

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

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REPORT OF THE MANAGER APRIL 2024

I. Water and Weather

The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 75.1°F with an average low of 50.3°F and 1.2 inches of rainfall as of April 29, 2024. The National Oceanic and Atmospheric Administration 1991-2020 seasonal averages for high and low temperatures in April were 72.7°F and 48.6°F respectively, with average rainfall of 0.97 inches.

Water storage at Pine Flat Reservoir increased to 923,992 acres-feet as of April 29, 2024. Pine Flat Reservoir's water inflow rate is 5,119 cubic feet per second (CFS) while its release is 2,739 CFS. The Lake Kaweah Reservoir storage increased to 131,078 acres-feet. Lake Kaweah's water inflow rate is 76 CFS and its release increased to 95 CFS as of April 29, 2024.

II. Narrative

Field operations received 31 mosquito service requests and 4 fish requests in April 2024. The service request inspections 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 (IVM) 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

All full-time and seasonal employees have completed all the annual training and are out in their zones. We are working on the first round of storm drain treatments in Visalia and outlying towns.

We worked with Aaron Fukuda from the Tulare Irrigation District to schedule the Aerial treatment for the season at the rock plant in Woodlake, they pay for the plane, DMVCD supplies the chemical.

We have had all staff read the DMVCD Policy Manual and sign that they have read and understand the district's policies.

We had Giotto's Alarm Company install a security monitor in the front office giving the ability to view access to and from the district, increasing security on the district grounds. We have also purchased a reception desk for the front office, ensuring privacy for that workstation and remaining ADA compliant.

Outreach

The DMVCD took part in the seventh and final Science, Technology, Engineering, and Math (STEM) event series at Four Creeks Elementary School on Thursday, April 25. The Visalia Unified School District (VUSD) had their media team make a short video edit of the STEM event, which was featured as a local news press release. The VUSD requested another 150 copies of the "Take Action" Newspaper handouts to be used at Four Creeks Elementary for STEM events for the students to study and create their own mosquito-bite prevention projects. These projects were displayed at the event. In addition, the DMVCD was invited to the Tulare County Museum Jamboree event at Mooney Grove Park; this was the second time attending this event. DMVCD was also invited to the Party of the Planet - Earth Day event on Saturday, April 20th, at the Tulare County Courthouse parking lot, along with the Saturday Visalia Farmers Market.

The 4th quarter students at Sequoia High School visited DMVCD for a tour of the facilities and were provided with insight into the various job opportunities available within the district.

The Visalia Summer Activity Guide will have a page for DMVCD to show tips on mosquito bite and breeding prevention and the services DMVCD provides to the city. The page will be found when the summer guide is finalized and shared by the City of Visalia.

Laboratory

Andrea, the Scientific Program Manager, contacted Emcor to service the BSL3 laboratory because the alarms are not responding appropriately. We are still waiting for Emcor to respond with an automation quote and set up a repair date for the insectary humidifier because some parts are on backorder. Air filters were replaced on the BSL-2/3 HVAC systems. Mark, Biologist, has had some algae issue in tank A and is working on rectifying this problem. He is also looking for a metal supplier to have the fish fry baskets remade.

Andrea Troupin, Scientific Program Manager, serves on the MVCAC Laboratory Technologies Committee, while Mark Nakata, Biologist, serves on the Integrated Vector Management Committee and Fish Subcommittee.

Routine mosquito trapping started on April 16, 2024. Traps were set throughout the District in Goshen, Traver, Delft Colony, Dinuba, Orosi, Seville, Kings River area, Elderwood, Woodlake, Lemon Cove, Ivanhoe, Exeter, Farmersville, and Visalia.

Technicians brought in 30 mosquito larvae samples to the laboratory for species identification in April 2024. There were 23 larval samples collected in April 2023. Andrea and Mario talked to Operations staff about labeling their larval samples and entering them into FieldSeeker so that Pablo could accurately report the findings. Andrea also explained the daily mosquito abundance report to Operations staff.

