

# California Arbovirus Surveillance Bulletin # 1

Week 1 Friday, January 6, 2006

## Weekly Summary

### Comments\*\*

**\*\* This Bulletin reports results from the last two weeks in December: 12/19-12/31/2005**

#### Humans:

In 2005 (as of December 30), 926 human West Nile virus (WNV) infections have been identified from the following local health jurisdictions: Alameda (1), Amador (4), Butte (25), Calaveras (2), Colusa (2), Contra Costa (11), El Dorado (1), Fresno (63), Glenn (13), Humboldt (1), Imperial (1), Kern (66), Kings (32), Los Angeles (47), Madera (19), Merced (28), Nevada (4), Orange (17), Placer (35), Plumas (1), Riverside (104), Sacramento (176), San Bernardino (34), San Diego (1), San Francisco (2), San Joaquin (36), San Mateo (1), Santa Barbara (2), Santa Clara (5), Shasta (1), Solano (5), Sonoma (1), Stanislaus (92), Sutter (9), Tehama (4), Tulare (60), Tuolumne (1), Ventura (1), Yolo (12), and Yuba (6). Of the 926 infections, 101 were initially detected in asymptomatic individuals through screening done at blood banks; 42 individuals later developed symptoms. Eight of the 101 presumptively viremic blood donors did not confirm in follow-up testing, and have subsequently been removed from the list. In addition to the individuals detected at blood banks, four individuals who had no symptoms for WNV were detected through the local health department. Of the 871 WNV cases with symptoms, 300 are classified as West Nile neuroinvasive disease cases, 519 as West Nile fever, and 52 are of unknown clinical presentation. The median age for all symptomatic cases where data is available is 51 years (range: 2-95 years). 478 (55%) of the cases are male. There have been 18 WNV-related fatalities to date in California in 2005, from Amador (1), Butte (1), Fresno (2), Kings (3), Madera (1), Riverside (5), Sacramento (1), San Bernardino (1), San Joaquin (1), Stanislaus (1), and Tulare (1) counties. The median age of the 18 fatalities was 79 years.

#### Horses:

The California Department of Food & Agriculture reported one new case of equine WNV from San Bernardino County during the period of 12/15-12/22/2005. The 2005 YTD total for the state is 456.

#### Dead Birds:

The hotline received a total of 109,358 dead bird reports in 2005. From December 19-December 31, twenty dead birds were tested for WNV; all tested negative.

The 2005 YTD total stands at 3,044 positive dead birds out of 9,199 tested (33.1%).\*

\*These numbers will change as more data become available.

#### Mosquito Pools:

WNV: CVEC reported no positive WNV mosquito pools during the week of 12/19/2005. The 2005 YTD total for the State is 1,242.

WEE: CVEC also reported no WEE positive mosquito pools during this same week. The 2005 YTD for the State is 51.

**Sentinel Chickens: WNV:** VRDL reported no seroconversions during the period of 12/19-12/29/2005. The 2005 YTD total stands at 793 seroconversions.

**WEE.** VRDL reported no WEE seroconversions during the period of 12/19-12/29/2005. The 2005 YTD total stands at 139 seroconversions.

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**Please note that unless there are objections, the winter chicken serology testing will discontinued after February 1<sup>st</sup>.**

#### Website Information:

For updated information on WNV, please visit the California WNV website, [www.westnile.ca.gov](http://www.westnile.ca.gov), the CDC website, [www.cdc.gov](http://www.cdc.gov), and the USGS website, [www.westnilemaps.usgs.gov](http://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.

## 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	40	0	5	0	0	0	0	0	0
	YTD	2,222	0	926	0	0	0	0	0	0
Horses Tested	Week	N/a	0	1	0	0	0	0	0	0
	YTD	775	0	456	0	0	0	0	0	0

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## Dead Birds

2005	Number Tested	WNV Positive
Week	20	0
YTD	9,199	3,044

## Sentinel Chickens and Mosquito Pools\*

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	149	0	0	0	0
	YTD	34,011	793	139	0	0
Mosquito pools	Week	16	0	0	0	0
	YTD	19,853	1,242	51	0	0

\*Total has been adjusted to include local agency submission

## Human Positives Reported (December 19 – January 6, 2006):

Virus	Onset Date	Status	Diagnosis	County	Age
WNV	4/xx/05	Probable	WNF	Sacramento	26
WNV	8/2/05	Probable	WNF	Stanislaus	50
WNV	9/14/05	Probable	WNND	Riverside	39
WNV	9/4/05	Probable	WNND	Riverside	41
WNV	6/xx/05	Probable	WNF	Tulare	58

## National Comments:

As of December 20, 2005, West Nile virus (WNV) activity has been detected in 48 states, New York City (NYC), and the District of Columbia (DC). At this time in 2004, a total of 47 states, Puerto Rico, DC, and NYC had published WNV activity. A total of 2,799 human WNV cases have been reported in 2005 from 42 states. At this time in 2004, 2,448 cases had been reported from 40 states, DC, and NYC. In 2005, of the 2,626 cases with available data, the median age is 51 years (range: 3 months-98 years) and 1,488 (57%) of the cases are male. Forty-three percent of the cases are neuroinvasive. There have been 102 reported WNV-related fatalities. The median age of the 97 decedents where data is available was 76 years (range: 36-98 years).

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## TEST PROTOCOLS

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### **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 RAMP and Vec-Tests from oral swabs from corvids 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.

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### **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.

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### **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.

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*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].*