

# Delta Mosquito & Vector Control District

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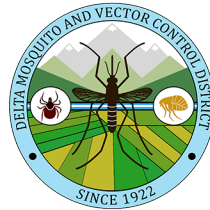
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## REPORT OF THE MANAGER April 2023

### I. Water and Weather

The weather began to warm up in April. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 75.3°F with an average low of 48.6°F and 0.35 inches of rainfall as of April 27, 2023. The National Oceanic and Atmospheric Administration 1981-2010 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 decreased to 434,028 acre-feet as of April 27, 2023. Pine Flat Reservoir's water inflow increased to 10,263 cubic feet per second (CFS) while its release increased to 13,202 CFS. The Lake Kaweah Reservoir storage decreased to 34,124 acre-feet. Lake Kaweah's inflow also increased to 3,904 CFS and its release decreased to 3,515 CFS as of April 27, 2023.

### II. Narrative

Field operations received 83 service requests in April 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.

Operations finished with fleet vehicle winter maintenance. All vehicles received a multi-point inspection which included engine, transmission, cabin filter, air conditioning, heater system, front and rear brake pads, rotors, parking brake, fluids (brake fluid, engine oil, etc.), and lights.

We purchased ornamental rocks and placed them into the flower beds (Figure 1). We built a screened in-wall in the Fish Hatchery with doors to keep the birds and pigeons from entering. (Figure 2)



Figure 1. Image of the before and after the ornamental rocks were added to the flower beds.



Figure 2 Image of the constructed screened in-wall to the Fish Hatchery.

We updated some of the safety containment units in the Pesticide Room to ensure if we have a chemical leak, we will be able to not just contain the chemical but save it so it can be used with no waste (Figure 3).



Figure 3 Image of the organization of the Pesticide Room.

The oil tank area was reorganized and cleaned of old drums and the waist oil was moved into the Pesticide Room so it can be out of the weather and stored in a safety cantonment unit (Figure 4 A and B).



Figure 4A Image of the oil tank area showing the clutter of old oil drums.



Figure 4B Image of the oil tank area after it was cleaned and decluttered.

We trained all the hired seasonals for three days and provided them with respirator fit testing.

The loading zone was repainted along with a new rectangular yellow loading zone in the parking lot to divide Urban and Rural parking areas as the employees will be parking there at different times of the day (Figure 5).



Figure 5 Image of the newly repainted loading zone in front of the pesticide room.

Old unused items, i.e., four truck toolboxes (\$103), two older spray tanks that were used for herbicide treatment (\$625, \$250), and one pull behind disc (\$351) as shown in Figure 6 were auctioned and sold for a total of \$1,329.

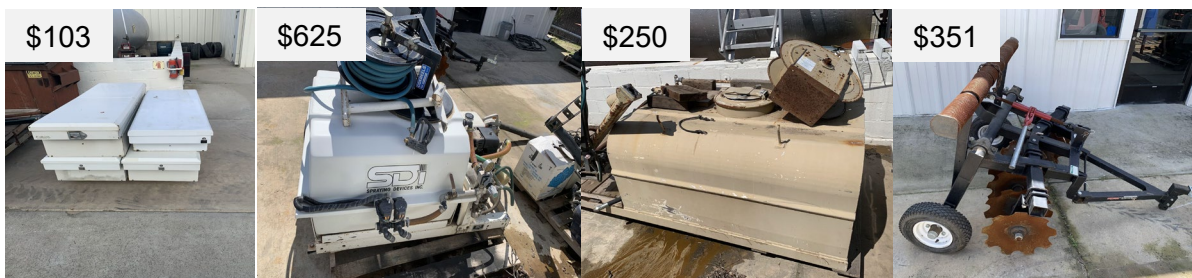


Figure 6 Image of the old unused assets that were auctioned and sold.

We started treating the catch basins with the chemical, Sumilarv WS packets and inspecting fields and treating dairy mosquito-breeding sources.

