



**MOSQUITO and VECTOR MANAGEMENT DISTRICT
of Santa Barbara County**

DISEASE SURVEILLANCE REPORT

June 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 a number of other areas in California. Since January 1, 2009 three sentinel chickens have tested positive for the disease in Los Angeles County along with a single positive dead tree squirrel from Fresno County, 62 WNV positive dead wild birds reported from 11 counties, and 81 WNV positive mosquito pools from 11 counties. Fresno County appears to be the epicenter for WNV activity so far in 2009 with 24 positive dead wild birds, 40 positive mosquito pools, and one positive dead tree squirrel.

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.

West Nile Virus Dead Bird Submissions

The District submitted two dead birds to be analyzed for WNV in June 2009, both from the Santa Ynez Valley. The birds, a Yellow-Billed Magpie from Happy Canyon and a Starling from Santa Ynez near the Solvang city limit, are the first dead birds submitted by the District for WNV analysis 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. Test results on the two dead birds are pending.

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.

Sentinel Chicken Flocks

District personnel are sampling the District's 5 chicken flocks, including the new flock at the City of Solvang's Wastewater Treatment Plant, every two weeks. All samples submitted to date have been negative for WNV and other mosquito-borne 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 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 June 2009: the Andree Clark Bird Refuge in the City of Santa Barbara (~2,018 mosquitoes), Tecolote Creek in Rancho Embarcadero in the western Goleta Valley (43 mosquitoes), and the El Estero Wastewater Treatment Plant in the City of Santa Barbara (73 mosquitoes). A total of 52 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.

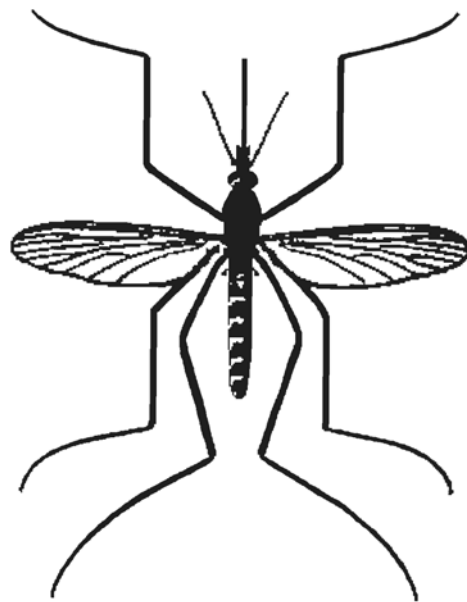
This surveillance technique utilizes battery-powered traps that use dry ice as a source of carbon dioxide to attract adult female mosquitoes that are actively seeking a blood meal. The live female mosquitoes are taken into the District's laboratory where they are anesthetized with triethylamine under 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. A trapping survey was conducted at Leroy Park, Guadalupe on June 4-5, 2009. A total of 9 mosquitoes were collected with 12 traps. Another survey was conducted along the Gaviota Coast on June 8-9, 2009. Two traps were placed at the Gaviota Rest Stop (no mosquitoes), two traps at Gaviota State Beach (one mosquito), four traps at Refugio Creek and State Beach (6 mosquitoes) and four traps at El Capitan State Beach (4 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.



**Southern House Mosquito
(*Culex quinquefasciatus*)**

A major vector of West Nile Virus, this mosquito often breeds in containers that fill with sprinkler or rain water in urban backyards.