



## MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

# DISEASE SURVEILLANCE REPORT

April 2017

### West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County in 2017 to date. Throughout California, three WNV positive dead birds have been reported; one each in Orange, San Diego, and San Mateo Counties. One human case, the year's first, has been confirmed in Kings County.

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).

### Zika Virus and Invasive *Aedes* Mosquito Update

The Santa Barbara County Public Health Department has reported a total of nine travel related cases of Zika infection in Santa Barbara County to date. There have been 534 imported cases of Zika virus into California as of April 21, 2017, but no local mosquito transmitted cases. However, a locally acquired case of Zika has recently been reported in Ensenada, Baja California, Mexico. Local mosquito transmitted cases of Zika infections have also been reported in southern Florida and southern Texas. Invasive Yellow fever mosquitoes (*Aedes aegypti*) and Asian tiger mosquitoes (*Aedes albopictus*) have now been found in at least 125 cities and communities in 12 California counties. A third species, the Australian backyard mosquito (*Aedes notoscriptus*) appears to be getting established in parts of Los Angeles County. Some California vector control districts already report finding live invasive *Aedes* larval activity in 2017. *Ae. aegypti* and *Ae. albopictus* can transmit Dengue, Chikungunya, and Yellow fever viruses as well as Zika virus. *Ae. notoscriptus* is an excellent vector of Dog heartworm.

Zika virus information can be found at <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Zika.aspx> and at <http://www.cdc.gov/zika/>.

### Live Mosquito-Borne Virus Surveillance

Persistent high winds and occasional rain severely restricted the mosquito trapping program in April 2017. As the table below shows, trapping surveys at Lake Los Carneros, Goleta and at the UCSB/ Santa Barbara Airport bluffs collected significant numbers of mosquitoes. Winter and spring active mosquito species such as the univoltine (one generation per year) Floodwater mosquitoes (*Aedes washinoi*) and California salt marsh mosquitoes (*Aedes squamiger*) along with multivoltine (multiple generations per year) Winter mosquitoes (*Culiseta inornata*) have been the most numerous species in the April 2017 trapping samples. Also, Encephalitis mosquitoes (*Culex tarsalis*), the most serious vector of WNV, are beginning to become active. BG-Sentinel traps are also being deployed to survey for invasive *Aedes* mosquito species that are known vectors of Zika virus and other diseases. Trapping in San Luis Obispo County has been pushed back into May 2017 due to the almost constant high winds.

LOCATION	DATE	NUMBER of MOSQUITOES	NUMBER of TRAPS^	MOSQUITOES PER TRAP NIGHT*	POOLS SUBMITTED	RESULT
<b>South Coast</b>						
6000 block of Avenida Ganso, Goleta City	3/28-4/4/17	7	1 BG	1.0	0	N.A.
Lake Los Carneros, Goleta City	4/3-4/17	704	12 EVS	58.7	8	Negative
UCSB/Santa Barbara Airport Bluffs	4/10-11/17	764	11 EVS/2 BG	58.8	16	Negative
Santa Barbara City offices, 620 Laguna St.	3/30-4/12/17	0	1 BG	0	0	N.A.

El Estero Wastewater Plant, Santa Barbara	4/24-25/17	87	10 EVS	8.7	3	Pending
El Estero Wastewater Plant, Santa Barbara	4/24-5/1/17	2	1 BG	0.3	0	N.A.
<b>North County</b>						
<i>Delayed until May due to wind.</i>						
<b>San Luis Obispo County</b>						
<i>Delayed until May due to wind.</i>						

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

^ EVS = CO2 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 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 Davis Arbovirus Research and Training (DART) laboratory on the U.C. Davis campus where they are analyzed for the presence of live mosquito-borne viruses including WNV.

### Sentinel Chicken Flocks

All five of the District's chicken flocks are now up and running for the 2017 season. The flocks are again located at the Carpinteria Sanitary District, the Goleta Sanitary District, the U.S. Forest Service Ranger Station on Paradise Road, the Solvang City Wastewater Treatment Plant, and the Mission Hills Community Services District. District personnel are obtaining samples from each chicken every two weeks. All samples submitted in 2017 to date have been negative for WNV and other mosquito-borne encephalitis viruses.

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 encephalitis viruses.

### West Nile Virus Dead Bird Submissions

The West Nile Virus Dead Bird Hotline is now back in full operation. The District retrieved and sampled two dead birds, both Crows, from Orcutt and Carpinteria. Both Crows tested negative for WNV.

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 (DART) laboratory on the U.C. Davis campus where the samples are analyzed for West Nile Virus.



**Common Crane Fly (*Tipula planicornis*)**

**Diptera: Tipulidae**

Recent weather conditions have led to an explosion in the Crane fly population throughout Santa Barbara County in March and April 2017. Crane flies are true flies that resemble “giant mosquitoes” and are sometimes mistaken for them. The truth is that Crane flies cannot bite nor do they eat mosquitoes as many people believe. They are completely harmless, but can be a nuisance because they are attracted to lights at night. The larvae live in loose soil or leaf litter and feed on the roots of small annual plants or decaying plant matter. Larvae of some species are aquatic.

Shown Life Size