

California Arbovirus Surveillance Bulletin #16

Week 24 Friday, June 19, 2015



Weekly Update

Humans

No human infections have been reported in 2015.

Dead Birds

Sixteen West Nile virus (WNV) positive dead birds were reported this week from the following 10 counties: Los Angeles (1), Riverside (2), Sacramento (2), San Diego (1), San Mateo (1), Shasta (1), Tulare (3), Ventura (1), Yolo (3), and Yuba (1). These are the first WNV positive birds from Los Angeles, Yolo, and Yuba counties. **This is the first detection of WNV activity in Shasta and Ventura counties this year.** In 2015, 77 birds have tested positive for WNV from 16 counties. At this time last year, 144 WNV positive birds had been detected in 15 counties.

Mosquito Pools

A total of 36 WNV positive mosquito pools were reported this week from the following eight counties: Contra Costa (2), Fresno (1), Kern (3), Riverside (4), San Diego (1), Tulare (23), Yolo (1), and Yuba (1). **This is the first detection of WNV activity in Contra Costa and Yuba counties this year.** In 2015, 120 WNV positive mosquito pools have been reported from 12 counties. At this time last year, 85 WNV positive mosquito pools had been detected from 14 counties.

Sentinel Chickens

No new seroconversions were reported this week. In 2015, one WNV positive chicken has been reported from Placer County. At this time last year, one WNV seroconversion had been reported from one county (Los Angeles).

| 2014 & 2015 YTD West Nile Virus Comparisons | | |
|---|------------|-------------|
| | 2014 | 2015 |
| Total # Dead Bird Reports | 3,376 | 4,136 |
| # Positive Counties | 17 | 23 |
| # Human Cases | 0 | 0 |
| # Positive Dead Birds / # Tested | 144 / 660 | 77 / 922 |
| # Positive Mosquito Pools / # Tested | 85 / 6,277 | 120 / 8,704 |
| # Seroconversions / # Tested | 1 / 4,358 | 1 / 4,102 |

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westmile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westmilemaps.usgs.gov

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| YTD Activity by Element and County, 2015 | | | | |
|---|----------|------------|----------------|-------------------|
| County | Humans | Dead Birds | Mosquito Pools | Sentinel Chickens |
| Alameda | | 2 | | |
| Contra Costa | | | 2 | |
| Fresno | | | 2 | |
| Kern | | | 4 | |
| Kings | | | 4 | |
| Los Angeles | | 1 | 2 | |
| Marin | | 1 | | |
| Orange | | | 4 | |
| Placer | | | | 1 |
| Riverside | | 4 | 28 | |
| Sacramento | | 3 | | |
| San Diego | | 32 | 3 | |
| San Mateo | | 3 | | |
| Santa Barbara | | | 1 | |
| Santa Clara | | 15 | | |
| Shasta | | 1 | | |
| Solano | | 1 | | |
| Sonoma | | 2 | | |
| Stanislaus | | 3 | | |
| Tulare | | 4 | 67 | |
| Ventura | | 1 | | |
| Yolo | | 3 | 2 | |
| Yuba | | 1 | 1 | |
| Totals | 0 | 77 | 120 | 1 |

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 | 122 | 16 |
| | YTD | 922 | 77 |

Chickens & Mosquitoes

| | | Number Tested | WNV Positive | SLEV Positive | WEEV Positive |
|----------------|------|---------------|--------------|---------------|---------------|
| Chicken Sera | Week | 353 | 0 | 0 | 0 |
| | YTD | 4,102 | 1 | 0 | 0 |
| Mosquito Pools | Week | 1,255 | 36 | 0 | 0 |
| | YTD | 8,704 | 120 | 0 | 0 |

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NEW POSITIVES

Dead Birds

| County | Agency | City | Zip | Species | Reported | Virus |
|-------------|----------------------------|-----------------|-------|----------------------|-----------|-------|
| Los Angeles | Los Angeles Co West VCD | Westchester | 90045 | American Crow | 6/15/2015 | WNV |
| Riverside | Northwest Mosquito VCD | Lake Elsinore | 92530 | House Finch | 6/3/2015 | WNV |
| Riverside | Northwest Mosquito VCD | Norco | 92860 | American Crow | 6/3/2015 | WNV |
| Sacramento | Sacramento-Yolo MVCD | Sacramento | 95820 | American Robin | 6/11/2015 | WNV |
| Sacramento | Sacramento-Yolo MVCD | Sacramento | 95831 | American Crow | 6/17/2015 | WNV |
| San Diego | San Diego Co VCP | Rancho Santa Fe | 92067 | American Crow | 6/15/2015 | WNV |
| San Mateo | San Mateo Co MAD | Menlo Park | 94025 | Western Scrub-Jay | 6/12/2015 | WNV |
| Shasta | Shasta MVCD | Anderson | 96007 | Yellow-billed Magpie | 6/17/2015 | WNV |
| Tulare | Delta VCD | Visalia | 93291 | Western Scrub-Jay | 6/9/2015 | WNV |
| Tulare | Delta VCD | Visalia | 93277 | American Crow | 6/15/2015 | WNV |
| Tulare | Delta VCD | Visalia | 93277 | American Crow | 6/17/2015 | WNV |
| Ventura | Ventura Co Env Health Dept | Simi Valley | 93063 | American Crow | 6/10/2015 | WNV |
| Yolo | Sacramento-Yolo MVCD | Davis | 95616 | American Crow | 6/11/2015 | WNV |
| Yolo | Sacramento-Yolo MVCD | Davis | 95616 | American Crow | 6/11/2015 | WNV |
| Yolo | Sacramento-Yolo MVCD | Davis | 95618 | Western Scrub-Jay | 6/18/2015 | WNV |
| Yuba | Sutter-Yuba MVCD | Marysville | 95901 | American Crow | 6/9/2015 | WNV |

