

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

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REPORT OF THE MANAGER December 2022

I. Water and Weather

The temperature cooled significantly in December. The Delta Mosquito and Vector Control District (DMVCD) Weather Station reported an average high temperature of 53.0°F with an average low of 39.9°F and 4.44 inches of rainfall. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in December were 55.4°F and 37.9°F respectively, with average rainfall of 1.83 inches.

Water storage at Pine Flat Reservoir (PFR) increased to 255,972 acre-feet by the end of December. The PFR's water inflow increased greatly to 1,487 cubic feet per second (CFS) while its release decreased to 87 CFS. The Lake Kaweah Reservoir also increased compared to the previous month, storing 138,181 acre-feet by the end of December. Lake Kaweah's inflow increased to 509 CFS and its release increased to 285 CFS.

II. Narrative

Field operations received one service request in December 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 six fleet vehicle inspections. Vehicle T-4 received a new exhaust gas recirculation valve, and a hydroboost brake booster assembly. T-4's A-1 Super Duty received a new throttle actuator, valve system modifications to prevent from chemical spill incidents, and refurbished the chemical solenoid. T-23 received a new transmission neutral safety switch, and the transmission

pan was re-sealed to prevent leaks. T-32 received a new clutch kit, shocks, and starter. T-50 received a new fuel pump and filter.

Regarding facility and maintenance, staff repaired the sprinklers system by the front office and behind the laboratory building. They removed broken sprinkler heads, irrigation valves, and drip lines. Behind the laboratory building, the underground sprinkler line was abandoned due to multiple broken water lines that caused ground erosion. The water lines were replaced above ground to be easily accessible for any future repairs. Staff replaced all non-functioning emergency lights in the laboratory building. The front entrance gate was repaired by re-aligning the tracks and replacing the rolling wheels of the gate for a smoother function. The interior of the Quonset was painted to give the room a fresh and updated appearance (Figures 1 & 2). Field safety equipment was inventoried and sanitized for the 2023 mosquito season. Facility yard maintenance was conducted. Hedges and other vegetation were trimmed and removed from the facility.



Figure 1. Quonset pre painting project.



Figure 2. Quonset post painting update.

Routine mosquito surveillance did not take place in December. Laboratory staff focused on preparing the annual report, routine maintenance, and repairing mosquito traps. They also began preparing posters and presentations for the Mosquito and Vector Control Association of California Annual Conference and attended continuing education events to maintain their California Department of Public Health (CDPH) Vector Control Technician certifications.

The year-end summary informational sheet, “At-a-Glance” was updated with the most up-to-date information for the 2022 year (Figure 3).

