

## California Arbovirus Surveillance Bulletin #13

Week 20 Friday, May 18, 2012



### WEEKLY UPDATE

#### Human Cases

No human cases have been reported in 2012.

#### Horses

No equine cases have been reported in 2012.

#### Dead Birds & Squirrels

Seven West Nile virus (WNV) positive dead birds were reported this week from four counties: Los Angeles (1), Sacramento (3), San Joaquin (2), and Santa Clara (1). This is the first indication of WNV activity in San Joaquin County in 2012. To date this year, 12 dead birds have tested positive for WNV from five counties. In addition, 11 dead birds have tested positive for chronic\* WNV infection from three counties.

At this time last year, six dead birds from four counties had tested positive for WNV.

*\*In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section began differentiating between chronic and acute infections in WNV positive dead birds. Birds considered to have chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility.*

#### Mosquito Pools

No positive mosquito pools were reported this week. In 2012, one mosquito pool from Riverside County has tested positive for WNV.

At this time last year, three mosquito pools had tested positive for WNV from two counties.

#### Sentinel Chickens

No seroconversions have been reported in 2012.

**YTD WNV Activity by Element and County, 2012**

| County        | Humans   | Horses   | Dead Birds* | Mosquito Pools | Sentinel Chickens | Squirrels |
|---------------|----------|----------|-------------|----------------|-------------------|-----------|
| Contra Costa  |          |          | 1           |                |                   |           |
| Los Angeles   |          |          | 2           |                |                   |           |
| Riverside     |          |          |             | 1              |                   |           |
| Sacramento    |          |          | 5           |                |                   |           |
| San Joaquin   |          |          | 2           |                |                   |           |
| Santa Clara   |          |          | 2           |                |                   |           |
| <b>Totals</b> | <b>0</b> | <b>0</b> | <b>12</b>   | <b>1</b>       | <b>0</b>          | <b>0</b>  |

*\*Total does not include chronic infections*

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.calsurv.org](http://www.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC website, [www.cdc.gov](http://www.cdc.gov), and the USGS website, [www.westnilemaps.usgs.gov](http://www.westnilemaps.usgs.gov)

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| 2011 & 2012 YTD West Nile Virus Comparisons |           |           |
|---------------------------------------------|-----------|-----------|
|                                             | 2011      | 2012      |
| Total # Dead Bird Reports                   | 2,115     | 2,552     |
| # Positive Counties                         | 5         | 6         |
| # Human Cases                               | 0         | 0         |
| # Horse Cases                               | 0         | 0         |
| # Positive Dead Birds / # Tested            | 6 / 423   | 12 / 496  |
| # Positive Mosquito Pools / # Tested        | 3 / 3,631 | 1 / 3,389 |
| # Seroconversions / # Tested                | 0 / 3,420 | 0 / 2,718 |
| # Positive Squirrels / # Tested             | 0 / 19    | 0 / 27    |

## TESTING SUMMARIES

### Humans and Horses

|             |      | WNV   |          | WEEV  |          | SLEV  |          |
|-------------|------|-------|----------|-------|----------|-------|----------|
|             |      | Local | Imported | Local | Imported | Local | Imported |
| Human Cases | Week | 0     | 0        | 0     | 0        | 0     | 0        |
|             | YTD  | 0     | 0        | 0     | 0        | 0     | 0        |
| Horse Cases | Week | 0     | 0        | 0     | 0        | 0     | 0        |
|             | YTD  | 0     | 0        | 0     | 0        | 0     | 0        |

### Dead Birds & Squirrels

|                |      | Number Tested | WNV Positive (recent only) |
|----------------|------|---------------|----------------------------|
| Dead Birds     | Week | 69            | 7                          |
|                | YTD  | 496           | 12                         |
| Tree Squirrels | Week | 3             | 0                          |
|                | YTD  | 27            | 0                          |

### Chickens & Mosquitoes

|                |      | Number Tested | WNV Positive | SLEV Positive | WEEV Positive |
|----------------|------|---------------|--------------|---------------|---------------|
| Chicken Sera   | Week | 473           | 0            | 0             | 0             |
|                | YTD  | 2,718         | 0            | 0             | 0             |
| Mosquito Pools | Week | 779           | 0            | 0             | 0             |
|                | YTD  | 3,389         | 1            | 0             | 0             |

## POSITIVES

| County      | Agency                      | City         | Zip   | Species                 | Reported  | Virus | Type of Infection | Method  |
|-------------|-----------------------------|--------------|-------|-------------------------|-----------|-------|-------------------|---------|
| Los Angeles | Los Angeles Co Veterinarian | Santa Monica | 90404 | American Crow           | 5/7/2012  | WNV   | Recent            | RT-PCR  |
| Sacramento  | Sacramento-Yolo MVCD        | Sacramento   | 95820 | Unknown                 | 5/9/2012  | WNV   | Recent            | RT-PCR  |
| Sacramento  | Sacramento-Yolo MVCD        | Sacramento   | 95817 | American Crow           | 5/10/2012 | WNV   | Recent            | RT-PCR  |
| Sacramento  | Sacramento-Yolo MVCD        | Sacramento   | 95829 | American Crow           | 5/15/2012 | WNV   | Recent            | RT-PCR  |
| San Joaquin | San Joaquin Co MVCD         | Manteca      | 95337 | Yellow-headed Blackbird | 5/8/2012  | WNV   | Recent            | RT-PCR  |
| San Joaquin | San Joaquin Co MVCD         | Manteca      | 95337 | Common Raven            | 5/15/2012 | WNV   | Recent            | RT-PCR  |
| Santa Clara | Santa Clara Co VCD          | San Jose     | 95129 | American Crow           | 5/7/2012  | WNV   | Recent            | VecTest |

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### Test Protocols

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#### **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.

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#### **Horses:**

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

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#### **Dead Birds and Tree Squirrels:**

Dead birds and tree squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

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#### **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 (WEEV), and St. Louis encephalitis (SLEV) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

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#### **Mosquito Pools:**

Mosquito pools are submitted to CVEC and screened for WEEV, SLEV, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation 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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