

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

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REPORT OF THE MANAGER MAY 2022

I. Water and Weather

The temperature increased throughout the month of May. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 84.4°F with an average low of 55.8°F and 0 inches of rainfall. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in May were 80.6°F and 55.4°F respectively, with average rainfall of 0.36 inches.

Water storage at Pine Flat Reservoir increased to 623,425 acre-feet by the end of May. By May 31, 2022, Pine Flat Reservoir's inflow had decreased to 1,668 cubic feet per second (CFS) and its release increased significantly to 1,404 CFS. The Lake Kaweah Reservoir had more water than the previous month with 119,506 acre-feet on May 31, 2022. Lake Kaweah's inflow decreased, showing 225 CFS and its release was increased to 244 CFS.

II. Narrative

Operations has hired an additional "Seasonal Operation Technician II (Ops Tech II)" for the month of May. Miguel Ballesteros, our new Ops Tech II joined the team on May 23, 2022. Miguel has over 5 years' experience working in the field of mosquito and vector control. He will be assisting our Rural team in managing Zone 2. Two additional Seasonals for the position of Operations Technician I started on May 9, 2022 and will assist the urban team in all operational functions.

Field operations received more service requests for the month of May than previous months. Service requests consist of a vector control technician inspecting the reported property for any standing water that can breed mosquito larvae. During this time, the technician uses an integrated vector management strategy to reduce any mosquito breeding found. In addition, technicians will use this opportunity to educate residents on mosquito breeding prevention, and how to protect themselves from mosquito bites. Field staff completed a total of 3,973 mosquito inspections throughout the District including rural and urban locations. Staff conducted 1,566 larval applications.

Storm drain operations continued for the month of May. Operations treated 10,869 storm drains in relation to streets, parks, commercial complexes, and parking lots. Storm drains are treated using a 30-day residual product, Altosid WSP, and re-inspections occur monthly.

Along with general facility maintenance, the shop Foreman, Mr. Paul Harlien replaced the cooling system for the pesticide storage room. The old cooling system was unrepairable and was replaced within 24 hours to avoid degradations of current chemical inventory.

Operations also repaired vehicle T-12 which needed a clutch replacement. Operations are still waiting on delivery of the A1 Super Duty and the A1 Boss wide larviciding units which are scheduled to arrive in June.

On May 3, 2022, four staff members attended an Unmanned Aircraft System workshop at Consolidated Mosquito Abatement District in Clovis, CA. Staff went over equipment calibrations, treatment parameters, and conducted mock treatments.

Our District GO-4 vehicle was listed for auction on GovDeals. The vehicle was listed on May 25, 2022 and will be at auction until June 3, 2022. We also transferred the title of our 10 new Colorado vehicles from Enterprise to the Delta Mosquito and Vector Control District.

Routine mosquito surveillance continued throughout May. A total of 15,984 mosquitoes were collected across 1,400 trap nights. The District-wide average of 11.4 mosquitoes per trap night for the month of May is 40.1% lower than the previous 5-year average of 19.1, but 35.4% higher than the 2021 average of 8.4 mosquitoes per trap night. The top 3 mosquito species caught in May were *Culex quinquefasciatus* at 86.7%, followed by *Cx. tarsalis* at 6.2% and *Cx. stigmatosoma* at 3.4%.

Mosquito-borne disease testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western Equine Encephalitis virus (WEEV) continued in May. The DMVCD tested 433 mosquito samples and two bird carcasses in May, with zero samples positive for WNV. So far in 2022, zero mosquito samples out of 566 samples tested were positive for WNV.

There were 19 technician and homeowner mosquitofish requests in May to distribute a total of 344 fish. A total of 391 mosquitofish fry were produced in May. Routine fish hatchery maintenance took place weekly during May.

A total of 34 mosquito larvae samples were brought to the laboratory for processing. Susceptible *Cx. quinquefasciatus*, *Cx. tarsalis*, and *Aedes aegypti* colonies were maintained for insecticide resistance testing.

