

September 2008



Entomology Report

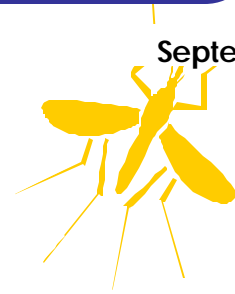
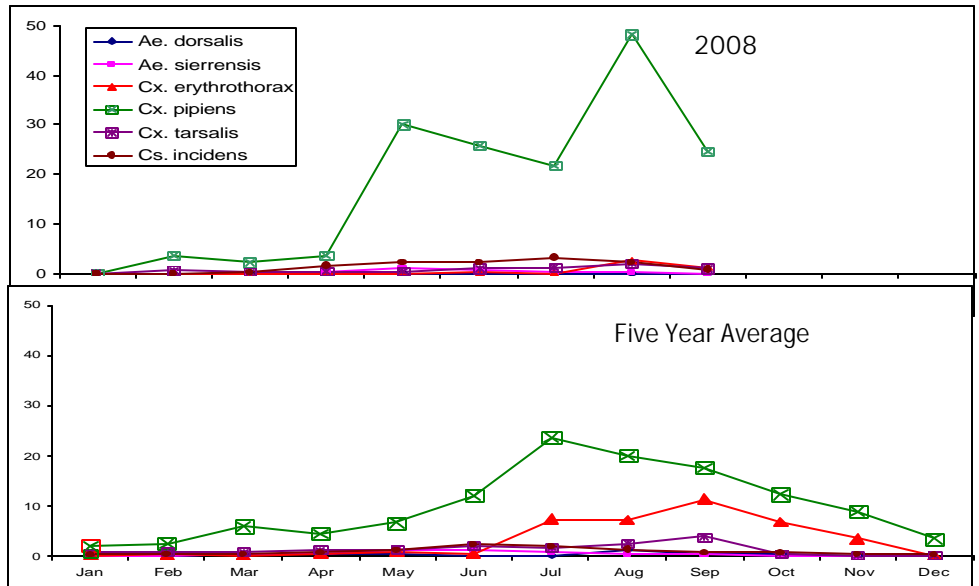


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Adult Mosquito Populations in CO2 Traps



Mosquito Control Operations

In September, district staff treated 1,793 utility vaults along with regular treatment of storm drains, residential sources, and seasonal impounds. 46,264 catch basins were treated this month in low-lying sections of urbanized parts of the county. Water under houses continued to produce mosquitoes this month, despite the dry weather. New sources of mosquito development were discovered in San Bruno, San Mateo and East Palo Alto. Over 1,200 backyard fishponds were inspected in September; 64% of these required treatment for mosquitoes.

Mosquito control technicians conducted regular inspections in urbanized sections of creeks, treating pockets of water as needed. Monthly helicopter treatment of cattail marshes in San Bruno, Portola Valley and Pacifica continued in September. The last helicopter treatment of the season is scheduled for October.

	Treated	Inspected	% Treated
Fishponds and Fountains	781	1,216	64%
Ditches and Drainlines	94	146	64%
Creek	39	62	63%
Marshes & Impounds	123	293	42%
Neglected Swimming Pools	45	123	37%
Water under Buildings	22	50	44%

Mosquito control technicians treated sewage treatment plants on a weekly basis in San Mateo, Burlingame, South San Francisco and Half Moon Bay.

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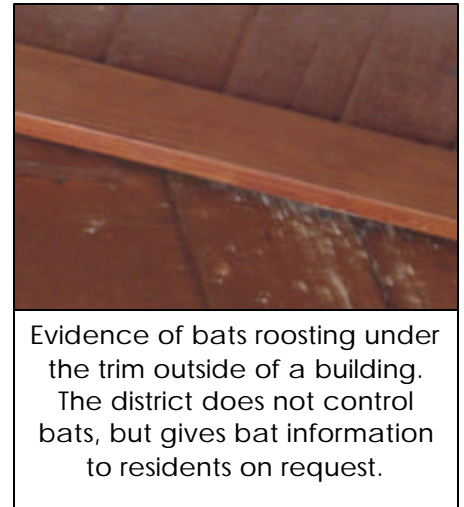
Mosquito Control Operations (continued) / Service Requests

(Continued from page 1)

Seasonal control of invasive cordgrass was completed in September. This work is carried out under a contract with the California Coastal Conservancy. Last year's applications were extremely effective and this program is expected to come to a conclusion within the next 5 years.