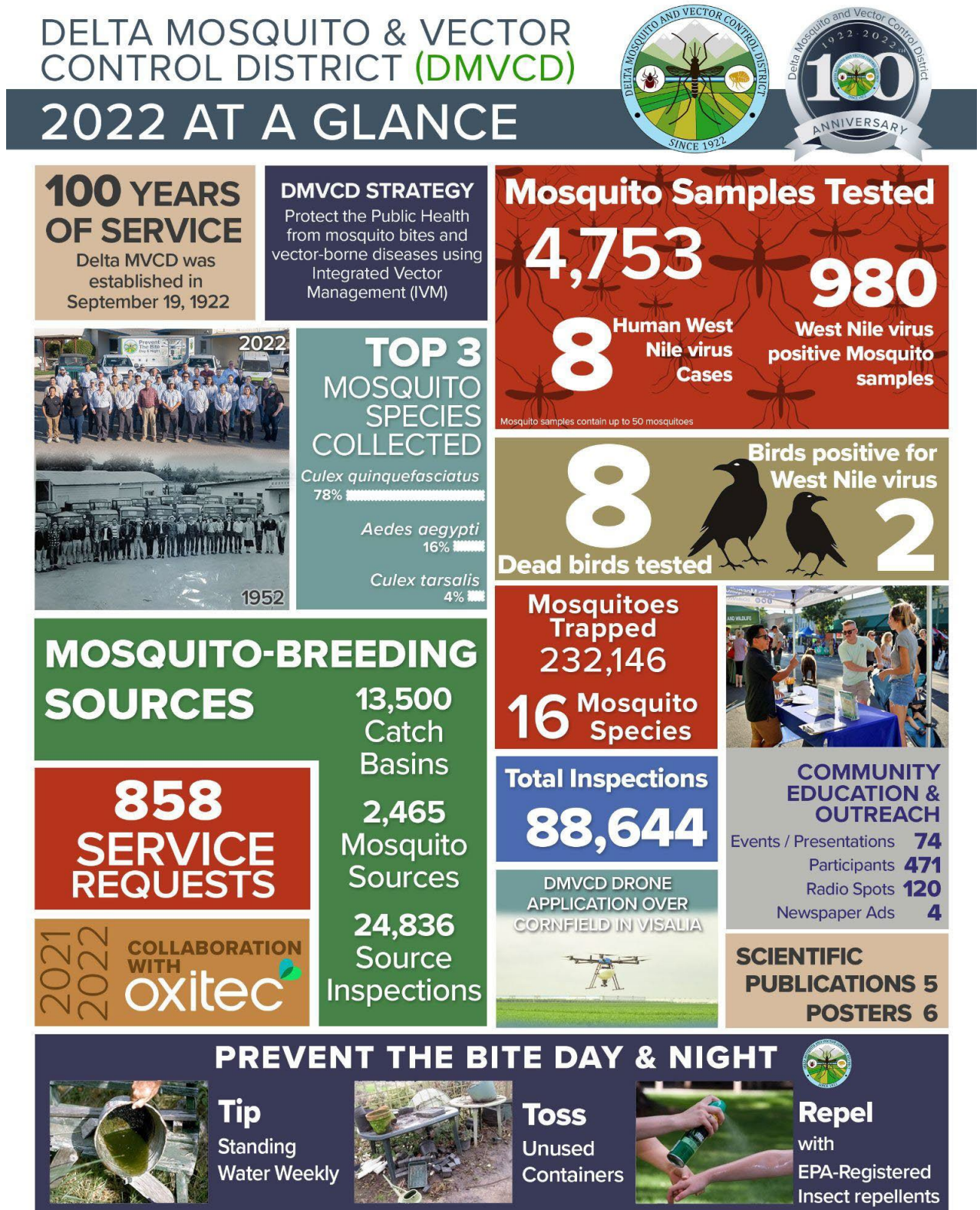


Figure 3. An updated 2022 year “At-a-Glance” information sheet.

There were no homeowner mosquitofish requests in December. Approximately 4,225 mosquitofish fry were produced in December 2022 and none in December 2021.

In 2022 and 2021, no mosquito larvae samples were collected and brought to the laboratory for species identification or resistance testing in December. Susceptible *Culex quinquefasciatus*, *Cx. tarsalis*, and *Aedes aegypti* colonies were maintained for insecticide resistance testing.

There was one service request in December:

2022 Service Request Summary

2022	Mosquito-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
September	5	21	63	22	2	113
October	5	8	47	15	0	75
November	1	0	25	8	0	34
December	0	1	0	0	0	1
Total	68	108	282	171	3	632

III. Vector and Disease Surveillance

Delta MVCD Summaries

Humans: No human cases of West Nile virus (WNV) in DMVCD were reported by the Public Health Department in December.

Birds: No dead birds were reported in December.

Mosquitoes: Routine mosquito surveillance ended for the year. In 2022, a total of 977 mosquito samples tested positive for WNV, six for St. Louis Encephalitis virus (SLEV), and three for both WNV and SLEV out of 4,753 mosquito samples tested.

State Surveillance:

Humans: Provisional data for 2022 showed 170 human cases of WNV from 27 counties and 12 SLEV human cases from six counties.

Birds: In 2022, 186 dead birds tested positive for WNV.

Mosquitoes: In 2022, 3,165 mosquito samples tested positive for WNV and 153 mosquito samples tested positive for SLEV.

IV. Expenditures & Revenues – 2022/23

TOTAL BUDGET \$4,958,310.00

EXPENDITURES – July 1, 2022 – December 31, 2022

Salaries	\$1,621,864.70
Services & Supplies	\$682,063.78
Tax Admin Fee	\$39,947.00
Capital	\$60,902.75
Long Term Debt	\$0.00
TOTAL EXPENDITURES	\$2,404,778.23

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

July	\$1,120.28
August	\$0.00
September	\$19,435.29
October	\$3,534.31
November	\$6,595.69
December	\$2,409,228.69
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	2,144	93.05

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.