

California Arbovirus Surveillance Bulletin # 3

Week 6 Friday, February 13, 2009

Weekly Summary

WEEKLY COMMENTS



Humans

No human cases have been reported in 2009.

2008 Update

In 2008 (reported as of 2/13/2009), 440 human cases of West Nile virus (WNV) were identified in Alameda (1), Butte (6), Calaveras (1), Colusa (1), Contra Costa (4), El Dorado (1), Fresno (3), Glenn (1), Kern (2), Kings (2), Los Angeles (156, including 5 from Long Beach and 3 from Pasadena), Merced (1), Orange (71), Placer (6), Riverside (62), Sacramento (13), San Bernardino (31), San Diego (35), San Joaquin (12), Santa Barbara (1), Santa Clara (1), Shasta (1), Solano (1), Stanislaus (17), Tehama (4), Tulare (5) and Yolo (1) counties. Of the 440 individuals, 291 (66%) developed neuroinvasive symptoms. The median age of the 440 individuals is 55 years (range: 3-94 years), and 280 (64%) are male. Fifteen WNV-related fatalities have been reported in Fresno (1), Los Angeles (6), Orange (3), Riverside (4) and San Bernardino (1) counties. A total of 73 WNV-positive blood donation samples have been reported this year; 21 of the individuals reported symptoms and were reclassified as cases.

Horses

No equine cases have been reported in 2009.

Dead Birds & Tree Squirrels

A WNV positive American crow from San Diego County was reported last week. This is the first WNV positive dead bird reported in 2009, and the first detection of WNV activity in California this year.

Statewide testing of dead birds and squirrels will resume on March 16, 2009.

Mosquito Pools

No positive mosquito pools have been reported in 2009.

Sentinel Chickens

Two WNV seroconversions were reported from Los Angeles County this week. One of the two chickens was bled in December, 2008 and will be included in the 2008 total. The other positive chicken was bled in January, 2009 and is the first detection of WNV activity in Los Angeles County this year.

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov.

2008 & 2009 YTD West Nile Virus Comparisons		
	2008	2009
Total # Dead Bird Reports	948	762
# Positive Counties	0	2
# Human Cases/ # Tested	0 / 25	0 / 78
# Horse Cases/ # Tested	0 / 0	0 / 0
# Positive Dead Birds/ # Tested	0 / 89	1 / 35
# Positive Mosquito Pools/ # Tested	0 / 79	0 / 153
# Positive Chicken Sera/ # Tested	0 / 0	1 / 59
# Positive Squirrels/ # Tested	0 / 1	0 / 0

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2009 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	16	0	0	0	0	0	0	0	0
	YTD	78	0	0	0	0	0	0	0	0
Horses Tested	Week	0	0	0	0	0	0	0	0	0
	YTD	0	0	0	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested*	WNV Positive
Dead Birds	Week	3	1
	YTD	35	1
Tree Squirrels	Week	0	0
	YTD	0	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	59	1	0	0
	YTD	59	1	0	0
Mosquito Pools: RT-PCR	Week	122	0	0	0
	YTD	153	0	0	0
Mosquito Pools: RAMP	Week	0	0	N/A	N/A
	YTD	0	0	N/A	N/A

*Statewide testing will resume on March 16, 2009

POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Reported	Tested	Result
San Diego	San Diego Co VCP	San Marcos	92069	American Crow	1/13/09	2/3/09	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Result	Band 01
Los Angeles	LACW1001	Rolling Hills Estates	1/21/2009	WNV	1034
Los Angeles	LACW1010	Los Angeles(Miracle Mile)	12/18/2008	WNV	1080

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NATIONAL COMMENTS

As of December 16, 2008, 1,370 human cases had been reported nationwide in the following 42 states: Alabama (21), Arizona (109), Arkansas (9), California (411), Colorado (95), Connecticut (8), Delaware (1), Florida (2), Georgia (8), Idaho (33), Illinois (19), Indiana (3), Iowa (10), Kansas (38), Kentucky (3), Louisiana (36), Maryland (14), Michigan (17), Minnesota (21), Mississippi (99), Missouri (19), Montana (5), Nebraska (49), Nevada (16), New Jersey (7), New Mexico (9), New York (44), North Dakota (43), Ohio (20), Oklahoma (7), Oregon (16), Pennsylvania (14), Rhode Island (1), South Dakota (39), Tennessee (17), Texas (62), Utah (26), Virginia (1), Washington (2), West Virginia (1), Wisconsin (7), and Wyoming (8). Of the 1,370 individuals, 640 (47%) had neuroinvasive illness. As of December 16, 37 fatalities had been reported in Arizona (5), California (13), Colorado (1), Idaho (1), Iowa (1), Illinois (1), Mississippi (3), Missouri (1), New Jersey (1), New York (6), Ohio (1), Pennsylvania (1), Texas (1), and Wisconsin (1). At this time last year, 3,404 human cases had been reported nationwide.

TEST PROTOCOLS

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing or confirmation by plaque reduction neutralization test (PRNT).

*Human denominator data only includes specimens tested at VRDL and does not include additional negative specimens that are tested by local agencies only.

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

Dead Birds and Tree Squirrels:

State testing of dead birds is currently suspended until March 16, 2009. Dead birds and squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded 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, Erin Parker, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to VBDS Laboratory and 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. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and 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.

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