

California Arbovirus Surveillance Bulletin # 16

Week 22 Friday, June 3, 2005

Weekly Summary

Comments:

Humans:

No human cases of WNV have been reported this year.

Horses:

The California Department of Food & Agriculture has reported a three-year old quarter horse from Plumas County tested positive for WNV. This is the first equine case in 2005. The horse is recovering.

Dead Birds:

This week the hotline received 1,492 dead bird reports, for a YTD total of 16,846 reports. One out of 194 (0.5%) dead birds collected from 34 counties tested positive for WNV via RT-PCR performed by UC Davis Center for Vectorborne Diseases (CVEC). In addition, one out of three corvids (33%) tested positive for WNV via VecTest. No dead birds were tested by RAMP or immunohistochemistry.

The following bird species tested positive for WNV: American crow (1); western scrub-jay (1). See "WNV Positive Dead Birds" table for details.

Since January 1, 2005, 72 of 2,541 (3.0%) dead birds have tested positive for WNV.

Mosquito Pools:

CVEC reported three positive mosquito pools from Fresno and Imperial counties. Two pools of *Culex quinquefasciatus*, collected on 5/25 tested positive for WNV from Fresno County. A pool of *Cx. tarsalis*, collected on 5/25 in Niland (Imperial County) tested positive for western equine encephalomyelitis (WEE). This is the first detection of WEE in CA in 2005.

Sentinel Chickens:

VRDL reported no sentinel chicken seroconversions.

Website Information:

For updated information on WNV, please visit the California WNV website, www.westnile.ca.gov, the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov. Please go to the Vector website at <http://vector.ucdavis.edu/arbo.html> for flock location and more information on WNV and other vector-borne diseases.

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TEST SUMMARIES

Humans and Horses

| | | Number Tested | WNV Positive | | WEE Positive | | SLE Positive | | Other Positive | |
|---------------|------|---------------|--------------|-------|--------------|-------|--------------|-------|----------------|-------|
| | | | Imported | Local | Imported | Local | Imported | Local | Imported | Local |
| Humans Tested | Week | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | YTD | 454 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Horses Tested | Week | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | YTD | 149 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

Dead Birds

| | Number Tested | WNV Positive |
|------|---------------|--------------|
| Week | 197 | 2 |
| YTD | 2541 | 72 |

Sentinel Chickens and Mosquito Pools

| | | Number Tested | WNV Positive | WEE Positive | SLE Positive | Other Positive |
|----------------|------|---------------|--------------|--------------|--------------|----------------|
| | | | | | | |
| | YTD | 9996 | 1 | 0 | 0 | 0 |
| Mosquito pools | Week | 692 | 2 | 1 | 0 | 0 |
| | YTD | 5489 | 3 | 1 | 0 | 0 |

*Total has been adjusted to include local agency submission

Virus Isolations From Mosquito Pools:

| Virus | Mosquito species | Date Collected | ACODE | Pool # | City | County | Date Received |
|-------|------------------------|----------------|-------|--------|-------------|----------|---------------|
| WNV | Culex quinquefasciatus | 25-5 | CNSL | 72 | Burrel | Fresno | 2-June |
| WNV | Culex quinquefasciatus | 25-5 | CNSL | 73 | Raisin City | Fresno | 2-June |
| WEE | Culex tarsalis | 25-5 | COAV | 1490 | Niland | Imperial | 2-June |

WNV Positive Dead Birds Reported May 28- June 3, 2005

| Species | County | City | Zip | Date Collected | Date Tested |
|----------------------------|-------------|------------|-------|----------------|-------------|
| American Crow ¹ | Los Angeles | Long Beach | 90815 | 5/26/05 | 5/26/05 |
| Western Scrub-Jay | Tulare | Visalia | 93277 | 5/26/05 | 5/31/05 |

¹Indicates VecTest

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TEST PROTOCOLS

Dead Birds:

All bird species, except chickens, doves, and pigeons, from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Positive Vec-Tests from oral swabs from crows are no longer confirmed. Other bird species are tested by singleplex RT-PCR and confirmed with a second primer set.

Dead birds are necropsied at the California Animal Health and Food Safety (CAHFS) Laboratories and kidney tissue from the dead birds are forward to the UC Davis Center for Vectorborne Diseases (CVEC) for WNV using the PCR Taqman assay. Organ pools from PCR positive carcasses are tested using cell culture for virus isolation. The WNV Dead Bird Surveillance Coordinator, Ryan Carney, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. The VRDL performs additional testing, including plaque reduction neutralization (PRNT), on specimens from sentinel chickens from geographic areas where WNV is detected for the first time. The VRDL also forwards selected serum to CVEC for additional testing for WNV, WEE, and SLE antibodies as needed.

Mosquito Pools:

All mosquito pools are screened for WEE, SLE, 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.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch) and the Viral and Rickettsial Disease Laboratory Branch, Division of Communicable Disease Control, California Department of Health Services, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Al Hom by phone (510) 412-6252, FAX (510) 412-6263, or email [ahom@dhs.ca.gov].