

# Delta Mosquito & Vector Control District

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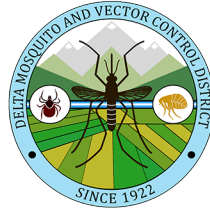
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[www.DeltaMVCD.org](http://www.DeltaMVCD.org)

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## REPORT OF THE MANAGER June 2023

### I. Water and Weather

The weather was mild throughout most of June. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 86.9°F with an average low of 60.9°F and 0 inches of rainfall as of June 28, 2023. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in June were 88.8°F and 61.5°F respectively, with average rainfall of 0.13 inches.

Water storage at Pine Flat Reservoir increased to 788,591 acre-feet as of June 28, 2023. Pine Flat Reservoir's water inflow decreased to 14,919 cubic feet per second (CFS) while its release decreased to 9,702 CFS. The Lake Kaweah Reservoir storage increased to 164,949 acre-feet. Lake Kaweah's inflow also decreased to 3,057 CFS and its release decreased to 2,606 CFS as of June 28, 2023.

### II. Narrative

Field operations received 147 service requests in June 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 uses an integrated vector management (IVM) strategy to reduce any mosquito-breeding found. In addition, a technician uses this opportunity to educate residents on mosquito-breeding prevention and how to protect themselves from mosquito bites and mosquito-borne diseases.

Operations is still working with the Federal Emergency Management Agency (FEMA) to get all the mosquito data and documentation they need. We have been doing ULV treatments throughout June in Visalia and outlying towns as we diagnose positive mosquito samples with West Nile virus (WNV).

We conducted an aerial treatment in Woodlake at the old rock plant owned by Tulare Irrigation District.

Bryan Ferguson and Paul Harlien inspected the Kings River to identify the flooded areas along the river as seen in Figure 1.



Figure 1. Kings River Lindy's flooded landing campsites.

The fluctuation of the water in Kings River flow has caused more of the subbed-up areas to produce more mosquitoes. This means less time for the Technicians to be out treating with a three-day time window to catch mosquitoes in their immature stages along with the added heat and increase in temperature that speed up their growth.

We have updated the National Pollutant Discharge Elimination System (NPDES) report and have submitted it to Waters of the United States and posted it on the Delta Mosquito and Vector Control District website and waiting for its approval by California Water Board.

Bryan Ferguson has been keeping up with all the vehicle repairs such as inoperative GPS, oil changes, battery problems, pump replacements, and tires repairs.

Bryan has also trained other Vector Control Technicians and prepared them to take their Unmanned Aircraft Systems (UAS) 107 pilots' license.

Routine mosquito surveillance continued through June. A total of 90,490 mosquitoes were collected across 1,234 trap nights as of June 23, 2023. The District-wide average of 73.3 mosquitoes per trap night for June was 219.5% higher than the previous 5-year average of 22.9 and 311.8% higher than the 2022 average of 17.8 mosquitoes per trap night. The top three mosquito species caught in June were *Culex quinquefasciatus* at 57.0%, followed by *Cx. tarsalis* at 37.9% and *Aedes aegypti* at 2.6%. Compared to June of 2022, the top three mosquito species caught

were *Cx. quinquefasciatus* at 76.0%, followed by *Ae. aegypti* at 13.4% and *Cx. tarsalis* at 6.6%.

Arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) continued in June. Laboratory staff tested 1,786 of the 2,196 mosquito samples collected in June. So far, a total of 29 mosquito samples collected in June have tested positive for WNV. Positive mosquito samples were collected from Visalia, Ivanhoe, and Peral. Test results are pending for the remaining samples. One potential kissing bug was reported from a Three Rivers resident in June.

There were 40 technician and homeowner mosquitofish requests in June to distribute a total of 1,712 fish as of June 29, 2023. In June 2022, there were 15 technician and homeowner mosquitofish requests and a total of 419 mosquitofish were distributed. A total of 10,203 mosquitofish fry were produced in June 2023, while 841 mosquitofish fry were produced in 2022.

