

California Arbovirus Surveillance Bulletin # 21

Week 27 Friday, July 8, 2005

Weekly Summary

Comments:

Humans: No additional human cases were reported this week. The only two cases in 2005 were in Tulare and Riverside counties.

Horses:

The California Department of Food & Agriculture reported four new confirmed cases of WNV in Kern, Tulare, and Riverside counties. In Kern County, the horse was from Bakersfield and the onset of symptoms was 6/29/05. The horse was euthanized. One WNV positive horse was reported from Tulare County. The horse was unvaccinated for WNV and was euthanized. Two cases were reported from Riverside County. The first horse was in Moreno Valley where onset of symptoms was 6/29/05 and the horse died. The second case occurred in Nuevo with the onset of symptoms on 6/29/05, and the horse was euthanized. The YTD total for WNV positive horses is 7.

Dead Birds:

This week the hotline received 3,195 dead bird reports, for an YTD total of 30,995 reports. 102 out of 281 (36.3%) dead birds collected from 41 counties tested positive for WNV this week.

- Sixty out of 215 (28.0%) dead birds tested positive via RT-PCR.
- Two out of two (100%) corvids tested positive via VecTest.
- Eight out of eight (100 %) corvids tested positive via RAMP.
- Thirty-two out of 56 (57.1%) dead birds tested positive via immunohistochemistry.

The WNV positive dead birds were collected from the following counties: Fresno, Kern, Kings, Los Angeles, Madera, Merced, Orange, Placer, Riverside, San Bernardino, San Diego, Santa Barbara, Stanislaus, Sutter, and Tulare. **This is the first indication of WNV activity in San Diego County and the first WNV positive dead bird in Sutter county in 2005.**

The following bird species tested positive for WNV: American crow (65); American robin (1); cooper's hawk (1); house finch (2); house sparrow (1); sparrow (2); Steller's jay (1); western scrub-jay (24); yellow-billed magpie (5). See "WNV Positive Dead Birds" table for details.

Since January 1, 2005, 359 of 3,822 (9.4%) dead birds have tested positive for WNV.

Mosquito Pools:

WNV: CVEC reported 53 WNV positive mosquito pools from the following counties: Fresno (2), Kern (23), Los Angeles (2), Madera (1), Orange (4), Placer (2), Riverside (5), Sacramento (9), Sutter (2), Ventura (1) and Yolo (2). These were the first WNV positive mosquito pools in Placer, Sacramento, and Yolo counties. The YTD total for the State is 139.

WEE: CVEC also reported 7 positive WEE pools in Riverside (COAV 1921 is both WEE and WN positive). The YTD total for the State is 24.

Sentinel Chickens:

VRDL reported one WNV seroconversion from Indio (Riverside County). This chicken was previously reported as flavivirus positive. No WEE seroconversions were reported this week.

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	32	0	0	0	0	0	0	0	0
	YTD	620	0	2	0	0	0	0	0	0
Horses Tested	Week	4	0	4	0	0	0	0	0	0
	YTD	205	0	7	0	0	0	0	0	0

Dead Birds

	Number Tested	WNV Positive
Week	281	102
YTD	3,822	359

Sentinel Chickens and Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Other Positive
Chicken sera	Week	980*	1	0	0	0
	YTD	15261	5	23	0	0
Mosquito pools	Week	637	53	7	0	0
	YTD	9671	139	24	0	0

*Total has been adjusted to include local agency submission

Human Positives Reported:

Virus	Date of Onset	Status	Diagnosis	County	Imported/Local	From
WNV	6/8/2005	Probable	West Nile Fever	Tulare	Local	
WNV	6/12/2005	Probable	West Nile Neuroinvasive Disease	Riverside	Local	

Virus Isolations From Mosquito Pools:

