

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

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REPORT OF THE MANAGER January 2023

I. Water and Weather

The weather in January was cool and rainy. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 58.7°F with an average low of 43.2°F and 4.44 inches of rainfall as of January 23, 2023. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in January were 55.3°F and 38.4°F respectively, with average rainfall of 1.96 inches.

Water storage at Pine Flat Reservoir (PFR) almost doubled to 505,924 acre-feet by January 23, 2023. The PFR's water inflow increased to 2,539 cubic feet per second (CFS) while its release slightly increased to 107 CFS. The Lake Kaweah Reservoir also almost doubled compared to the previous month, storing 69,106 acre-feet by the end of January 23, 2023. Lake Kaweah's inflow increased to 1,053 CFS and its release increased to 385 CFS.

II. Narrative

Field operations received three service requests in January 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 continued 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. Staff completed 8 fleet vehicle inspections. Vehicle T-33 received a new evaporator core for the air conditioning unit, clutch kit, a rack, and pinion steering gear kit. T-38 received new shocks and control arm bushings. T-39 received a new power steering pump, clutch, flywheel, thermostat, and rear axle bearings. Vehicle T-6 has gone through many modifications. We have installed a flatbed on the vehicle to mount an A-1 Super Duty Sprayer for mosquito larviciding

operations (Figures 1 & 2). The vehicle also received a new bumper with a winch to prevent the driver from being stuck on harsh terrain. In addition, T-6 was lifted to compensate for the weight of the A-1 Super Duty. The spare truck bed, tailgate and bumper from vehicle T-6 was sent to auction on Govdeals.com which is a public liquidity service marketplace. The items will be at auction from January 26, 2023 to February 9, 2023 for a starting bid at \$270.00. During our maintenance inspection of T-29 ARGO, we found that the frame of the vehicle was cracked and rusted out. The ARGO went through a full breakdown and rebuild of any damaged components (Figure 3).



Figure 1. Vehicle T-6 pre-update photo conducting a A-1 Super Duty application.



Figure 2. Vehicle T-6 post update photo of the flatbed, front bumper, winch, and A-1 Super Duty installation.



Figure 3. Image comparison of an ARGO and an ARGO tear down. Paul Harlien and Paul Raper refurbishing T-29 ARGO frame.

On January 3rd, American Incorporated began the District’s plumbing project to reroute sewer lines, add a sand oil interceptor and lift station. The project consisted of connecting the lounge and mechanic shop restroom to the main sewer line in front of the laboratory building (Figure 4). The front of the wash bay received a sand and oil interceptor with a sewage pump system to assist with the gradient slope of the project. The project had delays due to extreme rain, but the projected completion date is on February 3, 2023.



Figure 4. The DMVCD plumbing project in front of the wash bay and behind the wash bay building.

A water leak in the offices of the new fish hatchery building was discovered when staff returned from Christmas break (Figure 5). Additionally, water was entering under the Fish Hatchery Office door from heavy rain flooding the walkway to the offices. Laboratory staff placed sand bags to redirect water flow and called the original roofing contractor to inspect and repair the roof. Areas that were leaking or suspected of leaking were temporarily sealed using a leak repair caulking to prevent more damage (Figure 6). One Thermoplastic Polyolefin (TPO) pipe boot was repaired and all the other seals were checked.



Figure 5. A water leak caused minor damage to the offices in the new fish hatchery building.



Figure 6. Temporary repairs to prevent water leaks on the roof of the fish hatchery. The TPO boot (left) was repaired and the patch seals (right) checked.

Routine maintenance and repairs took place during the month of January. The Variable Frequency (VF) drives for the BSL-3 HVAC system were replaced with

outdoor rated drives (Figure 7). Air filters were replaced on the fish hatchery dehumidifiers and BSL-2/3 HVAC systems. Mosquito traps were inspected and repaired as needed.



Figure 7. Old VF drives (left) and their replacements (right).

Laboratory staff completed their posters for the Mosquito and Vector Control Association and American Mosquito Control Association annual conferences to be displayed at the end of January and February respectively. Additionally, laboratory staff participated in continuing education webinars to maintain their Vector Control Technician Certification through the California Department of Public Health and participated in an outreach event for the Visalia Garden Club.

Routine mosquito surveillance and arbovirus testing for West Nile virus (WNV), St. Louis Encephalitis virus (SLEV), and Western equine encephalitis virus (WEEV) did not take place in January 2023. To date, no mosquito samples have been tested in 2023. Tick flagging was conducted at Dry Creek Preserve in Woodlake on January 20, 2023. No ticks were found. No kissing bugs were reported to the District in January.

