



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

December 2014

West Nile Virus Activity

Two dead birds from the Santa Ynez Valley tested **positive** for West Nile Virus in October 2014. This is the only West Nile Virus (WNV) activity that was detected in Santa Barbara County in 2014. During summer and early fall 2014, infection rates of mosquitoes with WNV in California were at the highest levels since the disease arrived in 2003. As of December 30, 2014, 797 confirmed human cases (29 fatal) have been documented from 31 California counties. A total of 2,442 dead birds from 36 counties tested positive for the disease. 3,340 WNV positive mosquito pools were reported from 30 counties. A total of 443 WNV positive sentinel chickens from 97 flocks were reported from 23 counties. Very high levels of WNV were detected in Los Angeles, Orange, and Santa Clara Counties. One human case and 7 dead birds were reported from Ventura County, mostly from the western part of the county. A horse case of WNV was confirmed in northern San Luis Obispo County. These are likely the final figures for 2014.

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.

West Nile Virus Dead Bird Submissions

The District did not submit any dead birds in December 2014. Two dead birds from the Santa Ynez Valley tested positive for WNV in October 2014. These are the only indications of WNV activity in Santa Barbara County in 2014. The Dead Bird Hotline has been inactivated for the winter. However the District has made arrangements with the California Department of Public Health to continue testing certain species of birds reported online at www.westnile.ca.gov through the winter. The District will submit Crows, Jays, Magpies, Ravens, Hawks, Sparrows, and Finches when CDPH approves.

The MVCAC Board of Directors has approved funding the West Nile Virus Dead Bird Hotline for 2015. The Hotline will be fully staffed and functional again in spring 2015.

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 U.C. Davis Center for Vector-Borne Diseases where the samples will be analyzed for West Nile Virus.

Sentinel Chicken Flocks

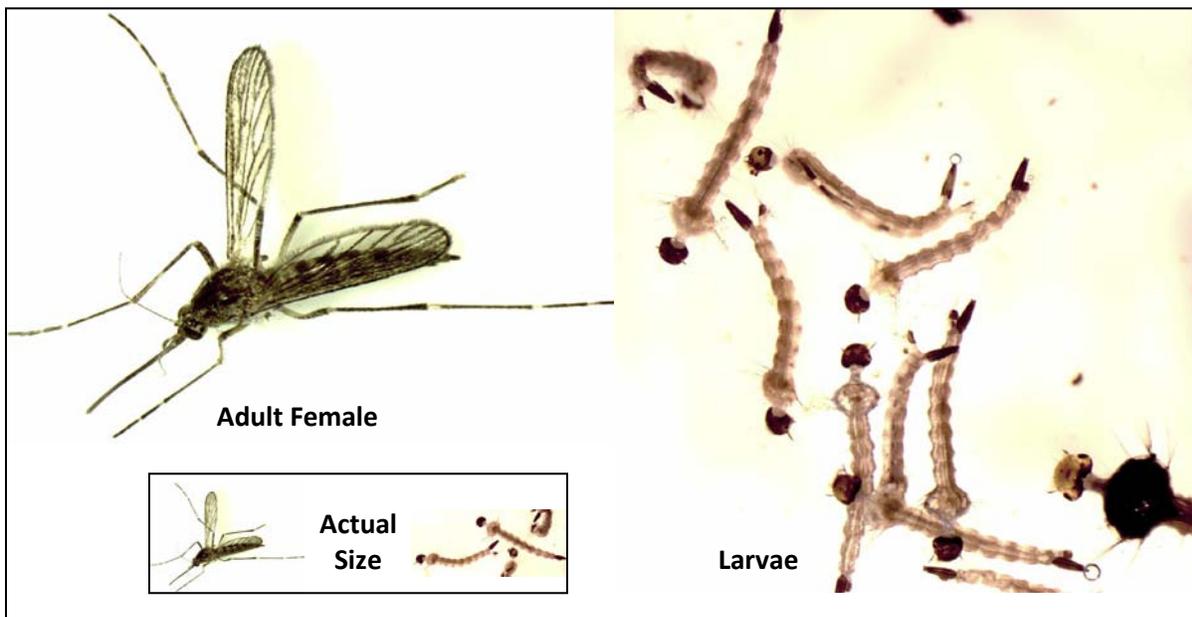
District staff is bleeding the 4 active chicken flocks once per month for the winter season. The flock at the USFS Ranger Station on Paradise Rd. has been inactivated for winter. All blood samples from all flocks tested negative for WNV and other mosquito-borne viruses in 2014.

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.

Live Mosquito-Borne Virus Surveillance

The District submitted 318 mosquito sample pools for laboratory analysis in 2014. All tested negative for WNV and other mosquito-borne viruses. The 318 sample pools are well short of the District's record of 529 pools in 2011, but is more than might have been expected for such dry year. Live mosquito-borne virus surveillance will resume in spring 2015.

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.



FLOODWATER MOSQUITO (*Aedes washinoi*)

The season's early rainfall has filled local seasonal wetlands and caused the eggs of Floodwater Mosquitoes to hatch. District technicians are currently 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.