

California Arbovirus Surveillance Bulletin # 31

Week 46 Friday, November 19, 2004

Weekly Summary

California Weekly Summary Comments:

This week, California reported three new human cases infected with West Nile virus (WNV). As of November 19, 2004, a total of **808** WNV infections have been reported from the following local health jurisdictions: Los Angeles (323), San Bernardino (191), Riverside (110), Orange (66), Kern (59), Fresno (14), Tehama (10), Butte (7), Shasta (6), Glenn (3), Tulare (2), Ventura (2), Imperial (1), Lake (1), Lassen (1), Merced (1), Placer (1), Sacramento (2), San Diego (2), San Joaquin (3), Santa Clara (1), San Luis Obispo (1), and Yolo (1) counties. Sixty-nine of the 806 WNV infections were initially detected in asymptomatic individuals through screening done at blood banks – 13 of these individuals later became symptomatic.

Of the 752 WNV cases with symptoms, 275 are classified as West Nile fever cases, 219 are classified as West Nile neuroinvasive disease, and 258 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 years (range: 4-91 years). Sixty-two per cent (465/752) of the cases are male. There have been 24 fatalities to date in California in Los Angeles (12), San Bernardino (5), Orange (3), Riverside (2), Kern (1), and Tehama (1) counties. The median age of the 24 fatalities is 75.5 years (range: 57-91 years).

Equine:

The California Department of Food & Agriculture reported three WNV equine cases from Sacramento (2) and Solano (1) counties. This is the first positive horse case reported in Solano County. Currently, the YTD total stands at 536 positive cases. A total of 228 horses have died or euthanized from the WNV infections.

Dead Birds:

The hotline received 365 reported dead birds last week (YTD = 91,710). The UC Davis Center for Vectorborne Diseases (CVEC) reported 19 out of 88 dead birds submitted last week have tested positive for WNV by RT-PCR: American crows (5), a barn owl (1), a Brewer's blackbird (1), an European starling (1), a fox sparrow (1), a great-horned owl (1), a house sparrow (1), sharp-shinned hawks (2), western scrub-jays (3), and yellow-billed magpies (3).

The positive birds were collected within the 13 counties of Glenn (1), Mariposa (1), Merced (1), Monterey (1), Orange (2), Sacramento (1), San Diego (1), San Francisco (1), San Joaquin (2), Santa Clara (2), Santa Cruz (1), Sonoma (2), and Stanislaus (3).

A total of 88 dead birds were tested, thus 22.0% (19/88) 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 3,198 positive bird carcasses.

News Flash:

CVEC reported last Wednesday that 8 of 72 dead birds have tested positive for WNV. The positive birds were collected within the 6 counties of Humboldt (1), Merced (1), Orange (3), Placer (1), Santa Clara (1), and Tulare (1).

Mosquito Pools:

CVEC reported one positive pool from Orange County. To date, 20 CA counties have reported positive mosquito activities. WNV has been isolated from nine mosquito species: *Culex tarsalis* (315), *Cx. erythrothorax* (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:

Fifteen WNV chicken seroconversions were detected in seven flocks from Imperial (1), Los Angeles (4), and Sacramento (1) counties. A positive flock came from Utah (1). Of the fifteen seroconversions, eight came from new flocks in Los Angeles (3), Sacramento (1), and Utah (4). Currently, 22 counties: Butte, Fresno, Glenn, Imperial, Kern,

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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 797 WNV seroconversions.

**** Please note that there will not be an Arbovirus Bulletin issue next week due to Thanksgiving holiday.**

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.

