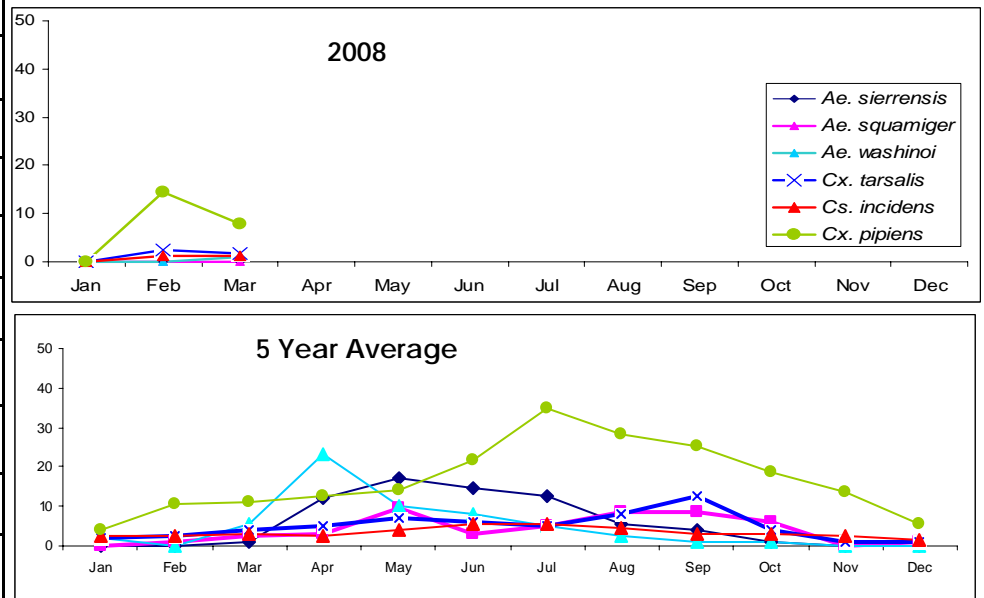


Entomology Report



Table of Contents	
Adult Mosquito Populations	1
Mosquito Control Operations	1
WNV Update	2
Physician Lyme Disease Survey	2
Larvicide Resistance Workshop	3
Rare Pond Species Workshop	3
Mosquito ID Workshop	3
Sentinel Chicken Pickup	3
Honey Bee Swarms	4

Adult Mosquito Populations in CO2 Traps



Mosquito Control Operations

In March, mosquito control technicians treated 939 backyard fishponds, 107 neglected swimming pools, 559 storm drain catch basins, and 83 ditches and drainlines. Impounded rainwater and marshes were the primary source of mosquito development this month

Bair Island has been treated by helicopter on two occasions this year. In addition to the February treatment of 1420 acres on Inner, Middle and Outer Bair, the helicopter was used again on March 20 and 21 to treat 680 acres on Middle Bair. On March 19, hand applications were made to 2 acres on Outer Bair. The most recent inspections indicate that larval treatment has been successful and very few adult salt marsh mosquitoes have turned up in CO2 traps.

Other marshes and impounds treated this month included those along the bay in East Palo Alto, Menlo Park, Redwood City, and San Mateo, as well as areas in Millbrae, San Bruno, Half Moon Bay, Pacifica, and Brisbane.

Sewage treatment plants are being treated every 3 weeks this month. Mosquitoes develop in inoperative tanks, raceways and in water trapped under buildings. Technicians treated for mosquitoes at plants in Burlingame, South San Francisco, Half Moon Bay and San Mateo.



Impounded water at Mills Field.



West Nile Virus Update

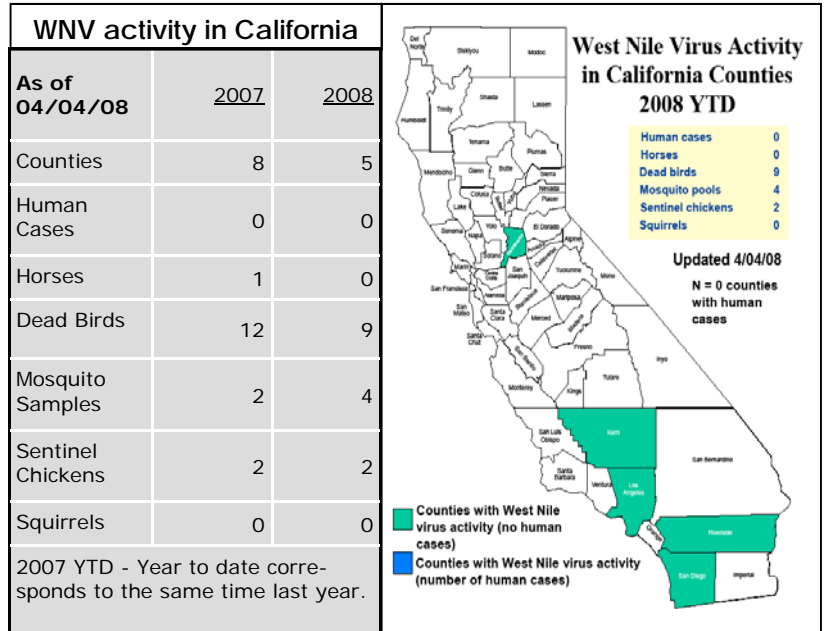
California:

In 2008, West Nile virus has been detected in five counties. Virus was detected in mosquito samples (4) from Riverside County, in sentinel chickens (2) from Los Angeles County, and in dead birds (7) in San Diego County, (1) in Sacramento County, and (1) in Kern County. All of these counties have experienced epidemic levels of disease in previous years.

