

# **DELTA VECTOR CONTROL DISTRICT**

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## **REPORT OF THE MANAGER MAY 2019**

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

Temperatures fluctuated wildly in May with a large decrease in temperature, an increase in precipitation in the middle of the month, and followed by a rapid increase in temperature. The average high temperature for the month was 79.5°F, and the average low was 53.4°F, with 1.83 inches of rainfall reported as preliminary data by the National Weather Service, Hanford Station. The 30-year seasonal averages for May are 55.7°F and 81.6°F respectively, with the seasonal average rainfall reported as 0.35 inches.

Water storage at Pine Flat Reservoir increased to 742,854 acre-feet. By the end of the month Pine Flat Reservoir's inflow decreased to 7,770 cubic feet per second (CFS), while the release increased by over 130% to 9,197 CFS. Lake Kaweah Reservoir water storage increased during the month, by approximately 15%, to be 149,064 acre-feet at the end of the month. Lake Kaweah's inflow decreased slightly, to 2,039 CFS, while its release nearly doubled, ending the month at 2,462 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. Because of the cold snap and precipitation in the middle of the month, traps were not able to be set consistently. Gravid trap averages were down from last year, at only 13 mosquitoes per trap per night, versus the 26 mosquitoes per trap per night we saw in 2018. Routed BG trap averages were slightly down, coming in around 15 mosquitoes per trap per night, versus the 16 mosquitoes per trap per night we got in 2018. Strategic traps aren't directly comparable due to the lack of consistency in trap placement, but despite the temperatures both strategic BG traps and EVS traps had higher averages than last year.

More of the invasive *Aedes* have been found across the District, with a total of 146 individual mosquitoes caught so far. For comparison, by the end of May in 2018, a total of 15 *Aedes aegypti* had been caught. To help handle the anticipated increase in both service requests and inspections, two additional seasonal lab staff were hired as an inspection crew. Both individuals have completed a bachelor’s in biology and started in mid-May.

Arbovirus screening officially began in May, with five mosquito collections testing positive for disease. The first detection of West Nile Virus (WNV) was from a sample collected on 5/15 from South West Visalia. This was the first detection of disease this year from Tulare County. Lab staff worked with the public health department in order to create a press release to notify citizens of the detection. On 5/24, two additional samples from South West Visalia tested positive for WNV, and one sample from the same area tested positive for St. Louis Encephalitis Virus (SLEV). This was the first detection of SLEV for the entire state. At the end of the month an additional detection of SLEV was made, also from South West Visalia. So far, no samples have tested positive for Western Equine Encephalitis Virus (WEEV).

St. Johns and Kaweah rivers started water deliveries the first week of May, which has increased treatments needed for all Technicians. May storms increased water releases in the river systems to flood control levels. Aerial photos were taken of Visalia, Goshen, and Farmersville the first week of May. The House mosquito crew, assisted by available lab staff, began inspections of marked Aerial locations the first week of May. The second aerial treatment to the Santa Fe Aggregates site was made on May 18<sup>th</sup>, one week late due to weather and plane availability. Due to the weather conditions during the month, very few post emergent weed treatments were made. Catch basin treatments are on schedule.

There were seventy-six service requests during the month of May:

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>Total</b>	<b>15</b>	<b>79</b>	<b>51</b>	<b>59</b>	<b>1</b>	<b>205</b>

**III. Vector and Disease Surveillance**

**Delta VCD Summaries**

Humans:

No human cases of vector-borne disease have been reported to Delta VCD in 2019 to date.

Birds:

During the month of May, ten dead birds were reported within Tulare County, eight within the city of Visalia, one from Exeter and one from Tulare. Two birds from within the district met the requirements for arbovirus testing, and did not test positive for WNV, SLEV or WEEV.

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 508 mosquito samples, each consisting of between 10 and 50 female mosquitoes, have been tested so far this year, with 3 samples testing positive for WNV, 2 samples testing positive for SLEV, and no samples testing positive for WEEV. So far all positive samples have come from South West Visalia.

**State Surveillance:**

Humans:

As of May 31<sup>st</sup>, 2019, no human cases of WNV have been detected across the state of California. At this date in 2018, no human cases had been detected.

Birds:

As of May 31<sup>st</sup>, 2019, one bird had tested positive for WNV from San Diego County. At this date in 2018, nine WNV positive birds had been reported from five different counties.

Mosquitoes:

As of May 31<sup>st</sup>, 2019, 41 mosquito samples have tested positive for WNV from three counties, Riverside, Tulare, and Orange. Additionally, 2 mosquito samples from Tulare County have tested positive for SLEV. At this date in 2018, three mosquito samples had tested positive for WNV from Alameda, Sacramento, and San Bernardino County, and no mosquito samples had tested positive for SLEV.

**IV. Expenditures & Revenues – 2018/19**

TOTAL BUDGET \$3,092,198.15

EXPENDITURES – July 1, 2018 – May 31, 2019

Salaries	\$1,966,333.84
Services & Supplies	\$532,385.25
Tax Admin Fee	\$59,174.00
Capital	\$58,610.66
Building Improvements	\$80,327.14
<b>TOTAL EXPENDITURES</b>	<b>\$2,696,830.89</b>

REVENUE RECEIVED – July 1, 2018 – April 30, 2019

July	\$47.38
August	\$262.76
September	\$14,274.20
October	\$1,338.16
November	\$1,280.52

December	\$1,322,084.51
January	\$356,387.57
February	\$5,843.24
March	\$19,739.58
April	\$790,056.90
May	\$352,846.06
<b>TOTAL REVENUE TO DATE</b>	<b>\$2,864,160.88</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>4320</b>	<b>66.50</b>	<b>4253.50</b>	<b>98.46</b>
<b>August</b>	<b>5152</b>	<b>118.50</b>	<b>5033.50</b>	<b>97.70</b>
<b>September</b>	<b>3792</b>	<b>88.25</b>	<b>3703.75</b>	<b>97.68</b>
<b>October</b>	<b>3160</b>	<b>50.25</b>	<b>3109.75</b>	<b>98.41</b>
<b>November</b>	<b>2128</b>	<b>94.95</b>	<b>2033.05</b>	<b>95.54</b>
<b>December</b>	<b>1736</b>	<b>86.75</b>	<b>1649.25</b>	<b>95.01</b>
<b>January</b>	<b>2352</b>	<b>64.00</b>	<b>2288.00</b>	<b>97.28</b>
<b>February</b>	<b>2128</b>	<b>85.25</b>	<b>2042.75</b>	<b>96.00</b>
<b>March</b>	<b>3161</b>	<b>58.50</b>	<b>3102.50</b>	<b>98.15</b>
<b>April</b>	<b>5280</b>	<b>60.25</b>	<b>5219.75</b>	<b>98.86</b>
<b>May</b>	<b>5248</b>	<b>95.86</b>	<b>5152.14</b>	<b>98.18</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.