

California Arbovirus Surveillance Bulletin # 21

Week 28 Friday, July 14, 2006

Weekly Summary

COMMENTS

Humans

No human cases were reported this week, but a WNV infection was identified in an asymptomatic blood donor from Sutter County. Routine testing of the blood sample identified the WNV infection in the donor, who has not demonstrated any symptoms of the disease.

In 2006, one human case of WNV has been reported from Kern County.

Horses

This week, the California Department of Food & Agriculture reported the first equine case of WNV in 2006. The horse was a 3-year-old quarter horse stallion from Tulare County. The horse died on July 4th and had not been vaccinated. **This is the first indication of WNV activity in Tulare County in 2006.**

Dead Birds

This week, 33 out of 139 (23.7%) dead birds collected from 30 counties tested positive for WNV.

- 8/100 dead birds tested positive via RT-PCR.
- 17/25 dead birds tested positive via VecTest.
- 8/8 dead birds tested positive via RAMP.
- 0/6 dead birds tested positive via IHC.

The WNV positive dead birds were collected from the following counties: Contra Costa (1); Fresno (9); Merced (1); Sacramento (2); San Joaquin (7); Santa Clara (6); Shasta (1); Solano (1); Stanislaus (3); and Yolo (2). **This is the first indication of WNV activity in Solano County in 2006.**

In 2006, 96 out of 2,471 (3.9%) dead birds have tested positive for WNV from 16 counties: Contra Costa (2); Fresno (21); Glenn (1); Merced (3); Orange (19); Sacramento (6); San Diego (2); San Joaquin (12); San Mateo (1); Santa Clara (11); Shasta (3); Solano (1); Stanislaus (8); Ventura (2); Yolo (3) and Yuba (1).

The hotline has received a total of 22,717 dead bird reports this year.

Mosquito Pools

CVEC reported 23 WNV positive mosquito pools this week from Glenn (1); Kern (15); San Joaquin (1); Stanislaus (4); and Sutter (2) counties.

Sac-Yolo MVCD reported three WNV positive mosquito pools from Sacramento (1) and Yolo (2) counties. Santa Clara County VCD reported three WNV positive pools tested by RAMP.

In 2006, 62 mosquito pools have tested positive for WNV from 12 counties: Fresno (1); Glenn (1); Imperial (3); Kern (18); Kings (3); Los Angeles (3); Merced (2); Riverside (6); Sacramento (4); San Joaquin (1); Stanislaus (10); Sutter (8); Yolo (1); and Yuba (1). In addition, Santa Clara County has reported four WNV positive mosquito pools tested by RAMP.

Sentinel Chickens

No seroconversions were reported this week. In 2006, seven WNV seroconversions in chickens have been reported from Imperial (3) and Los Angeles (4) counties.

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	41	0	0	0	0	0	0	0	0
	YTD	647	0	1	0	0	0	0	0	0
Horses Tested	Week	19	0	1	0	0	0	0	0	0
	YTD	220	0	1	0	0	0	0	0	0

*Total does not include asymptomatic infections

Dead Birds

	Number Tested	WNV Positive
Week	139	33
YTD	2471	96

Sentinel Chickens* and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus Positive
	YTD	15,135	7	0	0	6
Mosquito pools	Week	783	23	0	0	0
	YTD	6851	57	0	0	0

*Total includes local agency submission

Mosquito pools tested by local agencies

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
	YTD	1831	5	0	0	0
RAMP	Week	131	3	N/A	N/A	N/A
	YTD	272	4	--	--	--

POSITIVES

Mosquito Pools

Agency Code	County	City	Species	Pool #	Collected	Tested	Virus
AFSB0038	Kern	Shafter	Cx tarsalis	5517	6/29/06	7/14/06	WN
AFSB0038	Kern	Shafter	Cx tarsalis	5518	6/29/06	7/12/06	WN
AFSB0040	Kern	Lost Hills	Cx tarsalis	5495	6/29/06	7/12/06	WN
AFSB0040	Kern	Lost Hills	Cx tarsalis	5497	6/29/06	7/12/06	WN
AFSB0045	Kern	Bakersfield	Cx tarsalis	5515	6/29/06	7/12/06	WN
AFSB0054	Kern	Bakersfield	Cx tarsalis	5542	7/6/06	7/13/06	WN
AFSB0070	Kern	Bakersfield	Cx tarsalis	5537	7/6/06	7/13/06	WN
AFSB0070	Kern	Bakersfield	Cx tarsalis	5538	7/6/06	7/13/06	WN
AFSB0070	Kern	Bakersfield	Cx tarsalis	5539	7/6/06	7/13/06	WN
AFSB0070	Kern	Bakersfield	Cx tarsalis	5540	7/6/06	7/13/06	WN
AFSB0104	Kern	Bakersfield	Cx tarsalis	5550	7/6/06	7/14/06	WN
DAVI5104*	Yolo	Davis	Cx pipiens	480	7/6/06	7/10/06	WN
DAVI5108*	Yolo	Davis	Cx pipiens	487	7/6/06	7/10/06	WN
GLEN9705	Glenn	Sacramento Wildlife	Cx tarsalis	4	7/11/06	7/14/06	WN
KERN0033	Kern	Arvin	Cx tarsalis	265	6/28/06	7/14/06	WN
KERN0033	Kern	Arvin	Cx quinquefasciatus	270	6/28/06	7/14/06	WN