Virus	Mosquito species	Date Collected	ACODE	Pool #	City	County	Date Received
WNV	Cx. tarsalis	6/29/05	COAV	1921	Mecca	Riverside	7/7/05
WNV	Cx. quinquefasciatus	6/30/05	COAV	1928	Indian Wells	Riverside	7/7/05
WNV	Cx. quinquefasciatus	6/30/05	COAV	1929	Indio	Riverside	7/7/05
WNV	Cx. quinquefasciatus	6/30/05	COAV	1932	Rancho Mirage	Riverside	7/7/05
WNV	Cx. quinquefasciatus	6/30/05	COAV	1933	Rancho Mirage	Riverside	7/7/05
WNV	Cx. tarsalis	7/6/05	FRWS	32	Mendota Airport	Fresno	7/7/05
WNV	Cx. tarsalis	7/6/05	FRWS	34	Kerman	Fresno	7/7/05
WNV	Cx. quinquefasciatus	6/27/05	GRLA	887	Long Beach	Los Angeles	6/29/05
WNV	Cx. tarsalis	6/27/05	GRLA	888	Long Beach	Los Angeles	6/29/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	240	Bakersfield	Kern	7/5/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	242	Bakersfield	Kern	7/5/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	244	Bakersfield	Kern	7/5/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	246	Bakersfield	Kern	7/5/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	247	Bakersfield	Kern	7/5/05
WNV	Cx. quinquefasciatus	7/1/05	KERN	248	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5461	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5462	Bakersfield	Kern	7/5/05

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WNV	Cx. tarsalis	6/28/05	KERN	5467	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5472	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5475	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5479	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5480	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5505	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5508	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5509	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5510	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/28/05	KERN	5511	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/30/05	KERN	5523	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/30/05	KERN	5525	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/30/05	KERN	5526	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/30/05	KERN	5527	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	6/30/05	KERN	5528	Bakersfield	Kern	7/5/05
WNV	Cx. tarsalis	7/6/05	MADR	11	Firebaugh	Madera	6/29/05
WNV	Cx. quinquefasciatus	6/28/05	ORCO	2037	Huntington Beach	Orange	7/6/05
WNV	Cx. quinquefasciatus	6/28/05	ORCO	2044	Santa Ana	Orange	7/6/05
WNV	Cx. tarsalis	6/29/05	ORCO	2048	Huntington Beach	Orange	7/6/05
WNV	Cx. quinquefasciatus	6/29/05	ORCO	2070	Anaheim	Orange	7/6/05
WNV	Cx. tarsalis	6/30/05	PLCR	22	Roseville	Placer	7/5/05
WNV	Cx. tarsalis	6/30/05	PLCR	23	Lincoln	Placer	7/5/05
WNV	Cx. pipiens	6/29/05	SAYO	202	Fair Oaks	Sacramento	6/29/05
WNV	Cx. pipiens	6/29/05	SAYO	203	Fair Oaks	Sacramento	6/29/05
WNV	Cx. pipiens	6/29/05	SAYO	204	Fair Oaks	Sacramento	6/29/05
WNV	Cx. pipiens	6/29/05	SAYO	212	Arden Park	Sacramento	6/29/05
WNV	Cx. pipiens	7/1/05	SAYO	217	Citrus Heights	Sacramento	7/5/05
WNV	Cx. tarsalis	7/1/05	SAYO	219	Knights Landing	Yolo	7/5/05
WNV	Cx. tarsalis	7/1/05	SAYO	229	La Riviera	Sacramento	7/5/05
WNV	Cx. pipiens	7/1/05	SAYO	231	La Riviera	Sacramento	7/5/05
WNV	Cx. pipiens	7/1/05	SAYO	232	La Riviera	Sacramento	7/5/05
WNV	Cx. tarsalis	7/1/05	SAYO	237	Winters	Yolo	7/5/05
WNV	Cx. pipiens	7/1/05	SAYO	259	Sacramento	Sacramento	7/5/05
WNV	Cx. tarsalis	7/5/05	SUYA	85	Tudor	Sutter	7/5/05
WNV	Cx. tarsalis	7/5/05	SUYA	90	Sutter	Sutter	7/5/05
WNV	Cx erythrothorax	6/29/05	VENT	5	Simi Valley	Ventura	6/30/05
WEE	Cx tarsalis	6/27/05	COAV	1884	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/25/05	COAV	1893	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/26/05	COAV	1895	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/26/05	COAV	1897	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/25/05	COAV	1908	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/29/05	COAV	1921	Mecca	Riverside	7/7/05
WEE	Cx tarsalis	6/29/05	COAV	1923	Mecca	Riverside	7/7/05

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Chicken Seroconversions Reported by DHS:

Virus	County	State	Acode	City	Location
**** WNV	Riverside	CA	COAV0204	Indio	York
Band: 0730					Probable Seroconversion Date: 6-June-05

