

California Arbovirus Surveillance Bulletin # 19

Week 25 Friday, June 24, 2005

Weekly Summary

Comments:

Humans:

No human cases of WNV have been reported this year.

Horses:

No additional horse cases were reported this week from the California Department of Food & Agriculture. The year-to-date total stands at three positive for WNV.

Dead Birds:

This week the hotline received 2,836 dead bird reports, for a YTD total of 23,719 reports. Twenty-eight out of 209 (13.4%) dead birds collected from 39 counties tested positive for WNV.

- Eleven out of 174 (6.3%) dead birds tested positive via RT-PCR.
- One out of four (25%) corvids tested positive via VecTest.
- Four out of 11 (36.4 %) corvids tested positive via RAMP.
- Twelve out of 20 (60%) dead birds tested positive via immunohistochemistry.

The WNV positive dead birds were collected from Fresno, Kings, Madera, Merced, Orange, San Bernardino, Shasta, Stanislaus, and Tulare counties. **This is the first indication of WNV activity in Madera and Shasta counties in 2005.**

The following bird species tested positive for WNV: American crow (22); common raven (1); red-shouldered hawk (1); western scrub-jay (3); yellow-billed magpie (1). See "WNV Positive Dead Birds" table for details.

Since January 1, 2005, 149 of 3,166 (4.7%) dead birds have tested positive for WNV.

Mosquito Pools:

CVEC reported 7 positive WNV mosquito pools from the following counties: Madera (1), Orange (4), and Sutter (2). **The positive pools from Sutter county are the first indication of WNV in 2005.** The YTD total for the State is 41. Seven mosquito pools were positive for western equine encephalomyelitis (WEE) from Riverside. The YTD total is 16.

Sentinel Chickens:

VRDL reported no additional seroconversions this week. The year-to-date total is three 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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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	39	0	0	0	0	0	0	0	0
	YTD	537	0	0	0	0	0	0	0	0
Horses Tested	Week	0	0	0	0	0	0	0	0	0
	YTD	174	0	3	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	209	28
YTD	3,166	149

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	1161*	0	0	0	0
	YTD	13294	3	0	0	0
Mosquito pools	Week	589	7	7	0	0
	YTD	7644	41	16	0	0

*Total has been adjusted to include local agency submission

Virus Isolations From Mosquito Pools:

Virus	Mosquito species	Date Collected	ACODE	Pool #	City	County	Date Received
WNV	Cx. tarsalis	6/21/05	MADR	2	Madera	Madera	6/22/05
WNV	Cx. quinquefasciatus	6/14/05	ORCO	1749	Seal Beach	Orange	6/21/05
WNV	Cx. tarsalis	6/16/05	ORCO	1875	Irvine	Orange	6/21/05
WNV	Cx. tarsalis	6/16/05	ORCO	1885	Irvine	Orange	6/21/05
WNV	Cx. tarsalis	6/16/05	ORCO	1895	Irvine	Orange	6/21/05
WNV	Cx. tarsalis	6/10/05	SUYA	19	Pleasant Grove	Sutter	6/23/05
WNV	Cx. pipiens	6/10/05	SUYA	43	Sutter	Sutter	6/23/05
WEE	Cx. tarsalis	6/11/05	COAV	1687	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1738	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1748	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1749	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1754	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1755	Mecca	Riverside	6/23/05
WEE	Cx. tarsalis	6/15/05	COAV	1756	Mecca	Riverside	6/23/05

WNV Positive Dead Birds Reported June 18- June 24, 2005

Species	County	City	Zip	Date Collected	Date Tested
American Crow	Madera	Madera	93637	6/14/05	6/20/05
American Crow	Shasta	Redding	96002	6/13/05	6/20/05
American Crow	Stanislaus	Modesto	95355	6/13/05	6/20/05
American Crow	Tulare	Visalia	93277	6/9/05	6/20/05
American Crow	Tulare	Visalia	93277	6/10/05	6/20/05

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American Crow	Tulare	Visalia	93277	6/14/05	6/20/05
American Crow	Tulare	Visalia	93277	6/14/05	6/20/05
American Crow	Tulare	Visalia	93277	6/14/05	6/20/05
American Crow ³	Orange	Villa Park	92861	5/31/05	5/31/05
American Crow ³	Orange	Westminster	92683	6/1/05	6/1/05
American Crow ³	Orange	Huntington Beach	92647	6/1/05	6/1/05
American Crow ³	Orange	Huntington Beach	92649	6/1/05	6/1/05
American Crow ³	Orange	Orange	92867	6/1/05	6/1/05
American Crow ³	Orange	Garden Grove	92841	6/2/05	6/2/05
American Crow ³	Orange	Huntington Beach	92647	6/2/05	6/2/05
American Crow ³	Orange	Westminster	92683	6/2/05	6/2/05
American Crow ³	Orange	Huntington Beach	92646	6/2/05	6/2/05
American Crow ³	Orange	Fountain Valley	92708	6/6/05	6/6/05
American Crow ³	Orange	Cypress	90630	6/9/05	6/9/05
American Crow ¹	Fresno	Riverdale	93656	6/16/05	6/16/05
American Crow ¹	Kings	Hanford	93230	6/15/05	6/15/05
American Crow ¹	San Bernardino	Chino	91710	6/16/05	6/16/05
Common Raven ³	Orange	Huntington Beach	92647	6/8/05	6/8/05
Red-Shouldered Hawk	Fresno	Clovis	93619	6/14/05	6/20/05
Western Scrub-Jay	Tulare	Visalia	93277	6/13/05	6/20/05
Western Scrub-Jay ²	Fresno	Fresno	93702	6/21/05	6/21/05
Western Scrub-Jay ¹	Kings	Hanford	93230	6/15/05	6/15/05
Yellow-billed Magpie	Merced	Ballico	95303	6/10/05	6/20/05

¹Indicates RAMP

²Indicates VecTest

³Indicates immunohistochemistry

National Comments:

As of June 21, 2005, West Nile virus (WNV) activity has been detected in the following 21 states: Alabama, Arkansas, Arizona, California, Florida, Georgia, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, Ohio, Tennessee, Texas, and Wyoming. One human WNV case from Kansas has been reported in 2005. At this time in 2004, 14 cases from 5 states had been reported.

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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 Vec-Tests from oral swabs from crows 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 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].