

# Butte County Mosquito & Vector Control District

Since 1948

3<sup>rd</sup> Quarter, 2022

Newsletter

## MANAGER'S MESSAGE

I'm humbled, honored, and privileged to have a dedicated group of employees (29 total employees) who were willing to step up to work long hours, nights, holidays, and remain committed to protecting the public's health. Even with the COVID-19 pandemic continuing throughout this mosquito season, the District's staff and Board of Trustees continued to operate, conduct business, and responded to 1,834 service requests (9/28), West Nile virus, and a new invasive mosquito species. I am extremely grateful and appreciative for each and every one of my employees and the District's Board of Trustees. For all those that went above and beyond this season, I thank you.



Respectfully, Matthew C. Ball  
District Manager

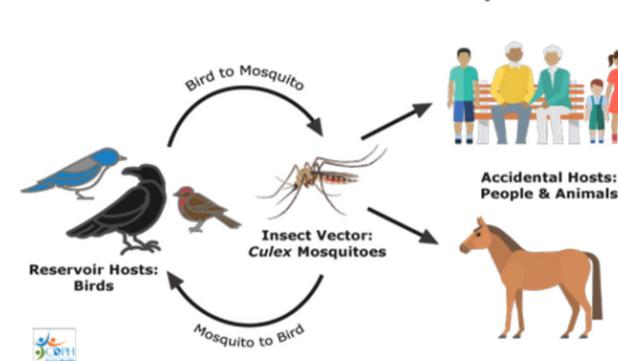
## 2022 WEST NILE VIRUS ACTIVITY

As of September 28<sup>th</sup>, 2022, 39 mosquito pools have tested positive for West Nile Virus within the District. 2 dead birds and 27 sentinel chickens have tested positive for WNV. There have been 3 human cases of WNV reported.

## AERIAL OPERATIONS

As of September 28<sup>th</sup>, 2022, Aerial Operations has treated 56,152 acres of Rice and 5,203 acres of wetlands. There have been 12 night ULV operations, treating 92,160 acres. A total of 153,515 acres have been treated by air.

West Nile Virus Transmission Cycle



	Humans	Horses	Dead Birds	Dead Squirrels	Mosquito Pools	Sentinel Chickens
2018	12	0	4	0	49	37
2019	5	0	1	0	45	34
2020	4	1	4	0	31	23
2021	12	0	2	0	80	26
2022	3	0	2	0	39	27

Aerial Operations AVERAGE	
Rice	56,152 Acres Treated
Wetlands	5,203 Acres Treated
ULV	12 Operations, 92,160 Acres Treated
<b>Total</b>	<b>153,515 Acres Treated</b>



Oroville, CA 95965  
5117 Larkin Road

Butte County Mosquito and Vector Control District

## MISSION STATEMENT

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

## CONTACT INFORMATION

Butte County Mosquito & Vector Control District

5117 Larkin Road, Oroville, CA. 95965

Phone: (530) 533-6038, (530) 342-7350

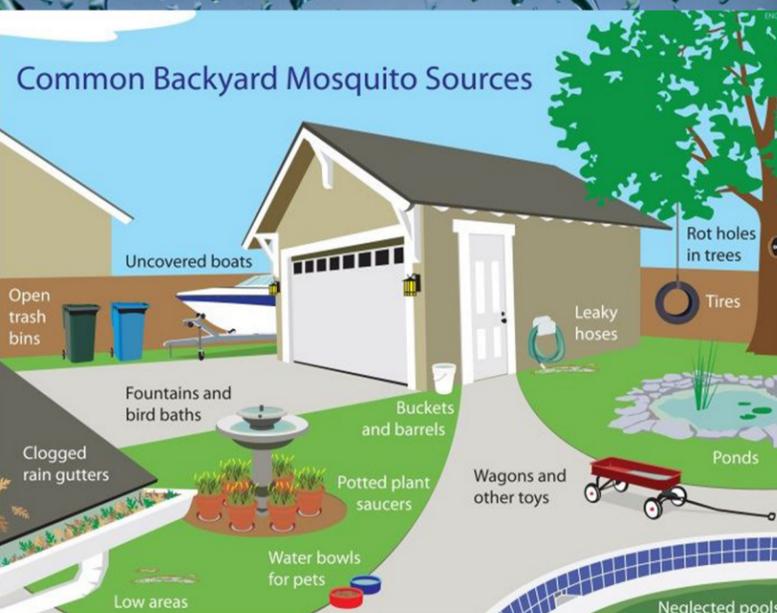
Fax: (530) 534-9916

Website: [www.BUTTEMOSQUITO.com](http://www.BUTTEMOSQUITO.com)

"FIGHT THE BITE!"

This institution is an equal opportunity provider and employer.

# DON'T FORGET TO DUMP AND DRAIN AFTER THE RAIN!



## AERIAL PROGRAM



Managed wetland surveillance is a vital component of the District's Integrated Vector Management (IVM) Program. There are over 50,000 acres of managed wetlands within the District's service area. These wetlands consist of state, federal, and private entities. With wetlands covering such a large portion of the District, utilizing aircraft is the most effective way to conduct surveillance on these wetlands. During mosquito season, when the managed wetlands commence flooding and/or irrigations, the District's Pilot will navigate a District aircraft over these wetlands and remotely take pictures with a GoPro camera to identify any "new" flood water. After the pictures have been uploaded, they are distributed to each Mosquito and Vector Control Specialist (MVCS).

The MVCS will then drive out to the field and "dip" the new source of water for the presence of mosquito larvae. Dipping consists of a 1-pint cup attached to a long handle. The MVCS gently dips this cup into the water, pulls it back out, and counts how many larvae are in the cup. The MVCS will do this dipping at several locations around the field. The MVCS will take the average number of larvae found and record it. If the number equals one or more larvae per dip, a map of the field is sent to the office using Mapvision, the new District software. Once Air Operations at the office receives the map, a determination of the product application rate is calculated based on the surveillance data gathered.

This is determined by how dense the vegetation in the field is, water depth and quality, larval dip counts, and by what larval instars are present. The Air Operations coordinator then forwards the map to the Pilot which contains a GIS-based map of the field polygon, the application rate, the field's GPS coordinates, and the amount of public health pesticide to load. Once the plane is loaded, the pilot flies to the field and makes the application. When the Pilot completes the application, the information is entered into the District's database for record keeping and reporting purposes.



If an operator finds 10 mosquito larvae per dip in a small 10-acre field, there are approximately 3.92 million mosquito larvae. With these numbers in mind, it quickly becomes apparent as to why the District must do aerial wetland surveillance and control.

## INVASIVE MOSQUITO REPORT

*Aedes aegypti*, commonly referred to as the Yellow Fever mosquito, has a worldwide distribution in tropic and subtropic areas. Now firmly established in Southern California, it has expanded its range northward. These mosquitoes are aggressive daytime biters that feed mostly during the day, indoors and outdoors. Eggs are laid over a period of several days, are resistant to drying out, and can survive for periods of six or more months. These mosquitoes remain alive through the winter in the egg stage and when the eggs are covered with water in warm weather, the larvae hatch. This mosquito has the ability to transmit Zika, dengue fever, chikungunya, yellow fever and other viruses. As of September 28<sup>th</sup> 2022, *Aedes aegypti* has been identified in Butte County 32 times at 10 sites, in areas of Oroville and Chico. It's important for residents to maintain or eliminate all types of standing water around their property to prevent the spread of *Aedes aegypti*.

