



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

January 2017

West Nile Virus Activity

No West Nile Virus (WNV) activity has been detected in Santa Barbara County or anywhere else in California in 2017 to date.

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.

Zika Virus and Invasive *Aedes* Mosquito Update

The Santa Barbara County Public Health Department reported seven travel related cases of Zika infection in Santa Barbara County in 2016, but none in 2017 to date. There have been 479 imported cases of Zika virus into California as of January 27, 2017, but no local mosquito transmitted cases. Local mosquito transmitted cases of Zika infections have been reported in southern Florida and southern Texas. Invasive *Aedes* spp. mosquitoes have now been found in at least 129 cities and communities in 12 California counties. Significant activity was reported for all three invasive *Aedes* species in most areas with known infestations in 2016.

Zika virus information can be found at <http://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx> and at <http://www.cdc.gov/zika/>.

West Nile Virus Dead Bird Submissions

The District submitted one dead bird in January 2017, a Red-shouldered Hawk from the City of Santa Barbara. The Hawk was negative for WNV.

The West Nile Virus Dead Bird Hotline is closed for the winter. However, the public can still report dead birds online at www.westnile.ca.gov. The District has made arrangements with CDPH to continue testing approved dead birds through the winter. The hotline will resume full operations in spring 2017.

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. 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.

Sentinel Chicken Flocks

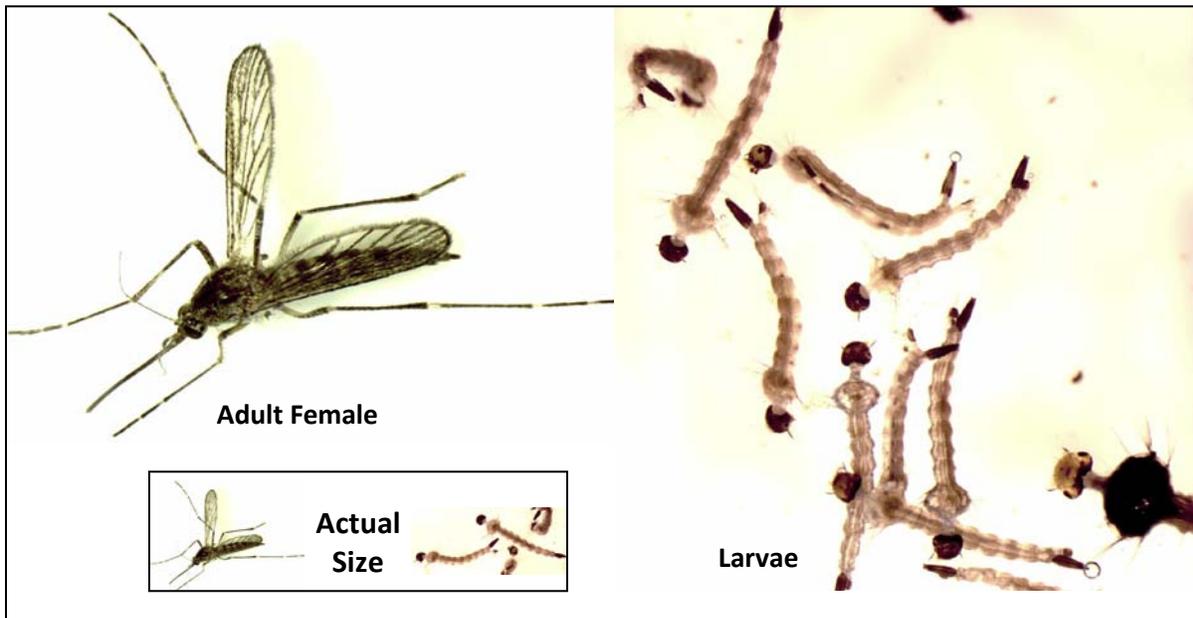
District personnel have switched to taking samples from the four active sentinel chicken flocks once per month for the winter season instead of every two weeks. All samples submitted in January 2017 were negative for WNV and other mosquito-borne viruses. Twice per month sampling will resume in spring 2017.

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.

Live Mosquito-Borne Virus Surveillance

The District did not conduct any mosquito trapping surveys in January 2017. Cold, wet weather is not conducive to mosquito trapping and the District technicians are very busy controlling Floodwater mosquitoes in the recently flooded seasonal wetlands. Live mosquito-borne virus surveillance will resume within the next month, weather permitting.

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 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.



FLOODWATER MOSQUITO (*Aedes washinoi*)

Recent rains have filled local seasonal wetlands and have caused the eggs of Floodwater mosquitoes to hatch. District technicians are very busy treating these wetlands with mosquito larvicide. Also known as the **Willow mosquito**, this species is univoltine; that is they have one generation per year. Eggs are laid on aquatic vegetation and on the ground during spring and remain dormant through the dry season. When winter rains re-flood the wetland, the eggs all hatch en mass. Adults emerge in the spring to complete the lifecycle. Adult females are vicious and aggressive biters that create serious mosquito nuisance problems, but are not known to transmit human disease.