A total of 42 mosquito larvae samples were brought to the laboratory for processing as of June 29, 2023. In June of 2022, 15 larvae samples were collected. Laboratory staff trained a staff member from Anton Cornel's laboratory on mosquito colony blood-feeding using a Hemotek feeder. The laboratory staff also provided Kern MVCD with susceptible Rockefeller *Ae. aegypti* eggs for insecticide resistance studies.

Routine maintenance continued during the month of June. Air filters were replaced on the BSL-2/3 HVAC systems and fish hatchery dehumidifiers. The laboratory solar panels were cleaned. Monthly safety checks for fire extinguishers and emergency lights were performed as well as weekly safety showers and eyewash inspections.

Laboratory staff also attended the virtual Mosquito and Vector Control Association of California (MVCAC) Integrated Vector Management Committee meeting, and assisted in a tour for staff from the Tulare County Public Health Department.

On June 2023, DMVCD outreach attended eight total events, two Farmers Markets in Visalia, two Rawhide baseball games in Visalia, four Senior Center presentations in Woodlake, Farmersville, Cutler/Orosi, and Dinuba.

We continued documenting the flooded areas and their mosquito-breeding risk within the District. One additional Board of Trustees member had her portrait taken, with only one Board member remaining to be photographed. Treatment maps and notifications were sent out to the public and city officials when scheduled. The general Delta MVCD outreach presentation has been translated into Spanish for use during Spanish-speaking audiences.

There were 147 service requests.

### 2023 Service Request Summary

2023	Mosquito -Fish	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	15	0	147	0	0	156
Total	56	0	368	0	1	425

### III. Vector and Disease Surveillance

#### Delta MVCD Summaries

Humans: No human cases of a mosquito-borne disease have been reported so far in 2023.

Birds: Two dead birds collected from Visalia tested positive for West Nile virus. So far, four dead birds have been tested with two testing positive for WNV in 2023.

Mosquitoes: A total of 1,786 mosquito samples were tested of which 29 samples were positive for WNV. So far, 3,169 mosquito samples have been tested with 30 samples positive for WNV in 2023.

#### State Surveillance:

Humans: No human cases have been detected so far in 2023.

Birds: As of June 23, 2023, 41 dead birds from nine counties have tested positive for WNV. So far, 459 dead birds have been tested in 2023.

Mosquitoes: As of June 23, 2023, 84 mosquito samples from nine counties have tested positive for WNV. Also, five samples from eight samples from four counties have tested positive for SLEV. So far, 14,269 mosquito samples have been tested for WNV and 14,233 for SLEV in 2023.

**IV. Expenditures & Revenues – 2022/23**

TOTAL BUDGET \$4,958,310.00

EXPENDITURES – July 1, 2022 – June 30, 2023

Salaries	\$2,898,782.40
Services & Supplies	\$1,050,242.57
Tax Admin Fee	\$79,894.00
Capital	\$74,629.99
Long-Term Debt	\$58,914.03
<b>TOTAL EXPENDITURES</b>	<b>\$4,162,462.99</b>

REVENUE RECEIVED – July 1, 2022 – June 30, 2023

July	\$1,120.28
August	\$0.00
September	\$19,435.29
October	\$3,534.31
November	\$6,595.69
December	\$2,409,228.69
January	\$252,528.83
February	\$11,235.47
March	\$29,630.06
April	\$1,390,086.63
May	\$439,248.96
June	Still Unavailable
<b>TOTAL REVENUE TO DATE</b>	<b>\$4,562,644.21</b>

**V. Timesheet Summary**

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Available for Work	Pct. Of Hrs Avail for Work
July	5,880	20.5	5,859.5	99.65
August	6,440	39.5	6,400.5	99.38
September	5,456	48.25	5,407.75	99.12
October	5,040	32	5,008	99.37
November	3,168	88	3,080	97.22
December	2,304	160	2,144	93.05
January	3,024	264	2,760	91.30
February	2,736	203	2,533	92.58
March	3,312	144.75	3,167.25	95.63
April	5,120	91	5,029	98.22
May	5,984	88.75	5,895.25	98.51
June	5,808	200.5	5607.50	96.54

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.

**\*\* June expenditures and revenue are not available as of 7/7/2023**