

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

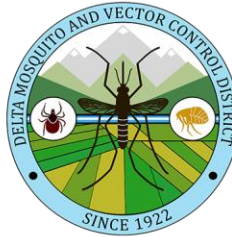
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REPORT OF THE MANAGER

September 2023

I. Water and Weather

The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 88.8°F with an average low of 62.5°F and 0.02 inches of rainfall as of September 28, 2023. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in September were 87.7°F and 60.3°F respectively, with average rainfall of 0.15 inches.

Water storage at Pine Flat Reservoir decreased to 677,440 acre-feet as of 9/29/2023. Pine Flat Reservoir's water inflow rate is 1,062 cubic feet per second (CFS) while its release increased to 3,917 CFS. The Lake Kaweah Reservoir storage decreased to 31,357 acre-feet. Lake Kaweah's inflow also increased to 1135 CFS and its release decreased to 1,152 CFS as of September 29, 2023.

II. Narrative

Field operations received 208 service requests in September which 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 use this opportunity to educate residents on mosquito-breeding prevention and how to protect themselves from mosquito bites.

We conducted Ultra Low Volume (ULV) fogging in the high trap and West Nile virus (WNV) positive areas along with the Wide Area Larvicide System (WALS) treatments early in the morning of 6, 7, 12, 20, 21, and 28 of October from 2:00 AM to 5:30 AM. We will continue treating throughout the District as needed.

We fitted all full-time and seasonal employees for the new uniforms for transitioning over to the new ones from UniFirst Uniform Services on November 1, 2023.

Dr. Debboun and Paul Harlien, our Operations Program Manager attended a Zoom meeting with Verkada Security on September 11, 2023, where we discussed and viewed some of their new updated security Camera systems. Verkada is a large Security company with a wide range of advanced security systems and innovative technology. The Senior Account Executive from Verkada visited the District and gave the DMVCD Supervisors an in-person demonstration of Verkada Security systems capabilities

Paul Harlien and Bryan Ferguson, our Foreman met with Dana A. Camilla from Enterprise Fleet Management and discussed the District's fleet and the future of electric vehicles (EV) which will be mandatory in California starting in 2024 and be fully compliant by 2030. Thus, we are preparing a proactive plan to have in place and be ahead of the rush for the EV mandate. Currently, only Ford is the only choice out there in the fleet truck market but soon General Motors and Toyota will be releasing their EVs to the market as well.

We continued to update and organize the District campus by cleaning up old and outdated oil recovery barrels, scrap metal, and old wooden pallets. We also assessed some of the old equipment and other items that will be set aside to be auctioned in November 2023.

A BVA-2 oil tanker is transported and, on its way, to refill our oil tank, estimated at between 6,000 and 6,100 gallons (about the volume of a large U-Haul truck). We are also replacing the old measuring meshing stick with a new modern measuring meshing system to measure the exact amount of oil in the tank.

We continued checking the In2Care Mosquito Traps to augment controlling the invasive Yellow Fever mosquito, *Aedes aegypti*. The traps were checked and serviced every two weeks. We saw over 90% of traps with all stages of mosquito larvae in them with plenty of dead larvae in the In2Care Mosquito Traps. We will continue to evaluate all 100 traps that have been set out throughout the District until the end of October 2023.

We set an October three-phase stage timeline for the seasonal employees to depart their seasonal mosquito work. The first group will be leaving on October 6, the second on October 13, and the third departing on October 27.

In September, the DMVCD participated and attended 6 outreach events: two Visalia Farmers Markets, a presentation and a tour for Sequoia High School. Dr. Debboun spoke to the Health Science Academy students at Mt Whitney High school in Visalia. We also attended the Dinuba Raisin Day Festival in Dinuba, and attended the Cutler and Dinuba senior centers where we supplied information and answered their questions or concerns. Signs have been installed in the District to help the public and visitors show clearly the Front Office and Fish Hatchery in the District. Two short videos were created to display how the ultra-low volume (ULV) Adulticide, and wide area larvicide system (WALS) treatments during early scheduled applications from 2:00 am to 5:30 am. The District website has been transferred over to DeltaMVCD.gov.