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KERN2001	Kern	Bakersfield	Cx quinquefasciatus	296	7/7/06	7/13/06	WN
KERN2002	Kern	Bakersfield	Cx quinquefasciatus	279	6/30/06	7/14/06	WN
SAYO2109*	Sacramento	Elverta	Cx tarsalis	1141	7/5/06	7/7/06	WN
SJCM8027	San Joaquin	Holt	Cx tarsalis	6489	7/6/06	7/12/06	WN
STCL*	Santa Clara	Saratoga	Cx pipiens	34	7/11/06	7/11/06	WN
STCL*	Santa Clara	San Jose	Cx pipiens	35	7/11/06	7/11/06	WN
STCL*	Santa Clara	San Jose	Cx pipiens	36	7/11/06	7/11/06	WN
SUYA0044	Sutter	Pleasant Grove	Cx tarsalis	105	7/10/06	7/13/06	WN
SUYA0044	Sutter	Pleasant Grove	Cx tarsalis	111	7/10/06	7/14/06	WN
TRLK0308	Stanislaus	Grayson	Cx tarsalis	897	7/11/06	7/13/06	WN
TRLK0308	Stanislaus	Grayson	Cx tarsalis	899	7/11/06	7/13/06	WN
TRLK0322	Stanislaus	Modesto	Cx tarsalis	905	7/11/06	7/13/06	WN
TRLK0502	Stanislaus	Vernalis	Cx pipiens	892	7/11/06	7/13/06	WN

*Tested by local agency

WNV Positive Dead Birds

Species	County	City	Collected	Tested	ZIP	Tested By
American Crow	Fresno	Fresno	7/4/06	7/4/06	93711	VecTest
American Crow	Fresno	Fresno	7/5/06	7/5/06	93727	VecTest
American Crow	Fresno	Fresno	7/6/06	7/6/06	93711	VecTest
American Crow	Fresno	Fresno	7/7/06	7/7/06	93703	VecTest
American Crow	Merced	Merced	6/28/06	7/10/06	95340	RT-PCR
American Crow	San Joaquin	Tracy	7/5/06	7/5/06	95376	RAMP
American Crow	San Joaquin	Tracy	7/5/06	7/5/06	95304	RAMP
American Crow	San Joaquin	Tracy	7/6/06	7/6/06	95376	RAMP
American Crow	San Joaquin	Banta	7/7/06	7/7/06	95304	RAMP
American Crow	San Joaquin	Banta	7/7/06	7/7/06	95304	RAMP
American Crow	Santa Clara	San Jose	6/29/06	6/29/06	95129	VecTest
American Crow	Santa Clara	Saratoga	6/30/06	6/30/06	95070	VecTest
American Crow	Santa Clara	Saratoga	6/30/06	6/30/06	95070	VecTest
American Crow	Santa Clara	Santa Clara	7/5/06	7/5/06	95051	VecTest
American Crow	Santa Clara	San Jose	7/4/06	7/4/06	95117	VecTest
American Crow	Santa Clara	San Jose	7/3/06	7/3/06	95129	VecTest
American Crow	Solano	Vacaville	7/5/06	7/5/06	94561	RAMP
American Crow	Stanislaus	Turlock	7/7/06	7/7/06	95380	VecTest
American Crow	Yolo	Davis	7/3/06	7/10/06	95618	RT-PCR
American Robin	Yolo	West Sacramento	7/3/06	7/10/06	95605	RT-PCR
Unknown	Stanislaus	Ceres	7/6/06	7/6/06	95307	VecTest
Western Scrub-Jay	Contra Costa	Oakley	6/29/06	7/10/06	94561	RT-PCR
Western Scrub-Jay	Fresno	Fresno	6/29/06	7/10/06	93710	RT-PCR
Western Scrub-Jay	Fresno	Fresno	6/30/06	7/10/06	93726	RT-PCR
Western Scrub-Jay	Fresno	Clovis	7/5/06	7/5/06	93612	VecTest
Western Scrub-Jay	Fresno	Fresno	7/6/06	7/6/06	93710	VecTest
Western Scrub-Jay	Fresno	Fresno	7/6/06	7/6/06	93727	VecTest
Western Scrub-Jay	Sacramento	Antelope	7/4/06	7/10/06	95843	RT-PCR
Western Scrub-Jay	Shasta	Redding	7/6/06	7/6/06	96001	VecTest
Western Scrub-Jay	Stanislaus	Ceres	6/30/06	6/30/06	95307	VecTest
Yellow-billed Magpie	Sacramento	Elverta	7/4/06	7/10/06	95626	RT-PCR
Yellow-billed Magpie	San Joaquin	Tracy	7/6/06	7/6/06	95304	RAMP
Yellow-billed Magpie	San Joaquin	Tracy	7/7/06	7/7/06	95376	RAMP

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National Comments: As of July 11, 2006, WNV activity has been reported from 28 states and New York City (NYC). A total of 10 human cases have been reported nationwide from California (1), Colorado (1), Iowa (1), Mississippi (1), Missouri (1), Nebraska (2), South Dakota (1), and Texas (2). Seven of the cases (70%) have presented with West Nile neuroinvasive disease, i.e. encephalitis or meningitis. The median age of the 10 cases is 54 years (range: 10-81 years) and 70% are male. No WNV-associated fatalities have been reported in 2006.

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].