Service Requests: District staff responded to 184 requests for service in September. Service requests fell into the following categories:

- 82 Mosquito-related requests, including
 - 47 mosquito calls
 - 24 reports of standing water
 - 11 requests for mosquito fish
- 96 Requests regarding stinging insects, including
 - 82 ground nesting yellow jackets
 - 10 other wasps
 - 4 other insects
- 4 Requests regarding vertebrate pests, including
 - 1 rat
 - 3 raccoons, skunks, bats
- 2 Miscellaneous issues



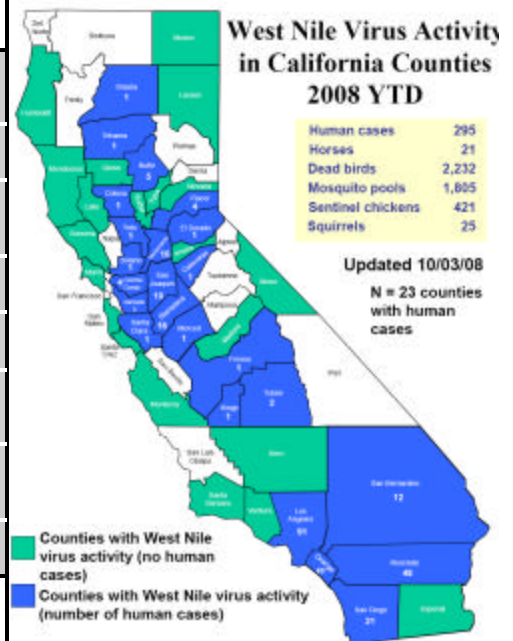
Evidence of bats roosting under the trim outside of a building. The district does not control bats, but gives bat information to residents on request.

West Nile Virus Update

Although summer is nearly over, mosquitoes are still active and residents should continue protecting themselves from bites. Most of the West Nile Virus (WNV) activity has been in southern California this year.

Human deaths caused by WNV in California this year have increased from three to six over the past month. The additional three deaths occurred in Los Angeles County (1) and Riverside County (2). Statewide in 2008, there have been 295 human cases of WNV within 24 counties. In September, El Dorado County had its first human case of WNV of the year. California has a total of 45 counties with some WNV activity this year.

WNV activity in California		
As of 10/06/08	2007	2008
Counties	51	45
Human Cases	323	295
Horses	25	21
Dead Birds	1240	2232
Mosquito Samples	987	1805
Sentinel Chickens	400	421
Squirrels	19	25
2007 YTD - Year to date corresponds to the same time last year.		



Thus far in 2008, 2,232 dead birds statewide tested positive for WNV, from 42 counties. In San Mateo County, two dead birds have tested positive for WNV in 2008, with no new positive results in the month of September. Dead squirrels have tested positive 25 times in California, from six counties. Ten dead squirrels have been reported in San Mateo County this year; none of them have been positive for WNV.



Control of Rats and Mice

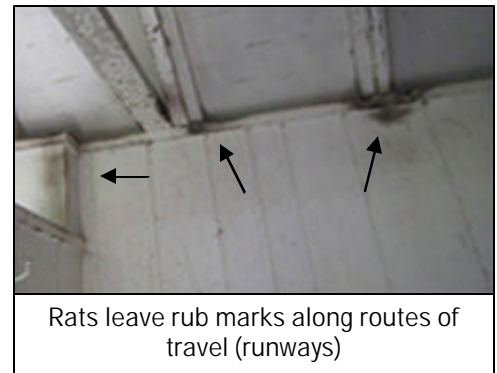
Currently, the district is developing a brochure on control of rats and mice and a supplemental handout on trapping. These documents will be distributed to residents to support rodent inspections conducted by district staff.

An effective program for control of rats and mice requires the completion of several steps: Assessment of activity, exclusion, pre-baiting, trapping, re-assessment of activity and trap relocation, disposal and clean-up.

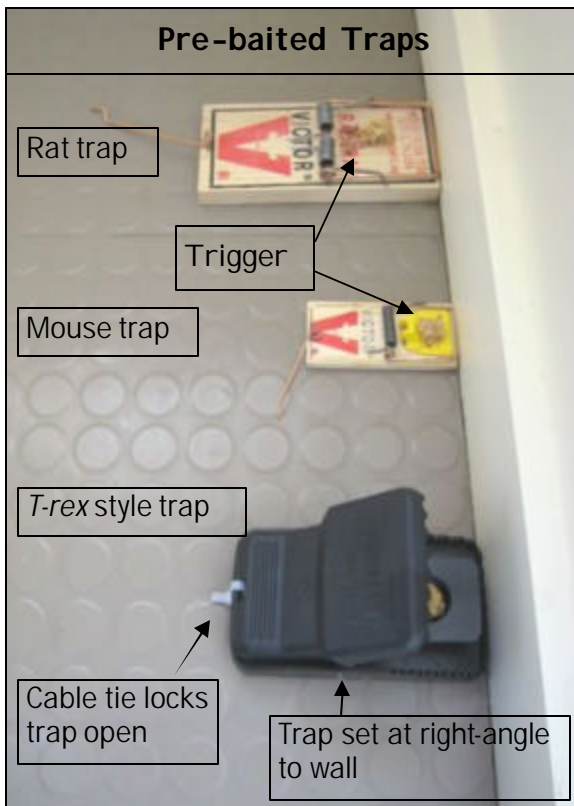
The first step in control is determining where rodents are entering structures or where activity is occurring. Signs of activity include droppings, live or dead rodents, rub marks, gnawed objects, urine odors, and sounds (in attics and walls).

