

California Arbovirus Surveillance Bulletin # 32

Week 48 Friday, December 3, 2004

Weekly Summary

California Weekly Summary Comments:

This week, California reported 12 new human cases infected with West Nile virus (WNV). As of December 3, 2004, a total of **817** WNV infections have been reported from the following local health jurisdictions: Los Angeles (326), San Bernardino (195), Riverside (112), Orange (63), Kern (60), Fresno (15), Tehama (10), Butte (7), Shasta (6), Glenn (3), Tulare (2), Ventura (2), Imperial (1), Lake (1), Lassen (1), Merced (1), Placer (1), Sacramento (3), San Diego (2), San Joaquin (3), Santa Clara (1), San Luis Obispo (1), and Yolo (1) counties. Sixty-six of the 817 WNV infections were initially detected in asymptomatic individuals through screening done at blood banks – 13 of these individuals later became symptomatic.

Of the 764 WNV cases with symptoms, 277 are classified as West Nile fever cases, 221 are classified as West Nile neuroinvasive disease, and 266 are of unknown status. The median age for all cases where data was available is 52 years (range: 2-94 years). Median age for West Nile fever cases is 49 years (range 7-89 years). Median age for West Nile neuroinvasive disease cases = 58.5 years (range: 4-91 years). Sixty-two per cent (471/764) of the cases are male. There have been 25 fatalities to date in California in Los Angeles (13), San Bernardino (5), Orange (3), Riverside (2), Kern (1), and Tehama (1) counties. The median age of the 25 fatalities was 76 years (range: 57-91 years).

Equine:

The California Department of Food & Agriculture reported no WNV equine cases for the past two weeks. Currently, the YTD total stands at 536 positive cases. A total of 228 horses have died or euthanatized from the WNV infections.

Dead Birds:

The hotline received 218 reported dead birds last week (YTD = 92,300). The UC Davis Center for Vectorborne Diseases (CVEC) reported 10 out of 83 dead birds submitted last week have tested positive for WNV by RT-PCR: American crows (2), a barn owl (1), a cedar waxwing (1), a hermit thrush (1) lesser goldfinches (2) western scrub-jays (2), and a yellow-rumped warbler (1).

The positive birds were collected within the 13 counties of Contra Costa (1), Fresno (2), Kern (1), Orange (2), San Diego (1), San Joaquin (2), and Ventura (1). A total of 83 dead birds were tested, thus 12.0% (10/83) of the birds tested from these counties were WNV positive.

No additional American crows were tested via Vec-Test, therefore the YTD total stands at 3,210 positive bird carcasses.

Mosquito Pools:

CVEC reported no positive mosquito pools for the past two weeks. To date, 20 CA counties have reported positive mosquito activities. WNV has been isolated from nine mosquito species: *Culex tarsalis* (315), *Cx. erythrorhax* (19), *Cx. quinquefasciatus*, (741) *Cx. stigmatosoma*, (41), *Cx. thriambus* (3), *Cx. pipiens* (13), *Anopheles hermsi* (1), *Ochlerotatus squamiger* (1) and *Oc. melanimon* (2). The YTD total stands at 1136 positive pools.

Chickens:

Eight WNV chicken seroconversions were detected in five flocks from Fresno (3) and Los Angeles (5) counties. Currently, 22 counties: Butte, Fresno, Glenn, Imperial, Kern, Kings, Lake, Los Angeles, Orange, Placer, Riverside, Sacramento, San Bernardino, San Joaquin, Santa Clara, Shasta, Stanislaus, Sutter, Tehama, Tulare, Ventura, and Yolo have positive WNV seroconversions. The current YTD total stands at 805 WNV 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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TESTING SUMMARIES

Humans and Equines

		Number Tested	WNV Positive		WEE Positive		SLE Positive		Other Positive	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Individuals Tested	Week	20	0	12	0	0	0	0	0	0
	YTD	1771	0	817	0	0	0	0	0	0
Suspect Equine Cases	Week	n/a	0	0	0	0	0	0	0	0
	YTD	1273	0	536	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	83	10
YTD	5,320	3,210

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	805*	8	0	0	0
	YTD	32,159	805	0	0	0
Mosquito pools	Week	67	0	0	0	0
	YTD	14,697	1136	0	0	0

*This total has been adjusted to include local agency submission

POSITIVES

Human Positives Reported:

