21	4	5.3	0	N.A.
Lake Los Carneros, Goleta	8/12-13/14	17	11	1.5	0	N.A.
Chumash Park, Pismo Beach	8/20-21/14	235	4	58.8	2	Pending
Pismo Creek, Pismo Beach	8/20-21/14	29	3	9.7	1	Pending
Pismo Ecological Reserve, Pismo Beach	8/20-21/14	108	4	27.0	2	Pending
Oceano Campground, Pismo State Beach	8/20-21/14	35	4	8.8	1	Pending
Lake Marie Subdivision, Orcutt	8/26-27/14	~2,236	6	~372.7	13	Pending
Orcutt Creek @ Bradley Rd., Orcutt	8/26-27/14	9	3	3.0	0	N.A.
Orcutt Creek @ Broadway, Orcutt	8/26-27/14	28	4	7.0	2	Pending

Leroy Park, Guadalupe	8/28-29/14	460	7	65.7	10	Pending
Riverview Park, Buellton	8/28-29/14	26	4	6.5	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 August 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.

Bubonic Plague Surveillance

On August 8, 2014, District staff assisted personnel from the California Department of Public Health/Vector-Borne Disease Section with a plague survey at Los Prietos Campground along Paradise Road in the Los Padres National Forest. A total of 8 California Ground Squirrels (*Otospermophilus beecheyi*) were collected with 40 traps. Blood and flea samples were taken from the squirrels which were then tagged and released. All 8 squirrels tested negative for Bubonic Plague (*Yersinia pestis*).

