

# DELTA MOSQUITO & VECTOR CONTROL DISTRICT

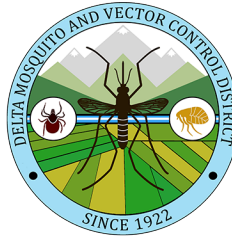
1737 West Houston Avenue, Visalia, California, 93291

Dr. Mustapha Debboun  
*General Manager*

Phone: (559) 732-8606 Toll Free: (877) 732-8606 Fax: (559) 732-7441

Rick Alvarez  
*Vector Control Supervisor*

Paul Harlien  
*Operations Program Manager*



Bryan Ruiz  
*Supervisor Assistant*

Mary Ellen Gomez  
*Administrative Assistant*

Bryan Ferguson  
*Foreman*

Erick Arriaga  
*Community Education &  
Outreach Coordinator*

Andrea Troupin  
*Scientific Program Manager*

## REPORT OF THE MANAGER OCTOBER 2023

### I. Water and Weather

The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 84.3°F with an average low of 56.8°F and 0.12 inches of rainfall as of October 24, 2023. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in October were 77.8°F and 52.3°F respectively, with average rainfall of 0.55 inches.

Water storage at Pine Flat Reservoir decreased to 575,301 acre-feet as of October 24, 2023. Pine Flat Reservoir's water inflow rate is 1,148 cubic feet per second (CFS) while its release increased to 2,452 CFS. The Lake Kaweah Reservoir storage decreased to 20,451 acre-feet. Lake Kaweah's inflow also decreased to 111 CFS and its release decreased to 124 CFS as of October 25, 2023.

### II. Narrative

Field operations received 91 service requests in October 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.

Dr. Debboun, Eric Arriaga, Mark Nakata, Andrea Troupin and Paul Harlien attended the MVCAAC Mosquito and Vector Control Association of California 2023 fall Meeting from October 2-4, 2023

Several staff members attended a DPR workshop on Wednesday, October 5, 2023 and all staff members along with two Board of Trustees members celebrated the end of the mosquito season with a BBQ on the same date.

We conducted Ultra Low Volume (ULV) treatment in the high trap and West Nile virus (WNV) positive areas early in the morning of October 2 and 4, from 2:00 AM to 5:30 AM.

Bryan Ferguson, the Forman and Paul Harlien, the Operations Program Manager turned in our yearly Environmental Information Management Department of Toxic Substances Control and monthly Pesticides reports. In addition, they both have been working on the list of trucks that need to be smogged in the year 2023.

Dr. Debboun and Paul Harlien conducted an on-site walk through with Verkada Security on October 13 to discuss the best place to install and use some of their new updated security Cameras. Verkada is a large Security company with a wide range of advanced security systems and innovative technology.

Paul Harlien has been working on a plan to get Solar and possibly a generator with a battery backup. We are waiting on three solar Companies to provide us with bids so we can move on to the next stage of getting a government grant or government low interest loan as low as 1%.

We have put together for the Tulare Department of Public Health a cost analysis summary to supply Strathmore and Lindsey with workforce, trucks, chemical and equipment that will be needed for the possibility of two new zones and all the surveillance and control efforts that will be needed to accommodate Strathmore and Lindsey.

We are preparing the District campus for the new front fence and gate by removing the dead trees and front shrubs. We will also be laying a concrete slab that will be poured behind the Laboratory.

We continued checking the In2Care Mosquito Traps to augment controlling the invasive Yellow Fever mosquito, *Aedes aegypti*. The traps were checked and serviced every two weeks. We saw over 90% of traps with all stages of mosquito larvae in them with plenty of dead larvae in the In2Care Mosquito Traps. We will continue to evaluate all 100 traps that have been set out throughout the District until the end of October 2023.

We set an October three-phase stage timeline for the seasonal employees to leave their seasonal mosquito work and the last group left on October 25, ending the season.

In October, the DMVCD participated and attended 4 outreach events: These events included the Visalia Farmers Markets, the Farmersville Fall Festival, the Visalia Senior Center Open House, and a College and Career Awareness Showcase at a local middle school in Visalia. The employee of the quarter plaque was updated, and a certificate was made for the 3rd quarter employee. Certificate for the safety award was created this week for Danny Cadena. A video was made to highlight the drone treatment application. The 2023 At-a-Glance infographic was completed, summarizing all District mosquito activities of the year.

Routine mosquito surveillance continued through the first 2 weeks of October. 15,098 mosquitoes were collected across 686 trap nights as of October 13, 2023. The District-wide average of 22.0 mosquitoes per trap night in October is 49.3% lower than the previous 5-year average of 43.4 and 76.0% lower than the October 2022 average of 76.0 mosquitoes per trap night. The top 3 mosquito species caught in October were *Culex quinquefasciatus* at 74.4%, followed by *Aedes aegypti* at 21.9% and *Cx. stigmatosoma* at 2.3%. Compared to October of 2022, the top 3 mosquito species caught were *Cx. quinquefasciatus* at 92.3%, followed by *Ae. aegypti* at 15.4% and *Cx. tarsalis* at 1.2%.

Arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) continued in October. Laboratory staff tested 499 mosquito samples collected in October. Six mosquito samples collected in October tested positive for WNV, 21 for SLEV, and 0 for SLEV/ WNV. Positive mosquito samples were collected from Calgro, Cutler, Delft Colony, Dinuba, Exeter, Farmersville, Goshen, Ivanhoe, Orosi, Peral, Sequoia Fields, Seville, South Kings River region, Traver, Visalia, and Woodlake. In October 2022, there were 21 WNV positive and 4 SLEV positive mosquito samples out of 743 tested. Additionally, the Tulare County Public Health Department reported 2 probable human cases of WNV in October. So far in 2023, there have been 3 confirmed human cases of WNV and SLEV co-infection, 1 probable case of WNV and SLEV co-infection, 1 confirmed WNV case, and 6 probable WNV cases from Visalia, Cutler, and Dinuba.

There were 9 technician and homeowner mosquitofish requests in October and 90 fish were distributed as of October 25, 2023. In October of 2022, there were 10 technician and homeowner mosquitofish requests, and 1,080 mosquitofish were distributed. A total of 6,731 mosquitofish fry were produced by October 25, 2023. In October of 2022, 2,305 mosquitofish fry were produced.

52 mosquito larvae samples were brought to the laboratory for processing by October 24, 2023. In October of 2022, 9 larvae samples were collected and processed.

Routine maintenance continued during October. Air filters were replaced on the BSL-2/3 HVAC system of the laboratory by American Air. Monthly safety checks for fire extinguishers and emergency lights were performed as well as weekly safety showers and eyewash inspections.

The laboratory tested zero mosquito samples from Tulare Mosquito Abatement District (MAD) and zero samples collected from Tulare by Vector Disease Control International in October.

There were 91 service requests in October.

### 2023 Service Request Summary

2023	Mosquitofish	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	9	0	147	0	0	156
July	10	0	130	0	0	140
August	8	0	134	0	0	142
September	8	0	205	0	0	208
October	3	0	91	0	0	94
<b>Total</b>	<b>79</b>	<b>0</b>	<b>928</b>	<b>0</b>	<b>1</b>	<b>1,008</b>

### III. Vector and Disease Surveillance

#### Delta MVCD Summaries

**Humans:** 2 probable human cases of WNV in October; 3 confirmed human cases of WNV and SLEV co-infection, 1 probable WNV and SLEV co-infection, 1 confirmed WNV case, and 6 probable WNV cases.

**Birds:** No dead birds were tested in October. So far, 12 dead birds have been tested with 5 positives for WNV in 2023.

**Mosquitoes:** 499 mosquito samples were tested in October, of which 6 were positive for WNV, 21 positives for SLEV, and 0 positives for WNV and SLEV. So far this year, 7,028 mosquito samples have been tested with 473 samples positive for WNV, 172 positives for SLEV, and 47 positives for both WNV and SLEV.

#### **State Surveillance:**

**Humans:** As of October 20, 2023, 271 human cases of WNV from 31 counties and 6 cases of SLEV from 5 counties have been reported so far in 2023. Additionally, there have been 20 asymptomatic WNV blood donors.

**Birds:** On October 20, 2023, 831 dead birds from 31 counties tested positive. So far, 1,907 dead birds have been tested in 2023.

**Mosquitoes:** As of October 20, 2023, 4,386 mosquito samples from 31 counties have tested positive for WNV. Also, 714 samples from 15 counties have tested positive for SLEV. So far, 50,096 mosquito samples have been tested for WNV and 45,031 samples for SLEV in 2023.

**V1. Expenditures & Revenues – 2023/24**

Total Budget \$5,068,115,26

EXPENDITURES – July 1, 2023, to October 31, 2023

Salaries	\$1,187,379.05
Services & Supplies	\$674,726.79
Tax Admin Fee	\$0.00
Capital	\$18,098.88
Long-Term Debt	\$58,914.03
<b>TOTAL EXPENDITURES</b>	<b>\$1,939,118.75</b>

REVENUE RECEIVED - July 1, 2023– October 31, 2023

July	\$0.00
August	\$39,702.16
September	\$31,916.62
October	Unavailable
<b>TOTAL REVENUE TO DATE</b>	<b>\$71,618.78</b>

**IV. Timesheet Summary**

Month	Available Work Hrs	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				

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.

*\* October expenditures and revenue are not available as of 10/27/2023*