Virus	Date of Onset	Status	Diagnosis	County	Imported/Local	From
WNV	10/28/04	Probable	Unknown	Sacramento	Local	
WNV	07/21/04	Probable	West Nile Fever	San Bernardino	Local	
WNV	08/23/04	Probable	West Nile Fever	Kern	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	San Bernardino	Local	
WNV	Unknown	Probable	Unknown	Riverside	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	Los Angeles	Local	
WNV	Unknown	Probable	Unknown	San Bernardino	Local	
WNV	Unknown	Probable	Unknown	San Bernardino	Local	
WNV	Unknown	Probable	West Nile Fever	Riverside	Local	

*Indicates Fatality

Chicken Seroconversions Reported by DHS:

Virus	County	State	Acode	City	Location
WNV	Fresno	CA	CNSL5008	Orange Cove	O. Mitchell
Bands: 1571					
Probable Seroconversion Date: 25-October-04					
WNV	Fresno	CA	CNSL5008	Orange Cove	O. Mitchell
Bands: 1565					
Probable Seroconversion Date: 9-November-04					
WNV	Fresno	CA	CNSL5008	Orange Cove	O. Mitchell
Bands: 1574					
Probable Seroconversion Date: 22-November-04					
WNV	Los Angeles	CA	LACW1001	Rolling Hills Estates	Botanical Garden
Bands: 2127					
Probable Seroconversion Date: 09-November-04					
WNV	Los Angeles	CA	LACW1007	Baldwin Hills	Baldwin Hills
Bands: 2167					
Probable Seroconversion Date: 09-November-04					
WNV	Los Angeles	CA	LACW1008	Inglewood	Hollywood Park
Bands: 2173					
Probable Seroconversion Date: 09-November-04					
WNV	Los Angeles	CA	LACW1049	Inglewood	Inglewood Cemetery Co.
Bands: 2234, 2243					
Probable Seroconversion Date: 09-November-04					

***Indicates a new flock

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Dead Birds Tested Positive for WNV last week

Species	County	City	Zip	Coll Date	Test Date
Cedar Waxwing	Contra Costa	Pleasant Hill	94523	11/08/04	11/15/2004
Western Scrub-Jay	Fresno	Friant	93626	11/10/04	11/22/04
Yellow-Rumped Warbler	Fresno	Reedley	93654	11/9/04	11/22/04
Hermit Thrush	Kern	Bakersfield	93313	11/04/04	11/15/2004
Lesser Goldfinch	Orange	Santa Ana	92705	11/08/04	11/15/2004
American Crow	Orange	Santa Ana	92706	11/15/04	11/22/04
American Crow	San Diego	Lakeside	92040	11/12/04	11/22/04
Lesser Goldfinch	San Joaquin	Stockton	95219	11/08/04	11/15/2004
Western Scrub-Jay	San Joaquin	Escalon	95320	9/15/2004	9/29/2004
Barn Owl	Ventura	Ventura	93001	9/16/2004	9/29/2004

***Indicates Vec-Test

National Comments:

As of November 30, 2004, a total of 2359 human WNV cases have been reported in 40 states, DC and New York City. At this time in 2003, 8694 cases had been reported from 45 states, DC, and NYC. Of the 2328 WNV cases where data is available, the median age is 52 years (range: 1 month – 99 years) and 59% are male. Thirty-six percent of the cases were classified as neuroinvasive, compared with 29% at this time in 2003. There have been 84 WNV-related fatalities nationwide in 2004. The median age of the 83 fatalities where data were available was 73 years (range: 43-95 years).

Dead Birds:

Dead bird kidney tissues are tested at CVEC using the PCR Taqman assay, subsequent to carcass necropsy at the California Animal Health and Food Safety (CAHFS) Laboratories. 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) 412-6251.

All bird species (except chickens, doves, and pigeons) from all zip codes are being accepted for testing except from a limited number of agencies. Positive Vec-tests from oral swabs from crows are no longer confirmed. Other bird species tested by RT-PCR using singleplex and confirmed with a second primer set.

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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) and IgM Capture – Enzyme Linked Immunosorbent Assay (MAC-ELISA)) on specimens from sentinel chickens in which antibodies are detected in new geographic areas. The VRDL also forwards selected serum to the UC Davis Center for Vectorborne Diseases (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. There will be an elimination of *in situ* EIA testing for all mosquito species.

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) 412-6254, FAX (510) 412-6263, or email [ahom@dhs.ca.gov].