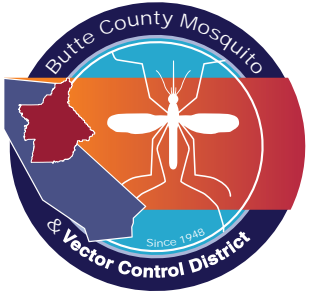


BUTTE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT



3rd Quarter, 2020

Newsletter

2020 WEST NILE VIRUS ACTIVITY

West Nile virus (WNV) again proved to be very active in Butte County. As of October 2, 2020, the District saw the number of human WNV cases stay the same as last year this time, a total of 4 cases, though more human cases could still be reported this year. There were no WNV caused deaths in the District in 2020. This year's mosquito pool numbers (28) were down from last year's numbers (45) and the sentinel chicken numbers were also down from last year's number with 23 chickens testing positive in 2020, compared to 34 in 2019. Dead bird numbers were slightly up in 2020 with 3, compare to 1 in 2019. Because of the human, trap, and chicken WNV numbers, the District once again ramped up its surveillance and control operations. As of September 30, 2020, the District's air operations treated 42,425 agriculture acres along with 7,587 wetland/duck club acres. The District has also aerielly treated 61,455 acres using ultra-low volume, wide area spray. The District also completed 130 ultra-low volume, wide area ground fogging missions. The lab trapped a high number of *Culex tarsalis* mosquitoes, which are a major vector of WNV. Since its arrival in Butte County in 2004, 248 residents have been confirmed with the virus, 9 of which lost their lives to the potentially deadly disease. WNV has been active each year in Butte County since its 2004 arrival.

INVASIVE AEDES DETECTED IN THE DISTRICT

The Butte County Mosquito and Vector Control District (District) detected an invasive (non-native) species of mosquito on Thursday, September 17th, 2020. The *Aedes aegypti*, commonly known as the yellow fever mosquito, was found in northeast Chico, in the area of East Avenue and Mariposa Avenue. The California Department of Public Health confirmed the invasive species detection. Since the first detection, the District has now detected *Aedes aegypti* in four other locations near the original site. The District has one additional detection site pending. "The District is working to evaluate the extent of the infestation and we plan to do everything we can to eradicate this mosquito and to protect our residents from the potential disease risk of these invasive mosquitoes," said Matt Ball, District Manager. "Our goal is to control and eliminate this species of mosquito so that it does not become established in our community." The District has sent an informative invasive Aedes mailer to each household and business within a greater than 2 square mile radius. Over 5400 houses/businesses received the mailer. The District's lab staff have added many surveillance traps within the one square mile radius. A door to door inspection campaign has been completed within the one mile square radius. An invasive Aedes door hanger was left wherever the employee was not able to access the yard. The District continues to find and treat possible larval sources and fogged the detection area. The *Aedes aegypti* mosquito has been detected previously in other areas of California, but never in Butte County. *Aedes aegypti* have the potential to transmit viruses such as chikungunya, dengue, yellow fever, and Zika.



Butte County Mosquito and Vector Control District
5117 Larkin Road
Oroville, CA. 95965

MANAGER'S MESSAGE

I want to thank an extremely dedicated group of employees (30 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, the District's staff and Board of Trustees continued to operate, conduct business, and responded to 1547 service requests (to date), 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! It is only because of you that the District is able to provide a level of service that has come to be expected by the residents within our service area and to suppress WNV from being more prevalent than it was! Outstanding JOB!

Respectfully,
Matthew C. Ball
District Manager

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 and 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!"

This institution is an equal opportunity provider and employer.

