

MOSQUITOES OF PUBLIC HEALTH IMPORTANCE IN BUTTE COUNTY

Anopheles freeborni Aitken

Found throughout most of the state. Breeds in aquatic habitats ranging from rice fields to permanent marshes. This mosquito is important in malaria transmission.

Aedes melanimon Dyar

A common species in areas where waterfowl habitat is flooded during late summer and early fall. This species is known to transmit viruses that cause encephalitis, in addition to being a major pest species.

Culex tarsalis Coquillett

The primary vector of western equine encephalomyelitis, St. Louis encephalitis and West Nile virus in California. This mosquito is associated with a wide range of habitats, from rain pools and floodwaters to permanent water sources.

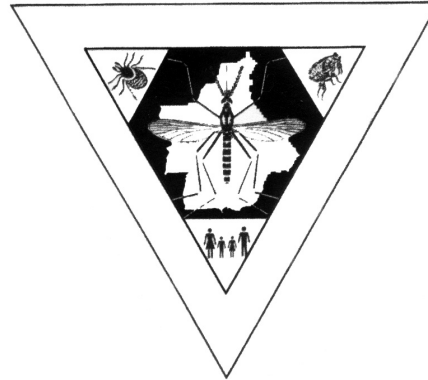
HOW CAN I GET MORE INFORMATION?

Mosquito and Vector Control
Association of California
660 J Street, Suite 480
Sacramento, CA 95814
(916) 440-0826
E-mail: mvcac@mvcac.org

California Department of Health Services
Vector-borne Disease Service
601 North 7th Street, MS 486
Sacramento, CA 94236
(916) 324-3738

Public information supplied by:

BUTTE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT



5117 Larkin Road
Oroville, California 95965-9250

From Chico/Paradise
Phone: 342-7350

From Biggs/Gridley/Oroville/Richvale
Phone: 533-6038

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5/08

Wetlands

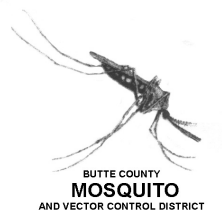
planning for mosquito control



Are you...

- ◆ Reconstructing or developing wetlands?
- ◆ Planning improved waterfowl habitat?
- ◆ Constructing a pond for fishing or bird watching?
- ◆ Converting fields from dry land agriculture to rice farming?
- ◆ Trying to control mosquitoes in an existing wetland?

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WHAT IS A WETLAND?

It may be a large permanent water body, a seasonally flooded marsh, a depression in the landscape or anything in-between. California leads the nation in the loss of original wetlands. Over 90% are gone, most drained for agriculture. Because wetlands provide important wildlife habitat and recreation, individuals, organizations and government agencies are all interested in reestablishing a variety of wetland types. Some wetlands are being developed to meet the dual goals of wastewater treatment and habitat restoration.

MOSQUITO ABATEMENT DISTRICTS AND YOUR WETLAND

People developing or restoring wetlands usually work with several regulatory agencies. However, one important area is often overlooked... mosquito control.

Why is up front consultation with mosquito control experts important?

1) Appropriate wetland design can make the area unsuitable for breeding mosquitoes, therefore reducing or eliminating the need for chemical or biological control.

2) The owners of wetland property can be charged for the costs of mosquito control.

Mosquito abatement districts are given broad authority for the control of disease vectors under the California Health and Safety Code (Div.3).

Mosquito abatement districts have both the

responsibility and legal authority to locate standing water and abate breeding sources of mosquitoes with appropriate physical, chemical or biological control measures. Personnel may enter private or public lands for inspection and treatment purposes.

HOW CAN YOU REDUCE MOSQUITO PROBLEMS IN YOUR WETLAND?

General wetland design criteria appropriate for all regions include:

- Size, slope and height recommendations for levees or banks.
- Water control, release and supply considerations and floodgate design.
- Vegetation management. Mosquito breeding is highest in shallow water and dense, emergent vegetation, typically marsh edges. Most wetlands can be designed and managed so that vegetated shallows are minimized and emergent vegetation only occurs in the deeper water. For large marshes, restrict emergent vegetation to less than half of the marsh area and confine it to islands surrounded by open waters. This allows wind and wave action to limit mosquito development, while providing more habitat for waterfowl and beneficial insects.

BEFORE YOU BEGIN CONSTRUCTION, HAVE YOU CONSIDERED ...

1) Will your wetland project be located near human development or activity, or domestic animals? Will it be within 15 miles of a community?

2) What are the primary and auxiliary objectives for your wetland?

3) Do you know what mosquito species and disease vectors are present in your region?

4) How will the wetland be filled? If artificially flooded, will leakage or seepage from water conveyance systems provide mosquito breeding sites? How quickly can the wetland be flooded? A fast flood minimizes mosquito production.

5) If your wetland is not permanent water, can the water level be controlled? Are the flooded cells small enough to be filled and thoroughly drained within 4 days?

6) Have you taken steps to minimize mosquito production through design and vegetation management for enhancement of natural mosquito predators?

7) Are there sensitive plant or animal species at your site that require specific design or management considerations that must be coordinated with mosquito control?

8) How will you maintain your wetland over time? Who will be responsible for maintenance? Is access adequate for motorized maintenance and mosquito control equipment?

9) If the wetland will hold wastewater that is high in nutrients (such as animal or municipal wastewater), has the greater potential for mosquito breeding been considered and addressed?