WNV Positive Dead Birds Reported July 2- July 8, 2005

Species	County	City	Zip Code	Date Collected	Date Tested	Tested By
American Crow	Fresno	Clovis	93619	6/26/05	6/26/05	RAMP
American Crow	Fresno	Clovis	93619	6/30/05	6/30/05	RAMP
American Crow	Kings	Hanford	93230	6/29/05	6/29/05	RAMP
American Crow	Kings	Hanford	93230	6/27/05	7/5/05	RT-PCR
American Crow	Kings	Hanford	93230	6/27/05	7/5/05	RT-PCR
American Crow	Kings	Hanford	93230	6/28/05	7/5/05	RT-PCR
American Crow	Los Angeles	Pico Rivera	90660	6/20/05	7/5/05	RT-PCR
American Crow	Madera	Madera	93637	6/28/05	7/5/05	RT-PCR
American Crow	Merced	Livingston	95334	6/24/05	7/5/05	RT-PCR
American Crow	Merced	Atwater	95301	6/27/05	7/5/05	RT-PCR
American Crow	Orange	Huntington Beach	92646	6/15/05	6/15/05	IHC
American Crow	Orange	Anaheim	92804	6/15/05	6/15/05	IHC
American Crow	Orange	Placentia	92870	6/15/05	6/15/05	IHC
American Crow	Orange	Costa Mesa	92626	6/15/05	6/15/05	IHC
American Crow	Orange	Costa Mesa	92627	6/15/05	6/15/05	IHC
American Crow	Orange	Costa Mesa	92628	6/15/05	6/15/05	IHC
American Crow	Orange	Huntington Beach	92649	6/16/05	6/16/05	IHC
American Crow	Orange	Huntington Beach	92647	6/16/05	6/16/05	IHC
American Crow	Orange	Tustin	92780	6/16/05	6/16/05	IHC
American Crow	Orange	Fountain Valley	92708	6/16/05	6/16/05	IHC
American Crow	Orange	Huntington Beach	92646	6/16/05	6/16/05	IHC
American Crow	Orange	Fountain Valley	92708	6/17/05	6/17/05	IHC
American Crow	Orange	Huntington Beach	92646	6/18/05	6/18/05	IHC
American Crow	Orange	Santa Ana	92707	6/19/05	6/19/05	IHC
American Crow	Orange	Anaheim	92804	6/20/05	6/20/05	IHC
American Crow	Orange	Buena Park	90620	6/20/05	6/20/05	IHC
American Crow	Orange	Irvine	92620	6/20/05	6/20/05	IHC
American Crow	Orange	Irvine	92612	6/20/05	6/20/05	IHC
American Crow	Orange	Laguna Beach	92651	6/20/05	6/20/05	IHC
American Crow	Orange	Huntington Beach	92646	6/21/05	6/21/05	IHC
American Crow	Orange	Huntington Beach	92646	6/21/05	6/21/05	IHC
American Crow	Orange	Huntington Beach	92647	6/21/05	6/21/05	IHC
American Crow	Orange	Santa Ana	92704	6/21/05	6/21/05	IHC
American Crow	Orange	Costa Mesa	92626	6/21/05	6/21/05	IHC

