

DELTA MOSQUITO & VECTOR CONTROL **DISTRICT**

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REPORT OF THE MANAGER **AUGUST 2022**

I. Water and Weather

The temperature remained high throughout the month of August. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 99.7°F with an average low of 69.4°F and 0.15 inches of rainfall. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in August were 93.2°F and 64.9°F respectively, with average rainfall of 0.00 inches.

Water storage at Pine Flat Reservoir decreased to 133,113 acre-feet by the end of August and its inflow decreased to 316 cubic feet per second (CFS) and its release greatly decreased to 923 CFS. The Lake Kaweah Reservoir had less water than the previous month with 15,503 acre-feet on August 31, 2022. Lake Kaweah's inflow decreased, showing 21 CFS and its release decreased to 165 CFS.

II. Narrative

Judith Lopez, a seasonal Technician I joined our team on August 12th, and is working with the Urban Team. She has been assigned to work in zone 15 which is northeast Visalia.

Urban staff have completed the neglected fly-over pool list completing 493 potential neglected pools.

Wide area larviciding (WAL's) continued for August. Staff completed a total of 15 applications for WAL's and treated a total of 750 acres of residential properties targeting the yellow fever mosquito, *Aedes aegypti*.

Field operations received 227 service requests in August which consisted 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 use this opportunity to educate residents on mosquito breeding prevention, and how to protect themselves from mosquito bites. Field staff completed a total of 4,496 mosquito inspections throughout the District including rural and urban locations. Staff conducted 1,020 larval applications, and continued storm drain operations for August. They treated 10,708 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 inspections are done monthly.

The District completed 14 adult mosquito treatments for August, covering approximately 4,118 acres of urban area. In addition, to the urban applications, the staff treated approximately 3,888 acres in rural locations, i.e., areas of Goshen, Dinuba, Visalia, Peral, Delft Colony, and Ivanhoe.

The Woodlake aerial application was conducted on August 2, 2022 by Blair Air Services. The plane dispensed 120 pounds of Altosid XRG Ultra covering 12 acres.

In collaboration with the Leading Edge Technologies, the District performed its first larviciding mission on August 30 and August 31, 2022 on the northwest area of Visalia. This was a 2-day rural operation that covered 144 treated acres near the residential border of Visalia. The District also conducted an adult mosquito treatment operation on September 1 in the northwest section of Visalia to reduce mosquito abundance and viral transmission.

Due to the 1997 Chevrolet Silverado truck's extreme old age of 25 years, high mileage of 169,626 miles, and the need of extensive repair to the transmission, the General Manager recommends to auction this vehicle on Govdeals.com which is a liquidity service marketplace. The District plans to send this vehicle to auction on September 15 for an 8-day auction ending on September 23. The vehicle will be placed on auction with a starting bid of \$2,300.00 upon Board approval.

Routine mosquito surveillance continued throughout August. A total of 57,016 mosquitoes were collected across 1,629 trap nights. The District-wide average of 35.0 mosquitoes per trap night for August is 53.5% higher than the previous 5-year average of 22.8 and 28.8% higher than the 2021 average of 21.7 mosquitoes per trap night. The top 3 mosquito species trapped in August were *Culex quinquefasciatus* at 71.7%, followed by *Ae. aegypti* at 24.2% and *Cx. tarsalis* at 2.7%. Compared to August of 2021, the top three mosquito species trapped were *Cx. quinquefasciatus* at 71.2%, followed by *Ae. aegypti* at 15.3% and *Cx. tarsalis* at 8.6% of mosquito total abundance.

Mosquito-borne disease testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western Equine Encephalitis virus (WEEV) continued in August. The DMVCD tested 1,015 mosquito samples and 1 bird carcass collected in August, with 355 mosquito samples (34.9% tested positive) and one dead bird positive for WNV. In August of 2021, 594 mosquito samples and 1 dead bird were collected with 120 mosquito samples (20.2% tested positive) and 1 dead bird positive for WNV. So far in 2022, a total of 615 mosquito samples, out of 3,137 samples tested (19.6% tested positive for WNV). At this time last year, 166 mosquito samples out of 1,642 mosquito samples collected (10.1% tested positive for WNV).

