

California Arbovirus Surveillance Bulletin #9

Week 23 Friday, June 9, 2023



WEEKLY UPDATE

Humans

No human infections have been reported in 2023.

Dead Birds

A total of 2 new West Nile virus (WNV) positive dead birds were reported this week from Sacramento County (2). In 2023, 16 WNV positive dead birds have been reported in 5 counties. At this time last year, 8 WNV positive dead birds had been reported from 5 counties.

Mosquito Pools

West Nile virus

A total of 10 WNV positive mosquito pools were reported this week from 4 counties: Los Angeles (3), Sacramento (2), San Joaquin (4), and Stanislaus (1). **This is the first detection of WNV activity in San Joaquin and Stanislaus counties this year.** In 2023, 15 WNV positive mosquito pools have been reported from 7 counties. At this time last year, 25 WNV positive mosquito pools had been reported from 6 counties.

St. Louis encephalitis virus

A single St. Louis encephalitis virus (SLEV) positive mosquito pool was reported this week from Riverside County. **This is the first detection of SLEV activity in Riverside County this year.** In 2023, 2 SLEV positive mosquito pools from 2 counties have been reported: Kern (1) and Riverside (1). At this time last year, 0 SLEV positive pools had been reported.

Sentinel Chickens

No seroconversions have been reported in 2023.

| 2022 & 2023 YTD West Nile Virus Comparisons | | |
|---|------------|------------|
| | 2022 | 2023 |
| Total No. Dead Bird Reports | 1,964 | 1,993 |
| No. Positive Counties | 9 | 9 |
| No. Human Cases | 0 | 0 |
| No. Positive Dead Birds / No. Tested | 8 / 434 | 16 / 350 |
| No. Positive Mosquito Pools / No. Tested | 25 / 7,590 | 15 / 9,380 |
| No. Seroconversions / No. Tested | 0 / 994 | 0 / 715 |

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| YTD WNV Activity by Element and County, 2023 | | | | | |
|--|--------|--------|------------|----------------|-------------------|
| County | Humans | Horses | Dead Birds | Mosquito Pools | Sentinel Chickens |
| Alameda | | | 2 | 1 | |
| Kern | | | | 1 | |
| Los Angeles | | | 2 | 5 | |
| Riverside | | | 1 | | |
| Sacramento | | | 4 | 2 | |
| San Joaquin | | | | 4 | |
| Santa Clara | | | 7 | | |
| Stanislaus | | | | 1 | |
| Tulare | | | | 1 | |
| Totals | | | 16 | 15 | |

TESTING SUMMARIES

| | | WNV | SLEV | WEEV |
|--------------------|------|-----|------|------|
| Human Cases | Week | 0 | 0 | 0 |
| | YTD | 0 | 0 | 0 |

| | | Positive / Total Tested | | | | | |
|-----------------------|------|-------------------------|-----------|-----------|--------|--------|--------|
| | | WNV | SLEV | WEEV | CHIK | DENV | ZIKA |
| Dead Birds | Week | 2 / 50 | | | | | |
| | YTD | 16 / 350 | | | | | |
| Chicken Sera | Week | 0 / 130 | 0 / 130 | 0 / 130 | | | |
| | YTD | 0 / 715 | 0 / 715 | 0 / 715 | | | |
| Mosquito Pools | Week | 10 / 1,884 | 1 / 1,850 | 0 / 1,850 | 0 / 0 | 0 / 0 | 0 / 0 |
| | YTD | 15 / 9,380 | 2 / 9,345 | 0 / 9,345 | 0 / 98 | 0 / 98 | 0 / 98 |

NEW POSITIVES

Dead Birds

| County | Agency | City | Zip Code | Species | Date Reported | Virus |
|------------|----------------------|------------|----------|----------------------|---------------|-------|
| Sacramento | Sacramento-Yolo MVCD | Sacramento | 95829 | Yellow-billed Magpie | 6/1/2023 | WNV |
| Sacramento | Sacramento-Yolo MVCD | Sacramento | 95833 | American Crow | 6/5/2023 | WNV |

Mosquito Pools

| County | Site Code | Pool # | Species | City | # in Pool | Trap | Collected | Virus |
|-------------|-----------|--------|----------------------|--------|-----------|------|-----------|-------|
| Los Angeles | SGVA 1216 | 154 | Cx. quinquefasciatus | Covina | 42 | GRVD | 6/8/2023 | WNV |
| Los Angeles | SGVA 1217 | 149 | Cx. quinquefasciatus | Covina | 50 | GRVD | 6/8/2023 | WNV |

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| | | | | | | | | |
|-------------|-------------|------|----------------------|------------|-----|------|----------|------|
| Los Angeles | SGVA 953 | 144 | Cx. quinquefasciatus | Covina | 50 | GRVD | 6/6/2023 | WNV |
| Riverside | COAV 121 | 2605 | Cx. tarsalis | Mecca | 50 | CO2 | 6/6/2023 | SLEV |
| Sacramento | SAYO 212021 | 685 | Cx. pipiens | Sacramento | 3 | GRVD | 6/6/2023 | WNV |
| Sacramento | SAYO 261003 | 538 | Cx. tarsalis | Isleton | 30 | CO2 | 6/2/2023 | WNV |
| San Joaquin | SJCM 8161 | 292 | Cx. tarsalis | Ripon | 100 | CO2 | 6/6/2023 | WNV |
| San Joaquin | SJCM 8199 | 296 | Cx. tarsalis | Manteca | 50 | CO2 | 6/6/2023 | WNV |
| San Joaquin | SJCM 8199 | 297 | Cx. tarsalis | Manteca | 50 | CO2 | 6/6/2023 | WNV |
| San Joaquin | SJCM 8222 | 315 | Cx. tarsalis | Stockton | 50 | CO2 | 6/8/2023 | WNV |
| Stanislaus | TRLK 1312 | 457 | Cx. tarsalis | Ceres | 50 | CO2 | 6/6/2023 | WNV |

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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).

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.

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.

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.

Website Information: For updated information on WNV in California, please visit the California WNV website, <https://westnile.ca.gov>, or the California Vector-Borne Disease Surveillance System website, <https://maps.vectorsurv.org>.

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