

Butte County Mosquito & Vector Control District

Since 1948

3rd Quarter, 2023

Newsletter

MANAGER'S MESSAGE

I'm humbled, honored, and privileged to have a dedicated group of employees (32 total employees) who were willing to step up to work long hours, nights, holidays, and remain committed to protecting the public's health. Throughout the 2023 season the District's staff and Board of Trustees operated and conducted business to respond to 2,266 service requests, West Nile virus detections, and *Aedes aegypti*, 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.



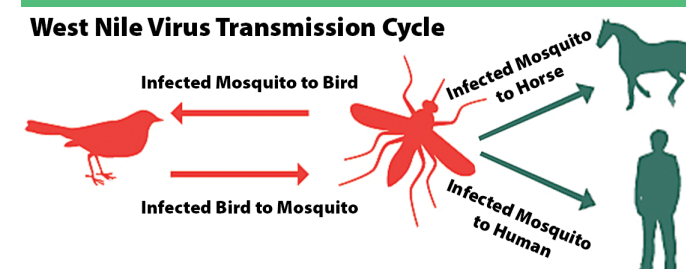
Respectfully, Matthew C. Ball
District Manager

WEST NILE VIRUS ACTIVITY

As of September 25th, 69 mosquito pools, 2 dead birds, 31 sentinel chickens and 1 horse have tested positive for WNV. There have been 18 human cases of WNV reported.

| Year | Human Cases | Horse Cases | Dead Birds | Deceased Squirrels | Mosquito Pools | Sentinel Chickens |
|------|-------------|-------------|------------|--------------------|----------------|-------------------|
| 2023 | 18 | 1 | 2 | 0 | 69 | 31 |
| 2022 | 3 | 0 | 2 | 0 | 39 | 27 |
| 2021 | 12 | 0 | 2 | 0 | 80 | 26 |
| 2020 | 4 | 1 | 4 | 0 | 31 | 23 |

West Nile Virus Transmission Cycle



AERIAL OPERATIONS

As of September 25th, Aerial Operations has treated 56,935 acres of Rice and 10,395 acres of wetlands. There have been 17 night ULV operations, treating 130,560 acres. A total of 197,890 acres have been treated by air.

| March-September | Rice | Wetlands | ULV Adulticide | Totals |
|-------------------------|--------|----------|----------------|---------|
| Acres Treated | 56,935 | 10,395 | 130,560 | 197,890 |
| Average Treated per Day | 272 | 50 | 625 | 947 |

Tank Trucks



Oroville, CA. 95965
5117 Larkin Road

Butte County Mosquito and Vector Control District

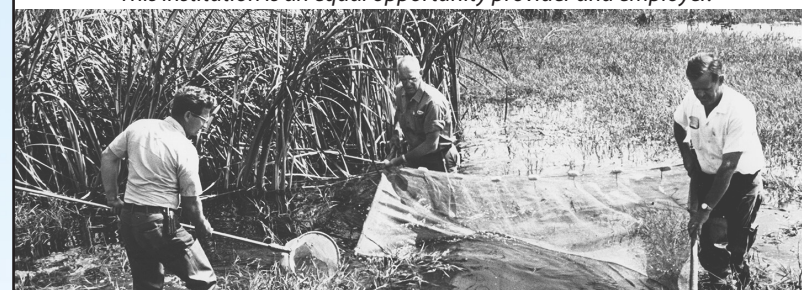
MISSION STATEMENT

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

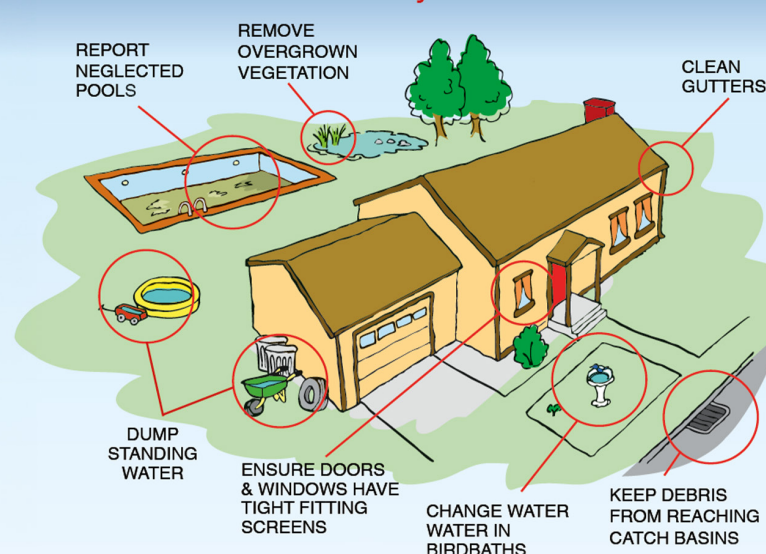
Butte County Mosquito & Vector Control District
5117 Larkin Road, Oroville, CA. 95965
Phone: (530) 533-6038, (530) 342-7350
Fax: (530) 534-9916
Website: www.BUTTEMOSQUITO.com
"FIGHT THE BITE!"