There were no mosquitofish requests as of January 23, 2023. In January 2022, there were no mosquitofish requests to distribute. Approximately 1,190 mosquitofish fry were produced by January 23, 2023. In January 2022, 100 fry were produced.

In January 2023 and 2022, no mosquito larvae samples were collected and brought to the laboratory for species identification or resistance testing. Susceptible *Culex quinquefasciatus*, *Cx. tarsalis*, and *Aedes aegypti* colonies were maintained for insecticide resistance testing.

On January 9th, the District provided a tour of the facility to the members of the Sequoia Garden Club (SGC) from Visalia, California (Figure 8). The tour consisted of the fish hatchery, laboratory, and field operations. The SGC members were interested in having a second tour in early April, 2023 in hopes to have the full tour without any rain issues and see more of the field operations equipment.



Figure 8. Crystal Grippin conducting a laboratory tour for the members of the Sequoia Garden Club from Visalia, California on January 9, 2023.

The General Manager, Dr. Mustapha Debboun was presented and awarded with a plaque by the Entomological Society of America in recognition of exceptional service as a Governing Board Member representing Medical, Urban and Entomology section from 2019 to 2022 (Figure 9).

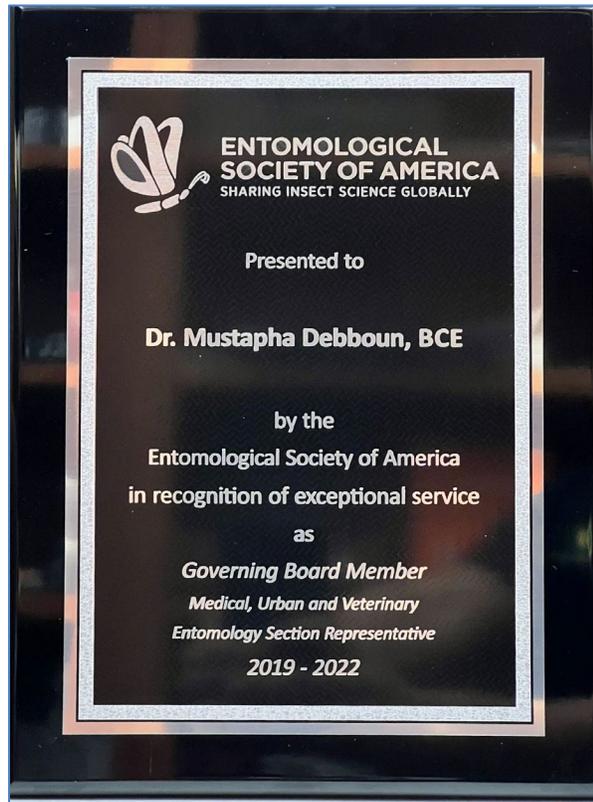


Figure 9. The Entomological Society of America awarded this prestigious plaque to Dr. Mustapha Debboun in recognition of his exceptional service as it’s Governing Board Member.

There were four service requests in January:

2023 Service Request Summary

2023	Mosquito-Fish	Inspection	Mosquito	Source	Other	Total
January	0	0	4	0	0	4
Total	0	0	4	0	0	4

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: No human cases of a mosquito-borne disease were reported in January 2023.

Birds: No dead birds were reported in January 2023.

Mosquitoes: No mosquitoes were tested for an arbovirus in January 2023.

State Surveillance:

Humans: No data was available for 2023 as of January 23, 2023.

Birds: No data was available for 2023 as of January 23, 2023.

Mosquitoes: No data was available for 2023 as of January 23, 2023.

IV. Expenditures & Revenues – 2022/23

TOTAL BUDGET \$4,958,310.00

EXPENDITURES – July 1, 2022 – January 31, 2023

Salaries	\$1,809,913.66
Services & Supplies	\$705,829.44
Tax Admin Fee	\$39,947.00
Capital	\$62,955.63
Long Term Debt	\$0.00
TOTAL EXPENDITURES	\$2,618,645.73

REVENUE RECEIVED – July 1, 2022 – January 31, 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	
TOTAL REVENUE TO DATE	\$2,439,914.26

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
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	2144	93.05
January	3,024	264	2760	91.30

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.

** January expenditures and revenue not available as of 2/3/2023*