There were 6 technician and homeowner mosquitofish requests in August and staff distributed a total of 164 mosquitofish. In August of 2021, there were 20 technician and homeowner mosquitofish requests with a total distribution of 459 mosquitofish. A total of 927 mosquitofish fry were produced in August 2022. In August 2021, 244 fry were produced. Recently, mosquitofish in the outdoor holding tanks died from a mosquitofish disease. The outdoor tanks underwent extensive cleaning and treatment to reduce further death of mosquitofish.

A total of 52 mosquito larvae samples were brought to the laboratory for processing. Susceptible *Cx. quinquefasciatus*, *Cx. tarsalis*, and *Ae. aegypti* colonies were maintained for insecticide resistance testing.

In August 2022, DMVCD attended 8 outreach events, i.e., Visalia Flea Market, Visalia Farmers Market, and Visalia Rawhide baseball games. These events averaged 15-30 residents who were educated on mosquito prevention. Our presence in the District continues to increase and the engagement with the residents has also increased.

A general timeline for the 100-Year Anniversary and Celebration event is as follows:

7:00 am – Most of District vehicles will be moved to the nearby school parking lot. The educational outreach van will shuttle drivers back and forth.

7:30 am - Set up canopies for each display station i.e., laboratory, operations, and education and outreach.

8:30 am - Staff Breakfast

9:00 am - Food setup for guests

10:00 am - Commencement of the 100-Year Anniversary and Celebration event

10:30 am - Facility tours begin and run every 30 minutes.

2:00 pm - Close the gate after the last guest has left.

2:00 pm - Shuttle drivers to pick-up District vehicles from the school parking lot.

2:30 pm - Pick up rental equipment

Promotional items such as pens, drink koozies, drawstring bags, etc. that were ordered for the celebration will be arriving throughout September in time for the 100-Year Anniversary and Celebration event.

Using the Tulare County Library as a resource, we learned from a newspaper article from 1922, the District was established by the Board of Supervisors on September 19, 1922.

There were 222 service requests in August:

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	15	6	9	23	0	53
June	15	43	28	36	0	122
July	9	29	86	24	1	149
August	9	17	153	48	0	227
Total	66	95	300	174	1	636

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: There was one human case of WNV reported by the local public health department for August.

Birds: One dead bird tested positive for WNV in August. In 2022, two dead birds tested positive for WNV out of the eight dead birds tested so far.

Mosquitoes: In August, 355 mosquito samples, i.e., (34.9%) were positive for WNV out of the 1,015 samples tested. A total of 3,137 mosquito samples have been tested with 615, i.e., (19.6%) samples positive for WNV so far in 2022.

State Surveillance:

Humans: 35 human cases of WNV from 12 counties have been reported so far in 2022.

Birds: 113 (11.4%) dead birds from 19 counties have tested positive for WNV. So far, 984 dead birds have been tested in 2022.

Mosquitoes: 2,136 (7.7%) mosquito samples have tested positive for WNV out of 27,682 samples tested in 2022. Additionally, 69 (0.28%) mosquito samples have tested positive for SLEV out of 24,468 mosquito samples tested in 2022.

IV. Expenditures & Revenues – 2022/23

TOTAL BUDGET \$4,833,308.73

EXPENDITURES – July 1, 2022 – August 31, 2022

Salaries	\$961,191.29
Services & Supplies	\$271,099.37
Tax Admin Fee	\$0.00
Capital	\$7461.04
Long Term Debt	\$0.00
TOTAL EXPENDITURES	\$1,239,751.70

REVENUE RECEIVED – July 1, 2022 – August 31, 2022

July	\$1,120.28
August	\$0.00
TOTAL REVENUE TO DATE	\$1,120.28

V. Time Sheet 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

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 table.