

# **DELTA VECTOR CONTROL DISTRICT**

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## **REPORT OF THE MANAGER September 2019**

### **I. Water and Weather**

Temperatures began to cool slightly in September. The average high temperature for the month was 91.4°F, and the average low was 58.6 °F, with 0.00 inches of rainfall reported as preliminary data by the National Weather Service, Hanford Station. The 30-year seasonal averages for high and low temperature in September are 87.7°F and 60.3°F respectively, with the 30-year average rainfall reported as 0.15 inches by the National Oceanic and Atmospheric Administration.

Water storage at Pine Flat Reservoir decreased over the course of September, going down 13%, to be to be 555,291 acre-feet. By the end of the month Pine Flat Reservoir's inflow decreased by nearly 45%, to 872 cubic feet per second (CFS), while the release decreased by over 60% to 1,692 CFS. Lake Kaweah Reservoir water storage continued to decrease during the month, by nearly 50%, to be 15,240 acre-feet at the end of the month. Lake Kaweah's inflow decreased as well, by over 50%, to 79 CFS, and its release decreased by over 85%, ending the month at 128 CFS.

### **II. Narrative**

The Delta Vector Control District laboratory staff continued its WNV surveillance program, *Aedes* surveillance program, and strategic trapping with both urban Biogents Sentinel (BG) traps and rural Encephalitis Virus Surveillance (EVS) traps through September. Gravid trap averages were similar to last year, for the month, at around 10 mosquitoes per trap per night for both years. Routed BG trap averages were decreased from last year, coming in around 21 mosquitoes per trap night, versus the 37 mosquitoes per trap night seen in 2018 for the month of September. Strategic traps are not directly comparable due to the lack of consistency in trap placement, but strategic BG traps had lower counts whereas the EVS traps were higher, compared to last year.

More of the invasive *Aedes* have been found across the District, with a total of 13,863 individual mosquitoes caught so far. For comparison, by the end of September in 2018, a total of 2,058 *Aedes aegypti* had been caught. Residents seem to be noticing the mosquitoes more this year as well, and there's been an increase in service requests for day biting mosquitoes.

There are over a hundred inspection areas where traps have caught more than the threshold ten adult female mosquitoes. The lab had completed over 1,700 inspections for these mosquitoes, by the end of September, finding breeding in just over a quarter of them. Of those found breeding, a little more than half have required follow up inspections to verify the elimination of the breeding source. Evaluations of BTI larvicide with the backpack blower are being currently evaluated by the lab to help deal with this biting nuisance.

Arbovirus screening for West Nile Virus (WNV), St. Louis Encephalitis Virus (SLEV), and Western Equine Encephalitis Virus (WEEV) continued in September. A total of 56 mosquito samples tested positive for WNV in September, and 28 tested positive for SLEV, out of the 568 total samples that were tested in September. So far, no samples have tested positive for Western Equine Encephalitis Virus (WEEV).

Weed control treatments were kept within a 16 day return interval for most of September and were halted on September 20<sup>th</sup> due to seasonal slow growth. BTI treatment scheduled has been maintained as well as the twice weekly oil treatments to the eight dairies on the Northwest of Visalia. Requested oil treatments to lagoons increased due to weather change and the large acreage of corn silage harvested. Catch Basin treatments remained on schedule. Adulticide treatments continued through the first week of September as virus and abundance remained high, and weather conditions allowed. The borrowed ULV vehicle and replacement chemical was returned to Kings MAD on September 20<sup>th</sup> due to the drop in Minimal Infection Rate and cooler weather. On September 26<sup>th</sup> the remaining two House mosquito seasonal employees and the three Weed/ Larval seasonal employees were laid off. Zone Technicians are covering treatments to dairy lagoons, catch basins, and House mosquito sources along with their respective zone work. Seasonal Lab employees will remain until trapping ceases and they are no longer needed. The WALs skid was droplet tested on September 19<sup>th</sup> with poor results, and was retested on September 24<sup>th</sup> at different conditions with good results. A dry chemical mixing skid was ordered to facilitate the larger quantities needed to fill the WALs for applications. One trial site has been chosen as well as a few other sites with large numbers of *Aedes aegypti* to be treated.