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	n/a	0	3	0	0	0	0	0	0
	YTD	1709	0	808	0	0	0	0	0	0
Suspect Equine Cases	Week	n/a	0	3	0	0	0	0	0	0
	YTD	1273	0	536	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	88	19
YTD	5,237	3,198

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	797*	15	0	0	0
	YTD	31,354	797	0	0	0
Mosquito pools	Week	107	1	0	0	0
	YTD	14,797	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	Unknown	Probable	Unknown	Fresno	Local	
WNV	Unknown	Probable	West Nile Fever	San Bernardino	Local	
WNV	Unknown	Probable	West Nile Fever	Orange	Local	
WNV	Unknown	Probable	Unknown	Riverside	Local	
WNV	Unknown	Probable	Unknown	Riverside	Local	

*Indicates Fatality

Chicken Seroconversions Reported by DHS:

Virus	County	State	Acode	City	Location
WNV	Imperial	CA	IMPR0011	Niland	Bono Wild Life Reserve
Bands: 4054					Probable Seroconversion Date: 11-November-04
****	WNV	Los Angeles	CA	ANTV2878	Lancaster
Bands: 1057, 1058, 1061					Probable Seroconversion Date: 06-October-04
WNV	Los Angeles	CA	LACW1006	Playa Del Ray	Playa Del Ray
Bands: 2157					Probable Seroconversion Date: 08-November-04
WNV	Los Angeles	CA	LACW1010	Los Angeles	La Brea Tar Pits
Bands: 2180, 2181, 2182, 2183					Probable Seroconversion Date: 08-November-04

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WNV	Los Angeles	CA	LACW1073	Los Angeles	Downtown Los Angeles
Bands: 2240					Probable Seroconversion Date: 08-November-04
****	WNV	MOAB	CA	MOAB0003	Moab, UT
Bands: 0001, 0002, 0003, 0004					Probable Seroconversion Date: 20-October-04
****	WNV	Sacramento/Yolo	CA	SAYO7002	Hood
Bands: 2882					Probable Seroconversion Date: 27-October-04

****Indicates a new flock

Virus Isolations From Mosquito Pools:

Virus	Mosquito species	Date Collected	ACODE	Pool #	City	County	Date Received
WNV	Culex quinquefasciatus	4-Nov	ORCO	1814	Westminster	Orange	12-Nov

Dead Birds Tested Positive for WNV last week

Species	County	City	ZIP	Date Collected	Date Tested
American Crow	Glenn	Willows	95988	10/28/04	11/08/04
Great Horned Owl	Mariposa	Coulterville	95311	10/22/04	11/01/04
Western Scrub-Jay	Merced	Atwater	95301	10/29/04	11/08/04
Brewer's Blackbird	Monterey	King City	93930	11/03/04	11/08/04
European Starling	Orange	Fountain Valley	92708	10/25/04	11/08/04
House Sparrow	Orange	Garden Grove	92843	10/27/04	11/08/04
Yellow-billed Magpie	Sacramento	Sacramento	95825	10/28/04	11/08/04
American Crow	San Diego	Descanso	91916	10/26/04	11/08/04
Fox Sparrow	San Francisco	San Francisco	94132	11/02/04	11/08/04
Barn Owl	San Joaquin	Escalon	95320	11/03/04	11/08/04
Western Scrub-Jay	San Joaquin	Manteca	95337	11/01/04	11/08/04
American Crow	Santa Clara	San Jose	95125	10/29/04	11/08/04
American Crow	Santa Clara	San Jose	95111	10/29/04	11/08/04
Sharp-shinned Hawk	Santa Cruz	Boulder Creek	95006	10/26/04	11/01/04
American Crow	Sonoma	Santa Rosa	95401	10/31/04	11/08/04
Sharp-shinned Hawk	Sonoma	Windsor	95492	10/25/04	11/01/04
Western Scrub-Jay	Stanislaus	Modesto	95350	11/02/04	11/08/04
Yellow-billed Magpie	Stanislaus	Modesto	95351	11/01/04	11/08/04
Yellow-billed Magpie	Stanislaus	Turlock	95382	11/01/04	11/08/04

***Indicates Vec-Test

National Comments:

As of November 16, 2004, a total of 2313 human WNV cases have been reported in 40 states, DC and New York City. At this time in 2003, 8470 cases had been reported from 45 states, DC, and NYC. Of the 2282 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 28% at this time in 2003. There have been 79WNV-related fatalities nationwide in 2004. The median age of the 78 fatalities where data were available was 74 years (range: 43-95 years).

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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.

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].