Once rat activity is confirmed, exclusion is the next step. Rats can access buildings through holes as small as a half-dollar and mice can enter gaps as small as a nickel. The district can assist residents with identifying access holes and gaps that need to be sealed up and offers advice on control options.

Because rats tend to avoid new objects, trap success can be increased by pre-baiting. Pre-baiting involves placing bait in unset traps (see figure below). This allows rodents to become familiar with the traps without being captured. For *T-rex* style traps, use a cable tie to temporarily hold the trap open.



Rats leave rub marks along routes of travel (runways)



Correct placement is key for all types of snap traps. Traps are shown in pre-baited setup. Note that triggers are not set, and T-rex trap is locked in an open position with a cable tie.

After a few days, add fresh bait to traps and set them for capturing rodents. Be sure to place traps perpendicular (at right angles) to active runways in which rodent droppings have been seen. Position the trigger of the trap toward the wall. Follow the manufacturer's label instructions for proper setting of traps. **Do not allow children or pets near traps!**

When the number of animals trapped per day declines, check for fresh droppings, indicating continuing rat activity. If droppings are still appearing, relocate the traps. The rodents may be avoiding the traps. Repeat the cycle of pre-baiting and trapping until new signs of rat activity cease.

Some rodents can carry Hantavirus or other diseases. Therefore, when cleaning rat-infested areas, it is important to prevent exposing yourself to airborne dust from droppings. Using rubber or latex gloves, apply a disinfectant or a 10% bleach solution onto the dead rodents and droppings. Double-bag and dispose of waste in a garbage can with a tight-fitting lid. Afterward, thoroughly wash hands with soap and water.

Rats and mice will seek out environments where food, water and shelter are available. The main goal of a successful control program is to eliminate these factors or prevent rats from reaching them.

Information about rodents and disease can be obtained from the District laboratory at (650) 344-8592.



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"An Independent Special District
Working for You Since 1916"

SAN MATEO COUNTY
MOSQUITO AND VECTOR CONTROL

1351 Rollins Road
Burlingame, CA 94010

Phone: 650-344-8592
Fax: 650-344-3843
www.smcmad.org

The San Mateo County Mosquito and Vector Control 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
Angie Nakano, Assistant Vector Ecologist_____	31
Tina Sebay, Assistant Vector Ecologist_____	38
Theresa Shelton, Assistant Vector Ecologist_____	44
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***"A VECTOR is any animal that can transmit
disease to animals or people."***

Blow Flies and Flesh Flies

During the warm summer months, the district receives a number of calls from residents complaining of pest flies infiltrating homes, circling in garages, or infesting backyards. Two of the most commonly reported families of conspicuous pest flies are the blow flies (family: Calliphoridae) and the flesh flies (family: Sarcophagidae). These medium-sized flies occur in both urban and rural areas, and breed mostly in carrion (dead animals or meat) or garbage.



Lucilia serricata, a
common blowfly*

Blow flies, or Calliphorids, are often called "blue bottle" or "green bottle" flies. They range from 6 to 16 mm in length (generally house fly-sized) and are characterized by their shiny metallic blue or green color. Blow fly maggots develop in decaying animal remains, excrement, and decaying organic matter. Because adult Calliphorids are often the first insects to discover and lay eggs on dead bodies, these flies have become important to in estimating time of death and other forensic information.

Sarcophagids are hairy gray flies which range between 2 to 14 mm in length and can be identified by their set of three black stripes and checkerboard-pattern on their backs. They often have red eyes and a red spot at the tip of the abdomen. Like the blow flies, most flesh fly maggots develop in animal carcasses, although some are parasites of other insects. The adults are often found on flowers, where they feed on nectar.

Although these flies are considered beneficial as decomposers and pollinators, some species have been known to vector diseases, and large infestations of these flies are undesirable. Identifying the breeding sources and attractants of these pests (often garbage, decaying plant material, or an unnoticed dead animal carcass in a yard) is key to managing fly populations.



A female flesh fly or
Sarcophagid**

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