

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

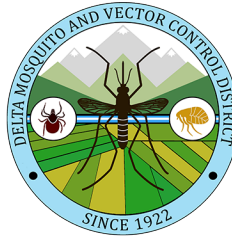
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REPORT OF THE MANAGER DECEMBER 2023

I. Water and Weather

The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 63.4°F with an average low of 42.0°F and 1.47 inches of rainfall as of December 31, 2023. The National Oceanic and Atmospheric Administration 1991-2020 seasonal averages for high and low temperatures in December were 55.4°F and 37.9°F respectively, with average rainfall of 1.83 inches.

Water storage at Pine Flat Reservoir increased to 616,880 acres-feet as of December 30, 2024. Pine Flat Reservoir's water inflow rate is 830 cubic feet per second (CFS) while its release decreased to 274 CFS. The Lake Kaweah Reservoir storage increased to 26,567 acres-feet. Lake Kaweah's inflow also decreased to 33 CFS and its release decreased to 34 CFS as of December 31, 2023.

II. Narrative

Field operations received two mosquito service requests on December 15, 2023. The service request inspection consisted of a Vector Control Technician inspecting the reported property for any standing water that mosquito larvae could breed in. During this time, the technician used an integrated vector management strategy to reduce any mosquito-breeding found. In addition, technicians used this opportunity to educate residents on mosquito-breeding prevention and how to protect themselves from mosquito bites and mosquito-borne diseases.

Operations

The carpet and laminate flooring projects were completed on December 15, 2023. We also replaced the hot water heater in the front office with a new tankless one as the old one was leaking. We relocated Erick Arriaga, Community Education & Outreach Coordinator into another office. We replaced some of the old incandescent lights with newer LED lights which will save money in the long run.

The EMD staff completed the project of network cable upgrade to the new system. Dennis Candito and Larry Heller from the company Azelis visited the Delta MVCD and were able to repair the Guardian 190 G4 ULV fogger. They found that the pump casing was loose and that it was causing a short that made the pump stop working randomly. We met with Dana Camille from Enterprise Fleet Management and discussed the future of our vehicle fleet and the possibility of purchasing two to three new trucks. Since some of the trucks are no longer available to order for next year, we are looking into other options.

We celebrated our Christmas luncheon potluck on December 15 with the Delta MVCD staff, their families, and a few members of the Board of Trustees.

The Auto and Equipment Shop staff continued the winter maintenance on the vehicles and pesticide equipment along with District repairs to the buildings and grounds.

We coordinated with Giotto's Alarm to install a wire beam across the front of the District and a security device to monitor the front office so we can see who is coming in and out of the front gate. We coordinated with the solar company and the California Clean Air Board to get additional information on the backup generator.

In December, the DMVCD sent supporting resources to Visalia Unified School District for the future elementary school Science, Technology, Engineering, and Math (STEM) events. Due to the installation of a new carpet and the relocation of the community outreach coordinator's office, most of the time was devoted to organizing education and outreach materials, cleaning up folders/paperwork, and setting up the new office. While organizing, inventory was made of all outreach materials and found which material will be redesigned when reprinting becomes necessary. The General Manager's position was posted to the District website. All the vehicle fleet had their decals updated to reflect the new website change from .org to .gov.

Although routine mosquito surveillance stopped for November, it resumed on December 1, 2023, due to the lack of freezing weather, and laboratory staff finding larvae at the Rock Plant in Woodlake. Mosquito traps were set pre-treatment and will be set once a week after treatment to check abundance. Traps were also set throughout the District once a week in Goshen, Traver, Delft Colony, Dinuba, Orosi, Seville, Woodlake, Ivanhoe, Exeter, Farmersville, and Visalia. Trapping was halted the last week of December and the beginning of January 2024 due to rain and freezing temperatures overnight. As the weather improves, trapping will resume.

Mosquito abundance for 2023 was 313,502 mosquitoes collected across 9,330 trap nights for an average of 33.6 mosquitoes per trap night for the mosquito season. The top three mosquito species caught in 2023 were *Culex quinquefasciatus* at 61.8% of total abundance, *Cx. tarsalis* at 19.3% and *Aedes aegypti* at 15.6%. In 2022, 232,127 mosquitoes were caught over 9,293 trap nights for an average of 25.0 mosquitoes per trap night. The top three mosquito species caught in 2022 were *Cx. quinquefasciatus* at 77.8% of total abundance, *Ae. aegypti* at 16.3%, and *Cx. tarsalis* at 3.6%.

