

# California Arbovirus Surveillance Bulletin # 38

Week 44 Friday, November 4, 2005

## Weekly Summary

### Comments:

#### **Humans:**

As of November 4, 2005, 894 human West Nile virus (WNV) infections have been identified from the following local health jurisdictions: Alameda (1), Amador (4), Butte (24), Calaveras (2), Colusa (2), Contra Costa (11), El Dorado (1), Fresno (61), Glenn (13), Humboldt (1), Imperial (1), Kern (63), Kings (32), Los Angeles (45), Madera (12), Merced (27), Nevada (4), Orange (17), Placer (35), Plumas (1), Riverside (99), Sacramento (174), San Bernardino (33), 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 (88), Sutter (9), Tehama (4), Tulare (56), Tuolumne (1), Ventura (1), Yolo (12), and Yuba (6). Ninety-nine of the 894 infections were initially detected in asymptomatic individuals through screening done at blood banks; 40 individuals later developed symptoms. Eight of the 99 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 840 WNV cases with symptoms, 279 are classified as West Nile neuroinvasive disease cases, 487 as West Nile fever, and 74 are of unknown clinical presentation. The median age for all symptomatic cases where data is available is 50 years (range: 2-95 years). 461 (55%) of the cases are male. There have been 18 WNV-related fatalities to date in California this year, 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 two new confirmed cases of equine WNV in Stanislaus (1), and Yolo (1) counties. The YTD total for the state is 453.

#### **Dead Birds:**

This week the hotline received 622 dead bird reports, for an YTD total of 105,940 reports. 26 out of 156 (16.7%) dead birds collected from 25 counties tested positive for WNV this week.

- 15 out of 137 (10.9%) dead birds tested positive via RT-PCR.
- 9 out of 16 (56.3%) corvids tested positive via VecTest.
- 2 out of 3 (66.7%) corvids tested positive via RAMP.

The WNV positive dead birds were collected from the following counties: Alameda (1); Contra Costa (5); Los Angeles (2); Riverside (1); San Diego (4); Santa Barbara (2); Santa Clara (5); Sonoma (2); Stanislaus (3); and Ventura (1).

The following bird species tested positive for WNV: American crow (10); common raven (1); house finch (1); sharp-shinned hawk (1); western scrub-jay (10); and yellow-billed magpie (3). See "WNV Positive Dead Birds" table for details.

Since January 1, 2005, 2,976 of 8,650 dead birds have tested positive for WNV.

#### **Mosquito Pools:**

WNV: CVEC reported one WNV positive mosquito pool from Stanislaus County. The YTD total for the State is 1236.

WEE: CVEC also reported one WEE positive mosquito pools for Kern County this week. The YTD for the State is 51.

**Sentinel Chickens: WNV:** VRDL reported 17 seroconversions among seven flocks from Calaveras (1), Imperial (7), Orange (2) and Sacramento (7) counties. The current YTD total stands at 774 seroconversions. No flavivirus positives were reported this week.

**WEE:** VRDL reported no WEE seroconversion this week. The current YTD total stands at 127 seroconversions.

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## 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	26	0	7	0	0	0	0	0	0
	YTD	1990	0	894	0	0	0	0	0	0
Horses Tested	Week	6	0	2	0	0	0	0	0	0
	YTD	926	0	453	0	0	0	0	0	0

### Dead Birds

	Number Tested	WNV Positive
Week	156	26
YTD	8,650	2,076

### Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
	YTD	31786	774	127	0	0
Mosquito pools	Week	246	1	1	0	0
	YTD	19261	1236	51	0	0

\*Total has been adjusted to include local agency submission

### Human Positives Reported (October 31 – November 4):

Virus	Onset Date	Status	Diagnosis	County	Age
WNV	9/8/05	Probable	WNF	Sacramento	45
WNV	8/20/05	Probable	WNF	Sacramento	60
WNV	8/29/05	Probable	WNF	Riverside	32
WNV	7/29/05	Probable	WNND	Riverside	74
WNV	9/5/05	Probable	WNF	Riverside	57
WNV	7/24/05	Probable	WNF	Stanislaus	61
WNV	10/7/05	Probable	WNF	Los Angeles	77

### Virus Positive From Mosquito Pools:

Results	Species	Date Collected	Site	Pool #	County	City	Date Received
WNV	Cx erythrothorax	10/24/05	TRLK0502	1236	Stanislaus	Vernalis	10/28/05
WEE	Cx tarsalis	10/21/05	KERN0055	5977	Kern	Bakersfield	10/26/05

