

California Arbovirus Surveillance Bulletin # 18

Week 25 Friday, June 23, 2006

Weekly Summary

COMMENTS

Humans

This week, a 27-year-old male from Kern County has been reported as the first human case of West Nile Virus (WNV) in California this year. The man became ill in mid-June and is hospitalized with neuroinvasive disease. Tests conducted by the California Department of Health Services' Viral and Rickettsial Disease Laboratory confirmed the WNV infection.

Horses

No equine infections have been reported in 2006 by the California Department of Food & Agriculture.

Dead Birds

This week, three out of 155 (1.9%) dead birds collected from 37 counties tested positive for WNV.

- 1/151 dead birds tested positive via RT-PCR.
- 2/4 dead birds tested positive via IHC.

The WNV positive dead birds were collected from Fresno and Orange Counties. **This is the first indication of WNV activity in Fresno County in 2006.**

In 2006, 31 out of 2,016 (1.5%) dead birds have tested positive for WNV from nine counties: Fresno (1); Orange (17); Sacramento (3); San Diego (2); San Mateo (1); Santa Clara (4); Shasta (1); Ventura (1); and Yuba (1).

The hotline has received a total of 17,137 dead bird reports this year.

Mosquito Pools

CVEC reported three WNV positive mosquito pools this week from Fresno, Imperial, and Stanislaus counties. **This is the first indication of WNV activity this year in Imperial and Stanislaus counties.**

In 2006, 13 mosquito pools have tested positive for WNV from six counties: Fresno (1); Imperial (1); Los Angeles (3); Merced (1); Riverside (6); and Stanislaus (1).

Sentinel Chickens

VRDL reported three WNV positive chickens this week from a flock located in Los Angeles County. Two of the chickens were reported last week as flavivirus positive and have been confirmed as WNV. One additional chicken from the same flock tested positive for WNV.

In 2006, four WNV seroconversions have been reported from Los Angeles County.

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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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	35	0	1	0	0	0	0	0	0
	YTD	566	0	1	0	0	0	0	0	0
Horses Tested	Week	3	0	0	0	0	0	0	0	0
	YTD	171	0	0	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	155	3
YTD	2016	31

Sentinel Chickens* and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus Positive
Chicken sera	Week	1231	3	0	0	0
	YTD	12,086	4	0	0	4
Mosquito pools	Week	511	3	0	0	0
	YTD	4924	13	0	0	0

*Total has been adjusted to include local agency submission

Mosquito pools tested by local agencies

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
RT-PCR	Week	236	0	0	0	0
	YTD	1154	0	0	0	0
RAMP	Week	38	0	N/A	N/A	N/A
	YTD	57	0	--	--	--

POSITIVES

Virus Isolations from Mosquito Pools

Virus	Species	County	City	Agency Code	Pool #	Collected	Tested
WN	Cx tarsalis	Fresno	Fresno	FRNO	9	6/19/06	6/23/06
WN	Cx tarsalis	Imperial	Niland	COAV	5274	6/14/06	6/22/06
WN	Cx pipiens	Stanislaus	Grayson	TRLK	658	6/12/06	6/16/06

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Sentinel Chicken Seroconversions

Virus	Agency Code	County	Nearest City	Probable Seroconversion Date	BAND #
WNV*	ANTV7947	Los Angeles	Palmdale	5/31/06	1062
WNV*	ANTV7947	Los Angeles	Palmdale	5/31/06	1063
WNV	ANTV7947	Los Angeles	Palmdale	6/14/06	1060

*Previously reported as flavivirus positive

WNV Positive Dead Birds

Species	County	City	ZIP	Collected	Tested	Tested By
American Crow	Fresno	Fresno	93704	6/7/06	6/19/06	RT-PCR
American Crow	Orange	Huntington Beach	92647	6/12/06	6/12/06	IHC
House Finch	Orange	Fullerton	92831	6/12/06	6/12/06	IHC

National Comments: As of June 13, 2006, West Nile virus (WNV) activity has been detected in the following states: Arkansas, California, Florida, Idaho, Illinois, Indiana, Michigan, Mississippi, Missouri, New York, Tennessee, Texas, Utah, West Virginia, and Wyoming. A total of 5 human cases have been reported in California (1), Colorado (1), Mississippi (1), and Texas (2). No fatalities have been reported in 2006.

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TEST PROTOCOLS

Dead Birds:

All bird species from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Additionally, once WNV has been detected within a county, doves, pigeons, and chickens will no longer be accepted for testing from that county. Corvids that test positive via RAMP or VecTest are no longer confirmed. Dead birds are necropsied at the California Animal Health and Food Safety (CAHFS) laboratory at UC Davis. Oral swabs from American Crows and kidney tissue from all other dead birds are forward to the UC Davis Center for Vectorborne Diseases (CVEC) for WNV testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set. 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 neutralization (PRNT), on specimens from sentinel chickens from geographic areas where WNV is detected for the first time.

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 Tina Albrecht by phone (510) 412-6298, FAX (510) 412-6263, or email [talbrech@dhs.ca.gov].