Mosquitoes

| County | Site Code | Pool # | Species | City | # in Pool | Trap Type | Collected | Virus |
|--------------|-----------|--------|----------------------|-------------|-----------|-----------|-----------|-------|
| Contra Costa | CNTR2543 | 98 | Cx. tarsalis | Oakley | 50 | CO2 | 6/15/2015 | WNV |
| Contra Costa | CNTR7402 | 86 | Cx. tarsalis | Oakley | 22 | CO2 | 6/15/2015 | WNV |
| Fresno | CNSL4024 | 307 | Cx. quinquefasciatus | Selma | 21 | GRVD | 6/16/2015 | WNV |
| Kern | KERN2003 | 138 | Cx. quinquefasciatus | Bakersfield | 50 | GRVD | 6/12/2015 | WNV |
| Kern | KERN2025 | 137 | Cx. quinquefasciatus | Bakersfield | 28 | GRVD | 6/12/2015 | WNV |
| Kern | KERN2027 | 122 | Cx. quinquefasciatus | Bakersfield | 50 | GRVD | 6/10/2015 | WNV |
| Riverside | COAV311 | 1775 | Cx. quinquefasciatus | Indio | 9 | CO2 | 6/18/2015 | WNV |
| Riverside | COAV421 | 1777 | Cx. quinquefasciatus | Indio | 45 | CO2 | 6/18/2015 | WNV |
| Riverside | NWST1004 | 18 | Cx. quinquefasciatus | Norco | 18 | CO2 | 6/9/2015 | WNV |
| Riverside | RIVR90 | 200 | Cx. tarsalis | Nuevo | 50 | CO2 | 6/17/2015 | WNV |
| San Diego | SAND466 | 67 | Cx. quinquefasciatus | San Diego | 41 | GRVD | 6/5/2015 | WNV |
| Tulare | DLTA8426 | 363 | Cx. quinquefasciatus | Visalia | 31 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8426 | 364 | Cx. quinquefasciatus | Visalia | 23 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8426 | 365 | Cx. quinquefasciatus | Visalia | 40 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8426 | 366 | Cx. quinquefasciatus | Visalia | 14 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8426 | 367 | Cx. quinquefasciatus | Visalia | 12 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8519 | 333 | Cx. quinquefasciatus | Visalia | 12 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8521 | 373 | Cx. quinquefasciatus | Visalia | 10 | GRVD | 6/17/2015 | WNV |
| Tulare | DLTA8530 | 337 | Cx. quinquefasciatus | Visalia | 11 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8530 | 338 | Cx. quinquefasciatus | Visalia | 39 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8530 | 339 | Cx. quinquefasciatus | Visalia | 50 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8530 | 340 | Cx. quinquefasciatus | Visalia | 50 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8530 | 341 | Cx. quinquefasciatus | Visalia | 11 | GRVD | 6/12/2015 | WNV |

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| Tulare | DLTA8530 | 342 | Cx. quinquefasciatus | Visalia | 50 | GRVD | 6/12/2015 | WNV |
| Tulare | DLTA8531 | 378 | Cx. quinquefasciatus | Visalia | 41 | GRVD | 6/18/2015 | WNV |
| Tulare | DLTA8531 | 379 | Cx. quinquefasciatus | Visalia | 23 | GRVD | 6/18/2015 | WNV |
| Tulare | DLTA8531 | 380 | Cx. quinquefasciatus | Visalia | 46 | GRVD | 6/18/2015 | WNV |
| Tulare | DLTA8531 | 381 | Cx. quinquefasciatus | Visalia | 22 | GRVD | 6/18/2015 | WNV |
| Tulare | DLTA8531 | 382 | Cx. quinquefasciatus | Visalia | 11 | GRVD | 6/18/2015 | WNV |
| Tulare | DLTA8533 | 351 | Cx. quinquefasciatus | Visalia | 12 | GRVD | 6/16/2015 | WNV |
| Tulare | DLTA9401 | 362 | Cx. quinquefasciatus | Visalia | 18 | GRVD | 6/16/2015 | WNV |
| Tulare | DLTA9403 | 358 | Cx. quinquefasciatus | Visalia | 22 | GRVD | 6/16/2015 | WNV |
| Tulare | DLTA9412 | 361 | Cx. quinquefasciatus | Visalia | 10 | GRVD | 6/16/2015 | WNV |
| Tulare | DLTA9506 | 352 | Cx. quinquefasciatus | Visalia | 10 | GRVD | 6/16/2015 | WNV |
| Yolo | SAYO146002 | 1042 | Cx. pipiens | Davis | 1 | GRVD | 6/16/2015 | WNV |
| Yuba | SUYA97 | 56 | Cx. tarsalis | Marysville | 20 | REST | 6/15/2015 | 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 or confirmation.

Dead Birds

Oral swab samples from corvids are collected onto RNA preservation cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

Sentinel Chickens:

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

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

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