The California Department of Public Health (CDPH) Proficiency Panel for mosquito-borne disease testing was completed by Juan Pablo Ortega, Biologist, in March and the results were submitted to CDPH. The laboratory passed the California Department of Public Health (CDPH) Proficiency Panel for mosquito-borne disease testing. A passing result is required for the district to submit in-house mosquito-borne disease test results to the state.

Routine mosquito surveillance began the third week of April. A total of 4,285 mosquitoes were collected across 371 trap nights. The District-wide average of 11.5 mosquitoes per trap night for the last half April and 33.7% higher than the 2023 average of 8.6 mosquitoes per trap night for the same time. The top 3 mosquito species caught in April were *Culex quinquefasciatus* at 74.9%, followed by *Cx. tarsalis* at 12.4% and *Cx. stigmatosoma* at 12.1%. Compared to April of 2023, the top 3 mosquito species caught were *Cx. quinquefasciatus* at 81.2%, followed by *Cx. tarsalis* at 12.5% and *Cx. stigmatosoma* at 4.2%. Arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) also began in April. As of April 30, 2023, the DMVCD tested 268 of the 294 mosquito samples collected in April. The dead bird brain samples collected for this year have all tested negative for WNV, SLEV, and WEEV. No samples were positive for a mosquito-borne disease. No kissing bugs have been reported to the district so far in April.

There were 25 technician and homeowner mosquitofish requests in April to distribute 997 fish. In April 2023, there were 26 technician and homeowner mosquitofish requests to distribute 1,273 fish. Approximately 2,982 mosquitofish fry were produced by April 29, 2024.

Routine laboratory maintenance continued during April 2024. 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 in April 2024.

There were 36 service requests in April 2024.

2024 Service Request Summary

2024	Mosquitofish	Inspection	Mosquito	Source	Other	Total
January	0	2	2	1	0	5
February	3	5	1	12	0	21
March	5	17	6	5	0	33
April	4	25	1	6	0	36
Total	12	49	10	24	0	95

III. Vector and Disease Surveillance

Delta MVCD Summaries:

Humans: No new human cases reported to DMVCD in April 2024. In 2023, there were three confirmed human cases of WNV and SLEV co-infection, one probable WNV and SLEV co-infection, one confirmed WNV case, and six probable WNV cases. There was one potential WNV death in 2024 but the patient contracted WNV in 2023. It is unclear whether the patient had other co-morbidities.

Birds: No dead birds were reported to DMVCD in April 2024.

Mosquitoes: 268 samples have been tested as of April 30, 2024. There are no positives. Last year, 7,082 mosquito samples were tested with 473 positive samples for WNV, 172 positives for SLEV, and 47 positives for both WNV and SLEV.

State Surveillance:

Humans: As of April 30, 2024, 0 human cases of WNV from 0 counties and 0 cases of SLEV from 0 counties have been reported.

Birds: As of April 30, 2024, 14 dead birds from 5 counties tested positive.

Mosquitoes: As of April 30, 2024, 1 mosquito sample from 1 county has tested positive for WNV. Also, 0 samples from 0 counties have tested positive for SLEV.

V1. Expenditures & Revenues – 2023/24

Total Budget \$5,068,115.26

EXPENDITURES – July 1, 2023, to April 30, 2024

Salaries	\$2,406,200.89
Services & Supplies	\$1,081,159.22
Tax Admin Fee	\$0.00
Capital	\$59,617.51
Long-Term Debt	\$58,914.03
TOTAL EXPENDITURES	\$3,605,891.65

REVENUE RECEIVED - July 1, 2023– April 30, 2024

July	\$75.00
August	\$39,702.16
September	\$31,916.62
October	\$7,591.00
November	\$523.77
December	\$2,635,329.40
January	\$285,794.26
February	\$13,558.44
March	\$55,614.48
April	Unavailable
TOTAL REVENUE TO DATE	\$3,070,105.13

IV. **Timesheet Summary**

Month	Available Hours	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
October	4,400	265.75	4,134.25	93.9
November	2,992	178	2814	94.00
December	2,688	104	2,584	96.13
January	3,128	118	3,010	96.22
February	2,432	95.25	2,336.75	96.08
March	2,856	163	2,693	94.3
April	5,632	84.5	5,547.5	98.5

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.

**** April expenditures and revenue are not available as of 5/3/2024**