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American Crow	Orange	Santa Ana	92704	6/21/05	6/21/05	IHC
American Crow	Orange	Santa Ana	92704	6/21/05	6/21/05	IHC
American Crow	Orange	Orange	92867	6/23/05	6/23/05	IHC
American Crow	Orange	Costa Mesa	92626	6/23/05	6/23/05	IHC
American Crow	Orange	Tustin	92780	6/23/05	6/23/05	IHC
American Crow	Orange	Huntington Beach	92646	6/23/05	6/23/05	IHC
American Crow	Placer	Roseville	95747	6/17/05	6/17/05	RT-PCR
American Crow	Riverside	Beaumont	92223	6/20/05	7/5/05	RT-PCR
American Crow	Placer	Pleasant Grove	95668	6/27/05	6/27/05	RT-PCR
American Crow	Riverside	Moreno Valley	92551	6/20/05	7/5/05	RT-PCR
American Crow	Riverside	Cherry Valley	92223	6/20/05	7/5/05	RT-PCR
American Crow	Riverside	Riverside	92503	6/21/05	7/5/05	RT-PCR
American Crow	Riverside	Sun City	92586	6/22/05	7/5/05	RT-PCR
American Crow	Riverside	Perris	92571	6/26/05	7/5/05	RT-PCR
American Crow	Riverside	Beaumont	92223	6/26/05	7/5/05	RT-PCR
American Crow	Riverside	Riverside	92501	6/27/05	7/5/05	RT-PCR
American Crow	San Bernardino	Yucaipa	92399	6/22/05	6/22/05	VecTest
American Crow	San Bernardino	Fontana	92337	6/23/05	6/23/05	VecTest
American Crow	San Bernardino	Chino	91710	6/23/05	7/5/05	RT-PCR
American Crow	San Bernardino	Fontana	92337	6/23/05	7/5/05	RT-PCR
American Crow	San Diego	Vista	92081	6/10/05	7/5/05	RT-PCR
American Crow	Santa Barbara	Goleta	93117	6/24/05	7/5/05	RT-PCR
American Crow	Stanislaus	Modesto	95350	6/26/05	7/5/05	RT-PCR
American Crow	Stanislaus	Modesto	95354	6/27/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93277	6/16/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93277	6/24/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93292	6/26/05	7/5/05	RT-PCR
American Crow	Tulare	Tulare	93274	6/27/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93277	6/28/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93291	6/28/05	7/5/05	RT-PCR
American Crow	Tulare	Visalia	93277	6/28/05	7/5/05	RT-PCR
American Robin	Fresno	Clovis	93619	6/21/05	7/5/05	RT-PCR
Cooper's Hawk	Orange	Tustin		6/22/05	6/22/05	IHC
House Finch	Orange	Westminster	92683	6/20/05	6/20/05	IHC
House Finch	Riverside	Moreno Valley	92555	6/17/05	7/5/05	RT-PCR
House Sparrow	Riverside	Winchester	92596	6/20/05	7/5/05	RT-PCR
Sparrow	Kern	Bakersfield	93307	6/27/05	7/5/05	RT-PCR
Sparrow	Placer	Roseville	95747	6/22/05	7/5/05	RT-PCR
Steller's Jay	Fresno	Clovis	93619	6/29/05	6/29/05	RAMP
Western Scrub-Jay	Fresno	Clovis	93611	6/27/05	6/27/05	RAMP
Western Scrub-Jay	Fresno	Clovis	93611	6/29/05	6/29/05	RAMP
Western Scrub-Jay	Fresno	Clovis	93619	6/30/05	6/30/05	RAMP
Western Scrub-Jay	Fresno	Sanger	93657	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Kern	Bakersfield	93309	6/24/05	7/5/05	RT-PCR
Western Scrub-Jay	Kings	Hanford	93230	6/29/05	6/29/05	RAMP
Western Scrub-Jay	Kings	Hanford	93230	6/20/05	7/5/05	RT-PCR
Western Scrub-Jay	Kings	Hanford	93230	6/27/05	7/5/05	RT-PCR

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Western Scrub-Jay	Kings	Hanford	93230	6/28/05	7/5/05	RT-PCR
Western Scrub-Jay	Madera	Madera	93638	6/28/05	7/5/05	RT-PCR
Western Scrub-Jay	Merced	Gustine	95322	6/21/05	7/5/05	RT-PCR
Western Scrub-Jay	Merced	Atwater	95301	6/24/05	7/5/05	RT-PCR
Western Scrub-Jay	San Bernardino	Yucaipa	92399	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Stanislaus	Modesto	95350	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Sutter	Yuba City	95991	6/29/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93277	6/23/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93277	6/23/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Porterville	93258	6/23/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93291	6/24/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93277	6/26/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93277	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93291	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93291	6/27/05	7/5/05	RT-PCR
Western Scrub-Jay	Tulare	Visalia	93291	6/28/05	7/5/05	RT-PCR
Yellow-billed Magpie	Merced	Livingston	95334	6/24/05	7/5/05	RT-PCR
Yellow-billed Magpie	Merced	Livingston	95334	6/24/05	7/5/05	RT-PCR
Yellow-billed Magpie	Stanislaus	Modesto	95350	6/24/05	7/5/05	RT-PCR
Yellow-billed Magpie	Stanislaus	Modesto	95350	6/27/05	7/5/05	RT-PCR
Yellow-billed Magpie	Sutter	Yuba City	95993	6/27/05	7/5/05	RT-PCR

National Comments:

As of July 5, 2005, West Nile virus (WNV) activity has been detected in the following 25 states: Alabama, Arkansas, Arizona, California, Florida, Georgia, Iowa, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Wisconsin, and Wyoming. At this time in 2004, a total of 31 states and Puerto Rico had published WNV activity. A total of 13 WNV cases had been reported in 2005 from Arizona (1), California (2), Indiana (1), Kansas (1), Missouri (1), New Mexico (2), South Dakota (4), and Texas (1). Of the 13 cases, 6 have been classified as neuroinvasive. There has been one reported WNV-related fatality.

TEST PROTOCOLS

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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].