

# INTEGRATED VECTOR MANAGEMENT

Integrated Vector Management (IVM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. Butte County Mosquito and Vector Control District's (District) IVM program uses current, comprehensive information on the life cycles of vectors and their interaction with the environment.

This information, in combination with available vector control methods, is used to manage public health threats and vector nuisances with the least possible hazard to people, property, and the environment, by the most economical means available.

The District's IVM includes vector surveillance, source reduction and/or elimination (physical control), public relations and education, biological control, and chemical control.



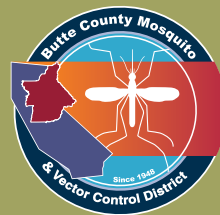
## Butte County Mosquito & Vector Control District

*Since 1948*

The District covers over 1600 square miles, and includes all of Butte County, except the small areas served by the Durham and Oroville Mosquito Abatement Districts, which were formed earlier. The District also includes the Hamilton City area of Glenn County. In April of 1994, "Vector Control" was added to the District name to reflect the additional disease surveillance and information now provided.

### OUR MISSION

The mission of BCMVCD is primarily to suppress mosquito-transmitted disease and to also reduce the annoyance levels of mosquitoes and diseases associated with ticks, fleas and other vectors through environmentally compatible control practices and public education.



5117 Larkin Road  
Oroville, CA 95965

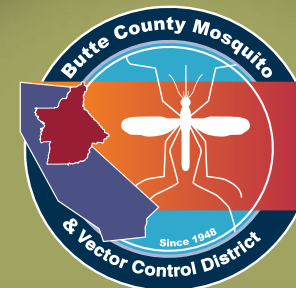
(530) 533-6038

or

(530) 342-7350

[www.BCMVCD.com](http://www.BCMVCD.com)

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# MOSQUITO AND VECTOR SURVEILLANCE

The District's entomology department (lab) monitors mosquito and other vector activity, detects mosquito-borne and vector-borne disease by testing mosquitoes, sentinel chickens, dead birds, and other vectors for the presence of pathogen, parasite, or arbovirus, and monitors weather and climate variables. In addition to the lab activities, the District relies on the surveillance conducted by the District's Mosquito and Vector Control Specialists in the field and the public. This research and surveillance data helps guide efficient control of vectors and vector-borne diseases in Butte County and Hamilton City.



# SOURCE REDUCTION AND/OR ELIMINATION (PHYSICAL CONTROL)

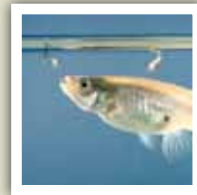
The best means of mosquito control is source elimination which is known as physical control. Physical control is an environmental manipulation that results in the reduction or elimination of mosquito development sites. All mosquitoes need water to breed, unfortunately water is vital to keep lawns

green, to grow crops, and to provide habitat for other aquatic insects and animals. District Mosquito and Vector Control Specialists actively work with property owners



and municipalities to reduce the amount of water used for irrigation, to observe or consider best management practices when irrigation is needed, to actively participate in the design of new developments, and the overall minimization of standing water on a property.

# BIOLOGICAL CONTROL



The District relies heavily on biological control. Over the years the District has tested many parasites and organisms to predate on or infect mosquito larvae. The District has

tried using mosquito larvae eating fish, *nematodes*, *planaria*, and other mosquitoes such as *Toxorhynchites sp.* to try and control mosquito larvae populations. By far and away, the most efficient biological control method used by the District today is mosquito larvae eating fish known as *Gambusia affinis* (Mosquitofish). Upon inspections with larvae present, District Mosquito and Vector Control Specialists evaluate the water source to determine if biological control is the most practical treatment possible and if deemed plausible the specialist will plant mosquitofish. Mosquitofish are available to the public free of charge and may be picked up from eleven locations throughout Butte County and/or Hamilton City.

# CHEMICAL CONTROL

The District's primary goal is to protect public health and welfare by managing mosquito populations so they do not present a significant risk to our community



and residents. In the event that mosquito populations pose a significant public nuisance or when emergency control measures are needed to rapidly disrupt

or terminate the transmission of disease to humans, the District will respond by continuing to implement its integrated vector management program. The District's chemical control program consists of larvicides and adulticides. Larvicides target mosquito larvae and pupa, while adulticides target adult mosquitoes. All public health pesticides used by the District are registered for use in mosquito control applications by the California Environmental Protection Agency.

# PUBLIC EDUCATION AND OUTREACH

The District's mission is to protect residents from mosquitoes and other vectors that transmit disease. Public education and information is an important part in the success of combating diseases such as West Nile virus and Lyme disease.

The District's education program consists of public appearances at local city and county fairs, participation in the state Mosquito and Vector Awareness week, and presentations to schools and local civic groups. In addition to the above activities, the District's public education is responsible for mosquito control notifications, website changes and updates, press releases and media events, source reduction through education, and working on the GIS/GIC project.