The state's protocol for testing changed in 2008 due to budget cuts. January and February bird testing was eliminated because early season virus detection may reflect past infection, instead of current disease transmission. Testing resumed on March 1st.

San Mateo County:

In the first three months of 2008, no virus activity was detected in San Mateo County. However, the total numbers of dead birds reported (73) and tested (15) were lower than in 2007 (107 reported, 34 tested). The dramatic drop in numbers of birds tested was largely due to the change in the state's protocol.



Number of Birds Reported and Tested Jan-March 2007/2008		
	2007	2008
Reported		
January	49	10
February	35	35
March	23	28
Total Reported	107	73
Tested		
January	17	Testing Suspended
February	11	Testing Suspended
March	6	15
Total Tested	34	15
Positive	0	0

Physician Lyme Disease Survey Follow-Up

Follow-up on the physician survey on Lyme disease continued in March. Based on survey results, the district mailed educational materials to over 200 primary care physicians in San Mateo County. The mailing consisted of a letter about infection in local ticks, instructions on disease reporting, brochures, and tick identification cards.

Results of the survey were presented to the California Lyme Disease Advisory committee in Sacramento on March 12. On March 20, the district discussed the survey in a teleconference of the Communicable Disease Exchange, a forum of health departments from counties throughout California. Two counties in the coastal region have expressed interest in conducting similar surveys or using the results of the present survey to guide physician education.



Mosquito Larvicide Resistance Management Workshop



Mortality rates were compared for a range of larvicide concentrations.

Assistant Vector Ecologist Angie Nakano attended a workshop on mosquito larvicide resistance testing presented by Dr. T. Steven Su and Dr. Min-Lee Cheng at the West Valley Mosquito and Vector Control District on March 25 and 26. Larval bioassays are used to assess the efficacy of larvicides on mosquitoes in the laboratory, and can be used to detect the development of pesticide resistance in wild mosquito populations. Participants from six California vector control agencies learned the different procedures for setting up and reading larval bioassays for biorational materials Bti (*Bacillus thuringiensis israelensis*), Bs (*Bacillus sphaericus*), and methoprene. Techniques for analysis of the results were also covered in this valuable two-day training session.

Rare Pond Species Survey Techniques

Over the weekend of March 29 and 30, three district staff members received field training from the Laguna de Santa Rosa Foundation in techniques for surveying local ponds for rare reptile and amphibian species. These included California Red-Legged Frogs, Western Pond Turtles, and California Tiger Salamanders. Clad in hip waders, Tina Sebay, Brian Weber, and Angie Nakano dredged up



Western Pond Turtle

and sorted tadpoles from vernal pools, observed the collection of pond turtles in drag nets and traps, and stalked frogs in ponds at night by headlamp. Techniques learned in this workshop will facilitate the protection of species of special concern during district activities in local pond and wetland areas.



Technicians Brian Weber and Tina Sebay sort salamander and frog larvae.

Mosquito Identification Workshop



Four staff members attended the mosquito identification workshop at Contra Costa Mosquito and Vector Control District on March 18, 2008. Characteristics of adult mosquitoes, such as the wing pattern of *Culiseta incidens* shown on the left, were observed in local, state, and exotic species. This was a good primer for those new to identifying adult mosquitoes.

Chicken Pickup

District staff picked up a flock of ten chickens from the Turlock Mosquito Abatement District on April 1. The flock will be kept at the Jasper Ridge Biological Preserve and blood samples drawn bi-weekly until November as a primary indicator of West Nile virus in rural parts of San Mateo County.





"An Independent Special District
Working for You Since 1916"

SAN MATEO COUNTY
MOSQUITO ABATEMENT DISTRICT

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The San Mateo County Mosquito Abatement District is an independent, Special District funded by a property tax voted in by individual cities. Our mission is to safeguard the health and comfort of our citizens through a planned program to reduce mosquitoes and other vectors in an environmentally responsible manner.

	Extension
Robert B. Gay, Manager	12
Chindi A. Peavey, Vector Ecologist	32
Angela M. Rory, Assistant Vector Ecologist	31
Angie Nakano, Assistant Vector Ecologist	44
Lauren Couture, Assistant Vector Ecologist	38
James Counts, Supervisor	16
Karen Williams, Finance Administrator	11

"A VECTOR is any animal that can transmit disease to animals or people."

Bee Swarms

Beginning in late March, residents often call the district to report huge clumps of buzzing bees seen congregating in tree branches or on the sides of buildings. These clusters of bees can range in size from a small baseball to bigger than a basketball. When established bee hives reach full capacity and become overcrowded, the queen, along with half of the colony, leave or "swarm" in search of a new home. When the queen leaves, a new queen emerges and takes over the original nest.



A swarm of bees found on the ground in Woodside.

Worker bees in the swarm, called "scouts", seek out a suitable place to establish a new hive. When the scouts find a favorable site, such as a hollow tree, they report back to the swarm with their findings and the entire swarm moves into this new home. This process can take up to a few days. Huge swarms of bees look intimidating but are relatively harmless! They have no hive or honey to protect and therefore are not aggressive.



The same swarm that was seen on the ground in Woodside. A day later the swarm moved into this tree.