

California Arbovirus Surveillance Bulletin # 40

Week 46 Friday, November 18, 2005

Weekly Summary

Comments:

Humans:

As of November 18, 2005, 904 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 (66), Kings (32), Los Angeles (47), Madera (12), Merced (28), Nevada (4), Orange (17), Placer (35), Plumas (1), Riverside (101), Sacramento (175), 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 (89), Sutter (9), Tehama (4), Tulare (56), Tuolumne (1), Ventura (1), Yolo (12), and Yuba (6). Of the 904 infections, 101 were initially detected in asymptomatic individuals through screening done at blood banks; 40 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 848 WNV cases with symptoms, 284 are classified as West Nile neuroinvasive disease cases, 489 as West Nile fever, and 75 are of unknown clinical presentation. The median age for all symptomatic cases where data is available is 50 years (range: 2-95 years). 467 (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 one new confirmed case of equine WNV in Tulare County this week. The YTD total for the state is 454.

Dead Birds:

This week the hotline received 426 dead bird reports, for an YTD total of 107,297 reports. 12 out of 90 (13.3%) dead birds collected from 24 counties tested positive for WNV this week.

- 6 out of 80 (7.5%) dead birds tested positive via RT-PCR.
- 3 out of 6 (50.0%) corvids tested positive via VecTest.
- 3 out of 4 (75%) corvids tested positive via RAMP.

The WNV positive dead birds were collected from the following counties: Alameda (1); Contra Costa (4); El Dorado (1); Napa (1); and San Diego (5).

The following bird species tested positive for WNV: American crow (7); house finch (1); lesser gold-finch (1); and western scrub-jay (3). See "WNV Positive Dead Birds" table for details.

Since January 1, 2005, 2,998 of 8,835 dead birds have tested positive for WNV.

Mosquito Pools:

WNV: CVEC reported no WNV positive mosquito pools this week. The YTD total for the State is 1238.

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

Sentinel Chickens: WNV: VRDL reported 10 seroconversions among six flocks from Los Angeles (3), Riverside (6), and San Joaquin (1) counties. The current YTD total stands at 788 seroconversions. No flavivirus positives were reported this week.

WEE: VRDL reported four WEE seroconversions from Riverside County this week. The current YTD total stands at 131 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.

California Arbovirus Surveillance Bulletin # 40

Week 46 Friday, November 18, 2005

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	31	0	8	0	0	0	0	0	0
	YTD	2068	0	904	0	0	0	0	0	0
Horses Tested	Week	5	0	1	0	0	0	0	0	0
	YTD	714	0	454	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	90	12
YTD	8,835	2,998

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	473*	10	4	0	0
	YTD	32768	788	131	0	0
Mosquito pools	Week	140	0	0	0	0
	YTD	19521	1238	51	0	0

*Total has been adjusted to include local agency submission

Human Positives Reported (November 14 – November 18):

Virus	Onset Date	Status	Diagnosis	County	Age
WNV	10/31/05	Probable	WNND	Riverside	49
WNV	8/13/05	Probable	WNND	Riverside	62
WNV	10/22/05	Probable	WNND	Los Angeles	59
WNV	Unknown	Probable	Unknown	Kern	41
WNV	Unknown	Probable	Unknown	Kern	64
WNV	7/5/05	Probable	WNF	Kern	37
WNV	9/5/05	Probable	WNF	Sacramento	57
WNV	N/a	Probable	Asymptomatic*	Los Angeles	50

* Asymptomatic blood donor

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	LACW1001	Los Angeles	CA	Rolling Hills Estate	Botanical Garden	10/24/05	3801	3805				
WNV	LACW1007	Los Angeles	CA	Baldwin Hills	Baldwin Hills	10/24/05	3839					
WNV	COAV0122	Riverside	CA	Mecca	Gordon	11/7/05	8968					
WNV	COAV0131	Riverside	CA	Oasis	Jessup	11/7/05	8561	8574	8946	8959		
WNV	RIVR0008	Riverside	CA	Murrieta	Auld Road	11/8/05	967					
WNV	SJCM9901	San Joaquin	CA	Lodi	White Slough	11/14/05	211					
WEE	RIVR0001	Riverside	CA	San Jacinto	County Lake Mobile	10/31/05	5203	5273	5274	5276		

California Arbovirus Surveillance Bulletin # 40

Week 46 Friday, November 18, 2005

WNV Positive Dead Birds Reported (November 14-November 18)

Species	County	City	ZIP	Date Collected	Date Tested	Tested By
American Crow	Alameda	Mountain House	94551	11/03/05	11/03/05	Ramp
American Crow	Contra Costa	Danville	94526	10/28/05	10/28/05	Ramp
American Crow	Contra Costa	Oakley	94561	10/27/05	10/27/05	Ramp
American Crow	San Diego	Rancho Santa Fe	92067	10/25/05	11/14/05	RT-PCR
American Crow	San Diego	Chula Vista	91911	10/31/05	10/31/05	Vec Test
American Crow	San Diego	Ramona	92065	11/03/05	11/03/05	Vec Test
American Crow	San Diego	Ramona	92065	11/06/05	11/06/05	Vec Test
House Finch	Contra Costa	Walnut Creek	94598	11/03/05	11/14/05	RT-PCR
Lesser Goldfinch	Napa	Napa	94558	11/03/05	11/14/05	RT-PCR
Western Scrub-Jay	Contra Costa	Walnut Creek	94598	11/03/05	11/14/05	RT-PCR
Western Scrub-Jay	El Dorado	Camino	95709	11/01/05	11/14/05	RT-PCR
Western Scrub-Jay	San Diego	Ramona	92065	10/28/05	11/14/05	RT-PCR

National Comments:

As of November 15, 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 2,676 human WNV cases have been reported in 2005 from 42 states. At this time in 2004, 2,313 cases had been reported from 40 states, DC, and NYC. In 2005, of the 2,513 cases with available data, the median age is 51 years (range: 3 months-98 years) and 1,423 (57%) of the cases are male. Forty-two percent of the cases are neuroinvasive. There have been 91 reported WNV-related fatalities. The median age of the 86 decedents where data is available was 77 years (range: 36-98 years).

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 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.

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

California Arbovirus Surveillance Bulletin # 40

Week 46 Friday, November 18, 2005

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].