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

Common Backyard Sources



AERIAL PROGRAM



Managed wetland surveillance is a vital component of the District's integrated vector management program. There are over 50,000 acres of managed wetlands within our service area. These wetlands consist of state, federal, and private entities. With wetlands covering such a large portion of the service area, utilizing aircraft is the most effective way to conduct surveillance on these wetlands. During mosquito season, when the managed wetlands commence flooding irrigations, the District's pilot will navigate aircraft over these wetlands and remotely take pictures with a 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 uses a 1-pint cup attached to a long handle which is gently dipped into the water, pulled back out, and larvae are counted in the cup. The MVCS will do this dipping at several locations around the field and will record the average number of larvae found. If the number equals one or more larvae per dip, a map of the field is sent to the office using Mapvision®, the District's map and GIS software. Once air operations staff receives the map, a determination of the product application rate is calculated based on the surveillance data gathered. This is determined by vegetation density, water depth, water quality, larval dip counts, and larval instars present. The air operations coordinator then forwards the information to the pilot which contains a GIS-based field polygon map, the application rate, the 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 Mapvision® for record keeping and reporting purposes.



Horse



Jaws



Bat

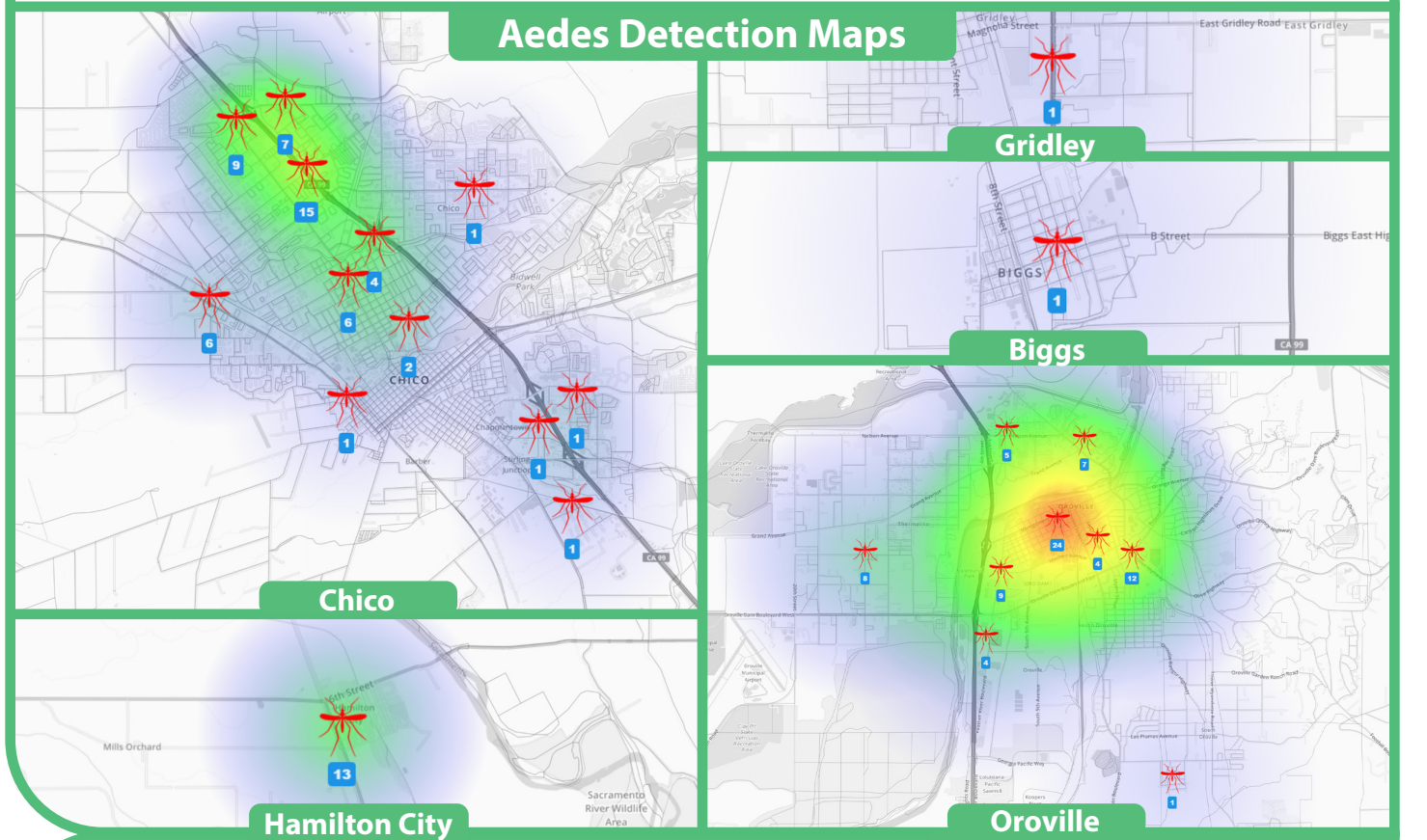
FYI If an MVCS finds 10 mosquito larvae per dip in a small 10-acre field, there are approximately 3.92 million mosquito larvae. With these numbers in mind, it quickly becomes apparent as to why the District must do aerial wetland surveillance and control.

INVASIVE MOSQUITO REPORT

Aedes aegypti, commonly referred to as the Yellow Fever mosquito, ranges globally 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 on dry surfaces near water and are resistant to drying out. Eggs can remain dry for 8 months. These mosquitoes survive the winter in the egg stage and hatch when covered with water in warm weather. This mosquito has the ability to transmit Zika, dengue fever, chikungunya, yellow fever and other viruses.

As of September 25th 2023, *Aedes aegypti* has been identified in Butte County 143 times at 24 sites, in areas of Oroville, Chico, Gridley, Biggs and Hamilton City. The detections in Hamilton City and Biggs are the first detections the District have had in those towns. It's important for residents to eliminate all types of standing water around their property to prevent the spread of *Aedes aegypti*. Detection maps available at ButteMosquito.com

Aedes Detection Maps



Aedes aegypti



Plant Saucers Rain Barrels

Tires Buckets