



**2010-2011
Madera County Grand Jury
Final Report
Madera County Mosquito and Vector Control
District**

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INTRODUCTION:

On September 16, 2010 the Madera County Grand Jury visited the Madera County Mosquito and Vector Control District, located at 900 North Gateway Drive, Madera, CA, for a routine inquiry. The Grand Jury met with the manager of the District who was promoted to this position two years ago after working in the department for ten years. The Grand Jury also met with the biologist responsible for the testing and then toured the garage where the equipment and trucks are stored.

FINDINGS:

This is an independent special district funded by county property taxes. The Board of Trustees, appointed by the Madera County Board of Supervisors, oversees all operations of this District, including budget approval. The approved budget with all monies coming from property taxes was \$1.6 million in 2009 and \$1.4 million for 2010.

The District covers 710 square miles of Madera County. This area is divided into 12 zones and two cities, Madera and Chowchilla. Some areas of the county are not included.

This District was founded in 1947 with the main purpose of controlling mosquitoes within the District boundaries. In 1991 the mission of the District was changed to include other vectors, such as flies, bed bugs, ticks, etc. At the present time due to budget and manpower restrictions the District only gives advice on controlling and monitoring these vectors. The District protects the health, safety and comfort of the population within district boundaries by the abatement of mosquito-borne diseases which affect humans and animals. This is accomplished by monitoring, biological control, chemical control, and community education.

West Nile fever is one of the most common diseases spread by mosquitoes in Madera County. Other viruses that mosquitoes spread are Western Equine, Eastern Equine and Saint Louis Encephalitis. In 2010 there were four cases with symptoms of West Nile fever and another six cases were discovered during blood donations. All infected people survived.

Dead birds can be the first indicator that West Nile is active in the community. The District publishes information in the newspaper and distributes brochures at various presentations throughout the county to raise public awareness. The public is asked to notify the District if a dead bird or squirrel is found. Once notified, a technician will be dispatched to pick up the animal for testing.

There are two basic categories of mosquitoes: Culex and Aedes. All mosquitoes require standing water to breed. Mosquitoes breed in three to four days. They lay their eggs on the standing water where the eggs turn into larvae. The larvae can be found in a variety of standing water locations.

Surveillance and monitoring of the mosquitoes is done by placing mosquito traps in strategic places to collect samples for analysis. Eradication is accomplished by placing mosquito fish and natural bacteria into small and large bodies of water. Other eradication procedures may include spraying an EPA approved, oil-based chemical which is almost exclusively toxic to mosquitoes on water surfaces like abandoned swimming pools to suffocate young mosquitoes before they mature. Other methods include placing mosquito fish in troughs and green pools and providing these fish to the public for their ponds and animal watering containers upon request.

An annual fly-over is done to detect green pools. The foreclosure of homes has caused an additional work load for the District. Eleven hundred dirty pools were detected last year. The District must obtain authorization to enter private property, causing lengthy delays in treating infestations. The banks and realtors are not responding to the District notices on foreclosed homes. The District has held discussions with the code enforcement division of the Redevelopment Agency (RDA) to issue code violation citations so penalties can be accessed.

Ten chickens are purchased yearly and placed randomly throughout the county in areas of suspected mosquito activity. Blood samples are drawn from these birds every two weeks by the district and sent for testing to the UC Davis Lab to detect the presence of any mosquito-borne viruses in the area. The annual testing costs approximately \$9,160. An analysis done by the biologist suggests a \$3,000 yearly savings and a quicker turn-around time if the District had its own lab.

Water troughs are a problem. The District is unable to locate them unless notified of their existence. The District does not have enough manpower to search out and treat them.

There are ten employees including the manager who work full-time at the District. These permanent employees are certified through the California Department of Public Health, attend ten courses twice a year and must be re-certified every two years. They work along with the Department of Public Health and the County Agricultural Commissioner to perform surveillance, identify vectors, track diseases, and assure proper pesticide use. Fourteen seasonal employees are hired to supplement the full-time staff each year. These seasonal employees are supervised by the full-time certified technicians. They provide extra coverage from April until November with July and August being the most important months because of the higher temperatures.

The period between November and April is used to address administrative tasks, update the maps, maintain equipment, attend classes and conferences, and re-certify staff.

The District operates and performs the maintenance on twenty-five vehicles which are equipped with GPS systems. This allows the District to track both the vehicle and associated data. The District facility where the vehicles are housed includes a secured garage, a locked storage area for chemicals, employee showers and lockers, a boardroom, and an employee break room.

The District, acknowledging the importance of community participation, has put in place a publicity program. District employees attended the most recent Madera Fair for the first time in twenty-two years, handing out brochures containing information about mosquitoes and other vectors. The District placed notices and information in the media and made free presentations at schools and other public forums, advising the public on how to reduce the risk of mosquito-borne illnesses.

CONCLUSIONS:

The Grand Jury found the District has an outstanding, knowledgeable staff. Their concern for the safety and comfort of the public goes beyond just doing a good job. The facility is clean, equipment well-maintained, and safety measures are taken to assure chemicals are properly stored. Due to the additional workload caused by foreclosed homes, continued expansion of the population, and the need to locate and treat standing water, the District does not have a sufficient number of staff.

The Grand Jury concludes that the District has been successful, given existing staffing, in reducing the mosquito and vector infestation in its area of responsibility.

RECOMMENDATIONS:

The Grand Jury recommends that the County Board of Supervisors consider the possibility of establishing a local lab to reduce the costs of testing and expedite the results.

The Grand Jury recommends that the RDA issue citations for noncompliant, contaminated pools and assess appropriate penalties.

The Grand Jury recommends that additional staff be hired to locate and monitor standing water.

The Grand Jury recommends that the District continue with the successful surveillance, testing, eradication, and publicity programs being used.

Respondents: Written response required pursuant to PC933(c)

Madera County Board of Supervisors
200 West Fourth Street
Madera, CA 93637

Madera County Mosquito and Vector Control District
900 North Gateway Drive
Madera, CA 93637

Respondents (Response Optional):

Madera County Agricultural Commissioner
332 Madera Ave.
Madera, CA 93637

Madera County Department of Public Health
14215 Road 28
Madera, CA 93638

Madera Redevelopment Agency