In May, we have attended eight events for community education and public outreach: five Visalia Rawhide baseball games, The Breakfast Lions Club car show, and two Farmers Markets. Each event averaged about two to three residents per hour. The main concern of residents was to learn tips on mosquito-bite prevention methods. At about half the events, Delta's booth was placed next to the Oxitec booth, which was very effective in answering all of the relevant questions the residents had about the Oxitec mosquito project.

The Assistant Manager, Mir Bear-Johnson and the General Manager, Dr. Mustapha Debboun published a Scientific Note entitled, *Triatoma protracta* (Uhler, 1894) (Hemiptera, Reduviidae) with *Trypanosoma cruzi* (chagas, 1909) Kinetoplastida, Trypanosomatidae) in the Central Valley of California, USA in the June 2022 issue of Journal of Vector Ecology, Vol. 47, no.1.

The next Public Oxitec Educational Webinar is on Tuesday, June 21, 2022 entitled, Oxitec in California: Community Engagement, Participation, and Consultation by Delta MVCD and Oxitec.

On May 19, 2022 the District hosted the California Department of Public Health’s Vector Control Technician Exam. Forty participants from eight districts took the exam, including nine from Delta Mosquito and Vector Control District.

There were 52 service requests in May:

2022 Service Request Summary

2022	Fish	Inspection	Mosquito	Source	Other	Total
January	0	0	0	5	0	5
February	2	0	7	7	0	16
March	4	0	7	14	0	25
April	12	0	10	17	0	39
May	14	6	9	23	0	52
Total	32	6	33	66	0	137

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: There were no human cases of an arbovirus reported by the local public health department for the month of May.

Birds: Two dead birds were tested in May. None were positive for a mosquito-borne disease. So far, zero out of five dead birds have tested positive in 2022.

Mosquitoes: A total of 433 mosquito samples were tested in May. None were positive for WNV, SLEV, or WEEV. A total of 566 mosquitoes have been tested so far in 2022.

State Surveillance:

Humans: No human cases have been reported in 2022.

Birds: One dead bird has tested positive for WNV in 2022. So far, one out of 307 dead birds have tested positive in 2022.

Mosquitoes: Three new mosquito samples have tested positive for WNV. So far, five mosquito samples out of 5,432 have tested positive for WNV.

IV. Expenditures & Revenues – 2021/22

TOTAL BUDGET \$3,977,153.00

EXPENDITURES – July 1, 2021 – May 31, 2022

Salaries	\$2,429,041.55
Services & Supplies	\$892,454.70
Tax Admin Fee	\$68,497.00
Capital	\$455,113.89
Long Term Debt	\$117,828.06
TOTAL EXPENDITURES	\$3,962,935.20

REVENUE RECEIVED – July 1, 2021 – May 31, 2022

July	\$137.48
August	\$0
September	\$12,309.21
October	\$35,667.25
November	\$0
December	\$2,379,114.09
January	\$290,119.86
February	\$0
March	\$10,513.35
April	\$1,247,001.75
May*	
TOTAL REVENUE TO DATE	\$3,974,862.99

V. Time Sheet Summary

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Available for Work	Pct. Of Hrs Available for Work
July	5,376	119.25	5,256.75	97.79
August	5,808	210.00	5,598.00	96.40
September	5,712	134.50	5,577.50	97.65
October	4,200	105.50	4,094.50	97.49
November	2,584	40.00	2,544.00	98.46
December	1,920	60.00	1,860.00	96.88
January	2,720	178.50	2,541.50	93.44
February	2,720	16.00	2,704.00	99.42
March	3,864	38.00	3,826.00	99.02
April	4,712	108.50	4603.50	97.70
May	6,160	108	6052.00	98.24

The District has a vacation policy that requires 24-hour notice in order 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 Time Sheet Summary table.

**May revenue not available as of 06/03/2022*