For 2023, a total of 473 mosquito samples tested positive for West Nile virus (WNV), 172 for St. Louis encephalitis virus (SLEV), and 47 for both WNV and SLEV out of 7,028 mosquito samples tested. For 2022, 977 mosquito samples tested positive for WNV, 6 for SLEV, and 3 for both WNV and SLEV out of 4,753 tested.

There were 0 technician requests for mosquitofish in December 2023 and 0 homeowner requests. In December 2022, there were 0 homeowner mosquitofish requests. Approximately 2,978 mosquitofish fry were produced in December 2023, while in December of last year, approximately 4,225 mosquitofish fry were produced.

No mosquito larvae samples were brought to the laboratory for species identification in December 2023. Similarly, no larval samples were collected in December 2022.

There was no arbovirus testing for WNV, SLEV, and Western equine encephalitis virus (WEEV) in December. In January 2024, the mosquitoes trapped in December will be tested for all three viruses.

In November and December, laboratory staff went tick flagging at the rock plant, Kaweah Oaks Nature Preserve, Dry Creek Preserve, and St. John's Trail. Ticks were found at the rock plant, which is private land. These ticks will be sent to the California Department of Public Health for rickettsial testing in January 2024.

Routine laboratory maintenance continued during December. Monthly safety checks for fire extinguishers and emergency lights were performed as well as weekly safety showers and eyewash inspections.

The laboratory staff tested zero mosquito samples from Tulare Mosquito Abatement District (MAD) and zero samples collected from Tulare by Vector Disease Control International (VDCI) in November. The laboratory Scientific Program Manager will contact Tulare MAD and Kings MAD to find out if they will be interested in continuing testing their samples at our laboratory during the 2024 mosquito season.

There were 2 service requests in December.

2023 Service Request Summary

2023	Mosquitofish	Inspection	Mosquito	Source	Other	Total
January	0	0	5	0	0	5
February	1	0	4	0	0	5
March	3	0	7	0	1	11
April	12	0	83	0	0	95
May	25	0	122	0	0	147
June	9	0	147	0	0	156
July	10	0	130	0	0	140
August	8	0	134	0	0	142
September	8	0	205	0	0	208
October	3	0	91	0	0	94
November	0	0	9	0	0	9
December	0	0	2	0	0	2
Total	79	0	948	0	1	1,014

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: No new human cases reported to DMVCD in December 2023. So far this year, there have been three confirmed human cases of WNV and SLEV co-infection, 1 probable WNV and SLEV co-infection, 1 confirmed WNV case, and 6 probable WNV cases.

Birds: No dead birds were tested in December; however, we did receive a dead bird from a resident which will be tested in January 2024. So far this season, 12 dead birds have been tested with 5 positives for WNV in 2023.

Mosquitoes: No samples were tested in December. There are some mosquito pools waiting to be tested in January 2024. So far this year, 7,028 mosquito samples have been tested with 473 samples positive for WNV, 172 positives for SLEV, and 47 positives for both WNV and SLEV.

State Surveillance:

Humans: As of December 31, 2023, 397 human cases of WNV from 34 counties and 18 cases of SLEV from 6 counties have been reported so far in 2023.

Birds: On December 31, 2023, 855 dead birds from 31 counties tested positive. In 2023, 2,046 dead birds have been tested in 2023.

Mosquitoes: As of December 31, 2023, 4,512 mosquito samples from 31 counties tested positive for WNV. Also, 728 samples from 15 counties tested positive for SLEV.

V1. Expenditures & Revenues – 2023/24

Total Budget \$5,068,115.26.

EXPENDITURES – July 1, 2023, to December 31, 2023

Salaries	\$1,577,213.77
Services & Supplies	\$920,554.78
Tax Admin Fee	\$0.00
Capital	\$51,950.15
Long-Term Debt	\$58,914.03
TOTAL EXPENDITURES	\$2,608,632.73

REVENUE RECEIVED - July 1, 2023– December 31, 2023

July	\$75.00
August	\$39,702.16
September	\$31,916.62
October	\$7,591.00
November	\$523.77
December	\$2,635,329.40
TOTAL REVENUE TO DATE	\$2,715,137.95

IV. Timesheet Summary

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Avail. for work	Pct. Of Hrs Avail for work
July	6,048	129	5,919	97.86
August	6,440	320.40	6,119.60	95.02
September	5,376	150.50	5,225.50	97.20
October	4,400	265.75	4,134.25	93.90
November	2,992	178	2,814	94.00
December	2,688	104	2,584	96.13

The District has a vacation policy that requires 24-hour notice to ensure the operational integrity of the workforce. Sick leave for doctor, dentist and/ or family medical necessity also requires advance notice-in so much as it is possible. Illness is unplanned and therefore unscheduled. Attendance records for the current year are shown in the table.