There were two hundred and sixty-three service requests during the month of August:

#### 2019 Service Request Summary

	<b>Fish</b>	<b>Inspection</b>	<b>Mosquito</b>	<b>Source</b>	<b>Other</b>	<b>Total</b>
<b>January</b>	0	4	1	1	1	<b>7</b>
<b>February</b>	0	9	0	0	0	<b>9</b>
<b>March</b>	3	14	0	4	0	<b>21</b>
<b>April</b>	7	29	27	29	0	<b>92</b>
<b>May</b>	5	23	23	25	0	<b>76</b>
<b>June</b>	9	25	116	58	0	<b>208</b>

<b>July</b>	6	31	284	85	8	<b>414</b>
<b>August</b>	11	34	228	94	5	<b>372</b>
<b>September</b>	8	30	179	43	3	<b>263</b>
<b>Total</b>	<b>49</b>	<b>199</b>	<b>858</b>	<b>339</b>	<b>17</b>	<b>1462</b>

**III. Vector and Disease Surveillance**

Delta VCD Summaries

Humans:

As of September 25, 2019, 2 confirmed human cases of neuroinvasive WNV, 5 probable cases of neuroinvasive WNV, and 6 probable cases of non-neuroinvasive WNV have been reported from within the district borders to Delta VCD. At this time last year there were no cases reported from within district borders.

Birds:

During the month of September, 19 dead birds were reported within Tulare County, 15 within the city of Visalia, one from the city of Tipton, and three from the city of Tulare. One of the birds from within the district met the requirements for arbovirus testing and tested positive for WNV. There have been a total of 27 testable dead birds from within the district in 2019, and 16 of them have tested WNV positive.

Mosquito:

Mosquito abundance data was collected weekly from 172 fixed gravid trap locations, 60 fixed BG trap locations, approximately 20 strategic BG trap locations, and approximately 20 strategic EVS trap locations. A total of 3,691 mosquito samples, each consisting of between 10 and 50 female mosquitoes, have been tested so far this year, with 771 samples testing positive for WNV, 86 samples testing positive for SLEV, and no samples testing positive for WEEV. Samples have tested positive from across the entire district.

**State Surveillance:**

Humans:

As of September 27, 2019, 112 human cases of WNV have been detected across the state of California, in 17 counties, including three fatalities. 16 asymptomatic infections have also been reported from 11 counties. At this date in 2018, 114 human cases of WNV had been detected in 25 counties. Additionally, 5 human cases of SLEV have been reported from three counties, Fresno, Kern and Imperial. There were no human cases for SLEV reported at this time last year.

Birds:

As of September 27, 2019, 175 birds have tested positive for WNV from 18 counties. At this date in 2018, 469 WNV positive birds had been reported from 20 counties.

Mosquitoes:

As of September 27, 2019, 3,126 mosquito samples have tested positive for WNV from 24 counties. Additionally, 320 mosquito samples from seven counties have tested positive for SLEV from 12 counties. At this date in 2018, 1,889 mosquito samples had tested positive for WNV from 28 counties, and 370 mosquito samples had tested positive for SLEV from eight counties.

**IV. Expenditures & Revenues – 2019/20**

TOTAL BUDGET \$4,053,625.97

EXPENDITURES – July 1, 2019 – September 30, 2019

Salaries	\$792,676.84
Services & Supplies	\$325,755.81
Tax Admin Fee	\$0
Capital	\$21,632.91
Building Improvements	\$4,605.00
<b>TOTAL EXPENDITURES</b>	<b>\$1,144,670.56</b>

REVENUE RECEIVED – July 1, 2019 – September 30, 2019

July	\$356.00
August	\$82.30
September*	
<b>TOTAL REVENUE TO DATE</b>	<b>\$438.30</b>

**V. Time Sheet Summary**

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Available for Work	Pct. Of Hrs Avail for Work
<b>July</b>	<b>4928</b>	<b>94.25</b>	<b>4833.75</b>	<b>98.08</b>
<b>August</b>	<b>5104</b>	<b>106.00</b>	<b>4998.00</b>	<b>97.93</b>
<b>September</b>	<b>4400</b>	<b>71.25</b>	<b>4328.75</b>	<b>98.38</b>

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.

*\*September Revenue not available from Tulare County as of 10/4/19.*