Routine mosquito surveillance continued through September. 51,604 mosquitoes were collected across 1,353 trap nights as of September 28, 2023. The District-wide average of 38.1 mosquitoes per trap night in September is 26.8% higher than the previous 5-year average of 30.1 and 21.1% higher than the September 2022 average of 31.5 mosquitoes per trap night. The top 3 mosquito species caught in August were *Culex quinquefasciatus* at 62.3%, followed by *Aedes aegypti* at 30.2% and *Cx. stigmatosoma* at 3.6%. Compared to September of 2022, the top 3 mosquito species caught were *Cx. quinquefasciatus* at 76.8%, followed by *Ae. aegypti* at 19.2% and *Cx. tarsalis* at 2.6%.

Arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) continued in September. Laboratory staff tested 872 mosquito samples collected by September 27, 2023. 54 mosquito samples collected in September have tested positive for WNV, 83 for SLEV, and 16 for SLEV/WNV. Positive mosquito samples were collected from Calgro, Cutler, Delft Colony, Dinuba, Exeter, Farmersville, Goshen, Ivanhoe, Orosi, Peral, Seville, South Kings River region, Traver, Visalia, and Woodlake. Additionally, the Tulare County Public Health Department reported 1 confirmed human case of WNV, 3 confirmed human cases of WNV and SLEV co-infection, and 5 probable WNV cases from Visalia, Cutler, and Dinuba. In September 2022, there were 183 WNV positive mosquito samples out of 818 tested.

There were 19 technician and homeowner mosquitofish requests in September and 890 fish were distributed as of September 29, 2023. In September of 2022, there were 7 technician and homeowner mosquitofish requests, and 212 mosquitofish were distributed. A total of 15,557 mosquitofish fry were produced in September 2023. In September of 2022, 1,305 mosquitofish fry were produced.

116 mosquito larvae samples were brought to the laboratory for processing in September. In September of 2022, 91 larvae samples were collected and processed.

Routine maintenance continued during September. Air filters were replaced on the BSL-2/3 HVAC system of the laboratory and the actuator end switch was replaced. Monthly safety checks for fire extinguishers and emergency lights were performed as well as weekly safety showers and eyewash inspections.

The laboratory tested 15 mosquito samples from Tulare Mosquito Abatement District (MAD) and 43 samples collected from Tulare by Vector Disease Control International. Kings MAD has stopped testing with the District for the year.

There were 208 service requests in September.

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
Total	76	0	837	0	1	914

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: 1 confirmed human case of WNV, 3 confirmed human cases of WNV and SLEV co-infection, and 5 probable WNV cases.

Birds: No dead birds tested positive in September. So far, 12 dead birds have been tested with 5 positives for WNV in 2023.

Mosquitoes: 872 mosquito samples were tested in September, of which 54 were positive for WNV, 83 positives for SLEV, and 16 positives for WNV and SLEV. So far this year, 6,629 mosquito samples have been tested with 459 samples positive for WNV, 134 positives for SLEV, and 45 positives for both WNV and SLEV.

State Surveillance:

Humans: As of September 22, 2023, 153 human cases of WNV from 25 counties and 2 cases of SLEV from 2 counties have been reported so far in 2023. Additionally, there have been 16 asymptomatic WNV blood donors.

Birds: As of September 22, 2023, 654 dead birds from 29 counties have tested positive for WNV in September. So far, 1,641 dead birds have been tested in 2023.

Mosquitoes: As of September 22, 2023, 3,983 mosquito samples from 30 counties have tested positive for WNV. Also, 552 samples from 15 counties have tested positive for

SLEV. So far, 43,322 mosquito samples have been tested for WNV and 39,098 samples for SLEV in 2023.

V1. Expenditures & Revenues – 2023/24

Total Budget \$5,068,115,26

EXPENDITURES – July 1, 2023, to September 30, 2023

Salaries	\$938,264.58
Services & Supplies	\$629,009.05
Tax Admin Fee	\$0.00
Capital	\$18,098.88
Long-Term Debt	\$0.00
TOTAL EXPENDITURES	\$1,585,372.51

REVENUE RECEIVED - July 1, 2023– September 30, 2023

July	\$0.00
August	\$39,702.16
September	Unavailable
TOTAL REVENUE TO DATE	\$39,702.16

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	320.4	6,119.60	95.02
September	5,376	150.5	5,225.50	97.2

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.

*** September expenditures and revenue are not available as of 10/6/2023**