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## Chicken Seroconversions Reported by DHS:

	Virus	Site Number	County	State	Nearest City	Location	Date Seroconverted	Band #1	Band #2	Band #3	Band #4	Band #5	Band #6
****	WNV	SCSD9901	Calaveras	CA	Copperopolis	Sewer Lift Station	10/3/05	4288					
	WNV	COAV5002	Imperial	CA	Niland	Bono Wild Life Res.	10/24/05	739					
	WNV	COAV5003	Imperial	CA	Westmorland	Westmorland	10/24/05	747	751	754	755	786	788
****	WNV	ORCO0006	Orange	CA	Irvine	San Joaquin WS	8/4/05	7458					
****	WNV	ORCO0006	Orange	CA	Irvine	San Joaquin WS	8/18/05	7452					
	WNV	SAYO7004	Sacramento	CA	Sacramento	Natomas	11/3/05	6005					
****	WNV	SAYO6004	Sacramento	CA	W. Sacramento	W. Sacramento	11/3/05	6051	6054	6055	6056	6059	6060

## WNV Positive Dead Birds Reported (October 31-November 4)

Species	County	City	Date Collected	Date Tested	ZIP	Tested By
American Crow	Los Angeles	Santa Clarita	10/12/05	10/31/05	91354	RT-PCR
American Crow	Riverside	Norco	10/25/05	10/31/05	92860	RT-PCR
American Crow	San Diego	Oceanside	10/24/05	10/31/05	92057	RT-PCR
American Crow	San Diego	Escondido	10/24/05	10/24/05	92025	VecTest
American Crow	Santa Barbara	Santa Barbara	10/17/05	10/24/05	93108	RT-PCR
American Crow	Santa Barbara	Santa Barbara	10/20/05	10/31/05	93109	RT-PCR
American Crow	Santa Clara	Campbell	10/24/05	10/24/05	95008	VecTest
American Crow	Santa Clara	Campbell	10/25/05	10/25/05	95008	VecTest
American Crow	Santa Clara	San Jose	10/19/05	10/19/05	95124	VecTest
American Crow	Ventura	Simi Valley	10/21/05	10/31/05	93065	RT-PCR
Common Raven	Los Angeles	Canyon Country	10/17/05	10/31/05	91387	RT-PCR
House Finch	Contra Costa	Walnut Creek	10/17/05	10/31/05	94598	RT-PCR
Sharp-shinned Hawk	Sonoma	Forestville	10/23/05	10/31/05	95436	RT-PCR
Western Scrub-Jay	Alameda	Sunol	10/20/05	10/31/05	94586	RT-PCR
Western Scrub-Jay	Contra Costa	Pleasant Hill	10/20/05	10/31/05	94523	RT-PCR
Western Scrub-Jay	Contra Costa	Walnut Creek	10/18/05	10/31/05	94596	RT-PCR
Western Scrub-Jay	Contra Costa	Concord	10/20/05	10/20/05	94521	RAMP
Western Scrub-Jay	Contra Costa	Walnut Creek	10/20/05	10/20/05	94597	RAMP
Western Scrub-Jay	San Diego	Guatay	10/24/05	10/24/05	91931	VecTest
Western Scrub-Jay	San Diego	Lakesode	10/27/05	10/27/05	92040	VecTest
Western Scrub-Jay	Santa Clara	Santa Clara	10/19/05	10/31/05	95051	RT-PCR
Western Scrub-Jay	Santa Clara	Santa Clara	10/19/05	10/19/05	95051	VecTest
Western Scrub-Jay	Sonoma	Healdsburg	10/18/05	10/31/05	95448	RT-PCR
Yellow-billed Magpie	Stanislaus	Waterford	10/19/05	10/31/05	95386	RT-PCR
Yellow-billed Magpie	Stanislaus	La Grange	10/26/05	10/26/05	95329	VecTest
Yellow-billed Magpie	Stanislaus	Turlock	10/27/05	10/27/05	95382	VecTest

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## National Comments:

As of November 1, 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 2,581 human WNV cases have been reported in 2005 from 42 states. At this time in 2004, 2,241 cases had been reported from 40 states, DC, and NYC. In 2005, of the 2,419 cases with available data, the median age is 51 years (range: 3 months-98 years) and 1,359 (56%) of the cases are male. Forty-two percent of the cases are neuroinvasive. There have been 83 reported WNV-related fatalities. The median age of the 78 decedents where data is available was 78 years (range: 36-98 years).

## 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].*