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 second week of April. A total of 7,243 mosquitoes were collected across 1,083 trap nights. The District-wide average of 6.7 mosquitoes per trap night for the month of April is 10.4% higher than the previous 5-year average of 6.1 and 104.3% higher than the 2022 average of 3.3 mosquitoes per trap night. The top 3 mosquito species caught in April were *Culex quinquefasciatus* at 76.9%, followed by *Cx. tarsalis* at 17.8% and *Cx. stigmatosoma* at 2.9%. Compared to April of 2022, 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 27, 2023, the DMVCD tested 98 of the 173 mosquito samples collected in April. Test results are pending for the remaining samples. The dead bird brain sample collected in March 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 26 technician and homeowner mosquitofish requests in April and distributed a total of 1,273 mosquitofish. In April of 2022, there were 10 technician and homeowner mosquitofish requests and distributed a total of 385 mosquitofish. A total of 3,030 mosquitofish fry were produced in April 2023. In April of last year, 868 mosquitofish fry were produced.

A total of 23 mosquito larvae samples were brought to the laboratory for processing. The top three species found in the samples were: *Cx. quinquefasciatus*, *Cx. tarsalis*, and a tie between *Cx. stigmatosoma* and *Culiseta inornata*. Susceptible *Cx. quinquefasciatus* and *Aedes aegypti* colonies were maintained for insecticide resistance testing.

Routine laboratory maintenance and repairs continued during the month of April. The annual preventative maintenance and calibration for the PCR machine was completed. Air filters were replaced on the BSL-2/3 HVAC systems. The annual maintenance for the District weather station was completed. The gutters on the trap shop and fish building were cleaned. Monthly safety checks for fire extinguishers and emergency lights were performed as well as weekly safety showers and eyewash inspections.

Laboratory staff participated in a presentation at a high school, two tours for high school groups, and a presentation for a Public Cemetery Alliance meeting. Laboratory staff also attended two virtual training sessions on using VectorSurv to submit surveillance data to the state. Additionally, laboratory staff attended the virtual Mosquito and Vector Control Association of California (MVCAC) Laboratory Technologies and Integrated Vector Management Committee meetings.

In April, the DMVCD participated and attended 5 outreach events: three Visalia

Rawhide Baseball games, a Museum Jamboree at Mooney Grove Park, City of Visalia Earth Day Celebration, and a tour for the Sequoia High School students. In addition, three presentations were given to Sequoia High School and the Exeter Independent study. We have a new DMVCD magnet that will be used at future outreach events to help engage with the residents on preventing mosquitoes and raising awareness for the District.

The newly hired seasonal employees and the full-time staff of DMVCD participated in a Pizza Luncheon to celebrate the start of the 2023 Mosquito Season.

There were 95 service requests in April:

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
Total	16	0	99	0	1	116

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: No dead birds have been reported in April. The one dead bird reported in March was negative for mosquito-borne diseases.

Mosquitoes: A total of 98 mosquito samples were tested of which 0 were positive for a mosquito-borne disease.

State Surveillance:

Humans: No human cases so far in 2023.

Birds: One dead bird from one county has tested positive for WNV in April. So far, 48 dead birds have been tested in 2023.

Mosquitoes: No new positive samples have been reported in April as of April 2, 2023. So far, two mosquito samples from two counties have tested positive for WNV in 2023.

IV. Expenditures & Revenues – 2022/23  
TOTAL BUDGET \$4,958,310.00

EXPENDITURES – July 1, 2022 – April 30,2023

Salaries	\$2,402,469.40
Services & Supplies	\$824,358.22
Tax Admin Fee	\$39,947.00
Capital	\$72,663.03
Long-Term Debt	\$58,914.03
<b>TOTAL EXPENDITURES</b>	<b>\$3,398,351.68</b>

REVENUE RECEIVED – July 1, 2022 – April 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	Still Unavailable
<b>TOTAL REVENUE TO DATE</b>	<b>\$2,733,308.62</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

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 5/3/2023*