MANAGED WETLAND SURVEILLANCE

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 Cessna aircraft over these wetlands so that Mosquito and Vector Control Specialist's (MVCS) can identify any "new" flood water. After the MVCS have taken notes, pictures, and have recorded GPS coordinates of where the "new" water is, the MVCS then will 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 a number of locations around the field. Once a MVCS has completed dipping 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. The map contains a GIS based satellite map of the polygon that needs to be flown, the application rate, the fields GPS coordinates, and how many pounds 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 and returns from the flight, the application information is entered into the District's database for record keeping and reporting purposes. For the reader's information, if an operator finds 10 mosquito larvae per dip, and a square foot contains 9 four inch dippers, then in a 10 acre field (a 10 acre wetland field is considered small) there are approximately 3.92 million mosquito larvae (approximately 50% of these mosquito larvae will be female). With these numbers in mind, it quickly becomes apparent as to why the District must do aerial wetland surveillance and control.



Aerial Treatment of a Wetland.

2020 PUBLIC EDUCATION CAMPAIGN

Currently, because of COVID-19, all fairs and indoor/outdoor events have been postponed or cancelled.

The District has again partnered with Stott Advertising on a billboard campaign. This year's slogan is "Fight the Bite!" The six billboards rotated throughout the county from May through September. The new billboard uses the District's new website address "www.ButteMosquito.com".

The District has also contracted with Action News Now, for a 30 second mosquito awareness animated commercial. The District is continuing its radio advertising campaign as well as its newsprint campaign.

Since the detection of *Aedes aegypti* in the District, a new mailer and door hanger were created. The mailers were sent to every business and resident within an approximate 2 mile radius of the original detection site, near East Avenue and Mariposa Avenue. The door hangers were left at every residence that was inspected or attempted inspection. See below for examples of both of these;

5117 Larkin Road
Oroville, CA 95965
(530) 533-6038
Monday-Thursday
6:00am to 4:30pm

PUBLIC HEALTH WARNING
REPORT DAY-BITING MOSQUITOES!
Please call the District at (530) 533-6038
AEDES AEGYPTI (Yellow Fever mosquito)

Actual Size: About 1/4 inch long

WHY THE CONCERN?
Aedes aegypti is an invasive mosquito in California. It can be a major annoyance and a public health threat, potentially capable of transmitting several diseases including Zika, dengue, and chikungunya.

FACTS: Invasive Aedes Mosquitoes

- Small dark mosquito that bites during the day.
- Prefers to dwell in urban areas indoors and outdoors.
- They especially like to bite ankles, wrists and elbows.
- They lay eggs in small sources of water around homes.
- They are very difficult to control.
- They complete their life cycle in 7-10 days. The adults live for about 3 weeks.
- Invasive *Aedes* are "container breeders". Individual eggs are glued to the sides of containers. The eggs are resistant to drying out and can survive for many months until water covers them.

REPORT DAY-BITING MOSQUITOES
call the District at (530) 533-6038
There is no charge for District services.

PUBLIC HEALTH WARNING: REPORT DAY-BITING MOSQUITOES
Please call the BUTTE COUNTY MOSQUITO & VECTOR CONTROL DISTRICT to schedule an inspection at (530) 533-6038

INVASIVE MOSQUITOES FOUND IN YOUR AREA

Aedes aegypti
Yellow Fever mosquito

Actual Size: About 1/4 inch long

WHY THE CONCERN?
Aedes aegypti is an invasive mosquito in California that is capable of transmitting several diseases including Zika, dengue, and chikungunya. While there have been no local transmissions detected to date, the identification and control of this invasive mosquito is important to protect public health.

About *Aedes aegypti* mosquitoes

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- Prefers to dwell in urban areas indoors and outdoors.
- They especially like to bite ankles, wrists and elbows.
- They lay eggs in small sources of water around homes.
- They are very difficult to control.
- They complete their life cycle in 7-10 days. The adults live for about 3 weeks.
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www.buttemosquito.com

PREVENT AEDES AEGYPTI DEVELOPMENT IN YOUR YARD:

1. Inspect your yard for standing water sources and drain water that may have collected under potted plants, in bird baths, discarded tires, and any other items that could collect water;
2. Check your rain gutters and lawn drains to make sure they aren't holding water and debris;
3. Check and clean any new containers that you bring home that may have contained water. *Aedes aegypti* eggs can remain viable under dry conditions for months.