

## California Arbovirus Surveillance Bulletin #1

Week 16 Friday, April 17, 2020



### Weekly Update

#### **Humans**

No human infections have been reported in 2020.

#### 2019 Final Summary

**West Nile virus:** In 2019, a total of 225 symptomatic and 18 asymptomatic infections with West Nile virus (WNV) were reported from 28 counties; incidence was highest (5.0 cases per 100,000 persons) in Fresno and Tulare counties. Of the 225 symptomatic cases, 147 (65%) had neuroinvasive disease and 6 (2.7%) fatalities were reported. The median age of all cases was 59 years (range, 10-93 years) and 136 (60%) were male. Dates of symptom onset ranged from May 12 to November 19, 2019.

**St. Louis encephalitis virus:** In 2019, six cases of St. Louis encephalitis virus (SLEV) disease were reported from four counties. All cases had neuroinvasive disease and no fatalities were reported. The median age of all cases was 64 years and four (67%) were male. Dates of symptom onset ranged from July 14 to September 13, 2019.

#### **Dead Birds**

To date in 2020, three WNV positive dead birds have been reported from Santa Clara County. At this time last year, one WNV positive dead bird had been reported from one county (San Diego).

#### **Mosquito Pools**

No positive mosquito pools have been reported in 2020. At this time last year, one WNV positive mosquito pool had been reported from one county (Orange).

#### **Sentinel Chickens**

No seroconversions have been reported in 2020.

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*Website Information:* For updated information on WNV in California, please visit the California WNV website, [www.westnile.ca.gov](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.maps.calsurv.org](http://www.maps.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC websites: [www.cdc.gov](http://www.cdc.gov) and [www.cdc.gov/arnonet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arnonet/maps/ADB_Diseases_Map/index.html)

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| YTD WNV Activity by Element and County, 2020 |          |            |                |                   |
|--|----------|------------|----------------|-------------------|
| County                                       | Humans   | Dead Birds | Mosquito Pools | Sentinel Chickens |
| Santa Clara                                  |          | 3          |                |                   |
| <b>Totals</b>                                | <b>0</b> | <b>3</b>   | <b>0</b>       | <b>0</b>          |

| 2019 & 2020 YTD West Nile Virus Comparisons |           |           |
|---|-----------|-----------|
|   | 2019      | 2020      |
| Total # Dead Bird Reports                   | 896       | 728       |
| # Positive Counties                         | 2         | 1         |
| # Human Cases                               | 0         | 0         |
| # Positive Dead Birds / # Tested            | 1 / 178   | 3 / 110   |
| # Positive Mosquito Pools / # Tested        | 1 / 1,991 | 0 / 1,057 |
| # Seroconversions / # Tested                | 0 / 129   | 0 / 67    |

### TESTING SUMMARIES

#### Humans

|             |      | WNV | SLE | WEE |
|-------------|------|-----|-----|-----|
| Human Cases | Week | 0   | 0   | 0   |
|             | YTD  | 0   | 0   | 0   |

#### Dead Birds

|            |      | Number Tested | WNV Positive |
|------------|------|---------------|--------------|
| Dead Birds | Week | 4             | 0            |
|            | YTD  | 110           | 3            |

#### Chickens

|              |      | Number Tested | WNV Positive | SLEV Positive | WEEV Positive |
|--------------|------|---------------|--------------|---------------|---------------|
| Chicken Sera | Week | 67            | 0            | 0             | 0             |
|              | YTD  | 67            | 0            | 0             | 0             |

#### Mosquitoes

|                |      | Positive / Total Tested |           |           |       |       |       |
|----------------|------|-------------------------|-----------|-----------|-------|-------|-------|
|                |      | WNV                     | SLEV      | WEEV      | CHIK  | DENV  | ZIKA  |
| Mosquito Pools | Week | 0 / 328                 | 0 / 328   | 0 / 328   | 0 / 0 | 0 / 0 | 0 / 0 |
|                | YTD  | 0 / 1,057               | 0 / 1,032 | 0 / 1,032 | 0 / 1 | 0 / 1 | 0 / 1 |

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### POSITIVES

#### Dead Birds

| County      | Agency          | City     | Zip Code | Species       | Date Reported | Virus |
|-------------|-----------------|----------|----------|---------------|---------------|-------|
| Santa Clara | Santa Clara VCD | San Jose | 95131    | American Crow | 2/3/2020      | WNV   |
| Santa Clara | Santa Clara VCD | San Jose | 95124    | American Crow | 3/9/2020      | WNV   |
| Santa Clara | Santa Clara VCD | San Jose | 95124    | American Crow | 3/9/2020      | WNV   |

### TEST PROTOCOLS

#### Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing with a plaque reduction neutralization test (PRNT).

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#### Dead Birds

Oral swab samples collected from bird carcasses are tested at the UC Davis Arbovirus Research and Training laboratory (DART) or at a local agency for West Nile virus by RT-qPCR.

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#### Sentinel Chickens:

Dried blood spot samples from sentinel chickens are tested at the California Department of Public Health Vector-Borne Disease Laboratory for IgG antibodies to West Nile, St. Louis encephalitis, and western equine encephalomyelitis viruses by an EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

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#### Mosquito Pools:

Mosquito pools are tested at DART or at a local agency for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex RT-qPCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested at DART for chikungunya, dengue, and Zika viral RNA by a separate RT-qPCR.

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