



MOSQUITO and VECTOR MANAGEMENT DISTRICT of Santa Barbara County

DISEASE SURVEILLANCE REPORT

May 2009

West Nile Virus Activity

No West Nile Virus (WNV) has been detected in Santa Barbara County in 2009 to date. However, WNV activity has been detected in Southern California and some areas of Northern California. Since January 1, 2009 three sentinel chickens have tested positive for the disease in Los Angeles County along with 13 WNV positive dead wild birds reported from 5 counties and 38 WNV positive mosquito pools from 5 counties.

Statistics for California WNV activity in 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.

Sentinel Chicken Flocks

District personnel are sampling the District's 4 established chicken flocks every two weeks. The 4 locations are: the Carpinteria Sanitary District, the Goleta Sanitary District, the Mission Hills Community Services District, and the U.S. Forest Service facility on Paradise Road in the upper Santa Ynez Valley. All samples submitted to date have been negative for WNV and other mosquito-borne viruses. A 5th flock was established at the City of Solvang's Wastewater Treatment Plant on May 22, 2009 using the 10 spare chickens that had been held at the District's Summerland facility. Sampling of the Solvang flock will begin on the first week of June 2009.

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 Section at Richmond, California where they are analyzed for antibodies to WNV and other mosquito-borne viruses.

Live Mosquito-Borne Virus Surveillance

District personnel conducted 3 mosquito trapping surveys during the month of May 2009: Carpinteria Creek (18 mosquitoes), the Shoreline Dr./ More Mesa area of the Goleta Valley (540 mosquitoes), and Lake Los Carneros, Goleta City (92 mosquitoes). A total of 23 mosquito pools have been submitted to the laboratory at U.C. Davis to date. All tested negative for WNV and other mosquito-borne viruses. Test results on more pools are pending.

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, separated by species, 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.

Mosquito Population Surveys

This project began in mid-March 2008 and is continuing in 2009. One survey took place at the 3 Lompoc Valley locations on April 30-May 1, 2009. The locations were the east end of Burton Mesa Blvd., Mission Hills (18 mosquitoes), the Santa Ynez River at Floradale Ave. (10 mosquitoes), and San Miguelito Canyon (3 mosquitoes). The Santa Ynez Valley was surveyed on May 12-13, 2009 at Sage Hill Campground (79 mosquitoes), Cachuma Village (38 mosquitoes), the Santa Ynez River at Refugio Road (11 mosquitoes), the

Santa Ynez River at Fjord Dr., Solvang (69 mosquitoes), the Santa Ynez River at Avenue of Flags, Buellton (2 mosquitoes), and Alamo Pintado Creek at Los Olivos for the first time ever (9 mosquitoes). The Oak Hill Cemetery at Ballard has been deleted from the survey due to very low numbers of mosquitoes in 2008. On May 27-28, 2009, a survey was conducted at Orcutt Creek at Bradley Road (57 mosquitoes), Orcutt Creek at Broadway (341 mosquitoes), and for the first time the Bradley Channel in the City of Santa Maria (17 mosquitoes).

This mosquito trapping technique utilizes the same traps that are used for Live Mosquito-Borne Virus Surveillance. However fewer traps are placed at each location. The primary objective is to determine mosquito populations instead of collecting a large number of mosquitoes to test for the presence of disease. This is an effort to determine what mosquito species are active, how many, and at what time of year they are active. A number of locations will be sampled repeatedly throughout the spring, summer, and early fall seasons. Emphasis will be placed on North County locations that have not been routinely surveyed in past years.

West Nile Virus Dead Bird Submissions

To date, the District has not submitted any dead birds to be analyzed for WNV in 2009. Due to the State of California's financial difficulties, the California Department of Public Health (DPH) is now being very selective about authorizing dead birds for testing. The District cannot submit dead birds for testing without the DPH's authorization.

The dead birds are submitted to the California Animal Health and Food Safety Laboratory at Davis, California to be analyzed for the presence of West Nile Virus. The District and other agencies submit dead birds that are found by citizens who report them 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.

Gaviota Area Fly Complaint

The District investigated a complaint about flies annoying humans and horses at a ranch near the top of Refugio Road above the Gaviota Coast. It was found that animal manure and landscape vegetation trimmings were likely to be the source of much of the fly breeding. Ranch management was advised to move the manure and vegetation trimmings farther away from the buildings and horse corrals. Samples of the flies were collected and identified at the District laboratory. Canyon Flies (*Fannia benjamini*) and one or two species of Small Dung Flies (Family Sphaeroceridae) were present in the sample.

