

California Arbovirus Surveillance Bulletin # 8

Week 13 Friday, April 3, 2009

Weekly Summary

WEEKLY COMMENTS



Humans

No human cases have been reported in 2009.

Horses

No equine cases have been reported in 2009.

Dead Birds & Tree Squirrels

One West Nile virus (WNV) positive dead bird from Fresno County was reported this week. **This is the first detection of WNV activity in Fresno County this year.** In 2009, three birds have tested positive for WNV from Fresno (1), Orange (1) and San Diego (1) counties.

No WNV positive tree squirrels have been reported this year.

Mosquito Pools

One WNV positive mosquito pool from Contra Costa County was reported this week. **This is the first WNV positive mosquito pool detected in California this year, and the first indication of WNV activity in Contra Costa County in 2009.**

Sentinel Chickens

No seroconversions were reported this week. In 2009, three chickens from Los Angeles County have tested positive for WNV.

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.

YTD WNV Activity by Element and County, 2009

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa				1		
Fresno			1			
Los Angeles					3	
Orange			1			
San Diego			1			
Totals	0	0	3	1	3	0

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2008 & 2009 YTD West Nile Virus Comparisons		
	2008	2009
Total # Dead Bird Reports	2,403	1,902
# Positive Counties	4	5
# Human Cases/ # Tested	0 / 97	0 / 214
# Horse Cases/ # Tested	0 / 0	0 / 32
# Positive Dead Birds/ # Tested	8 / 276	3 / 171
# Positive Mosquito Pools/ # Tested	0 / 283	1 / 708
# Positive Chicken Sera/ # Tested	2 / 182	3 / 121
# Positive Squirrels/ # Tested	0 / 7	0 / 4

2009 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	8	0	0	0	0	0	0	0	0
	YTD	214	0	0	0	0	0	0	0	0
Horses Tested	Week	0	0	0	0	0	0	0	0	0
	YTD	32	0	0	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	45	1
	YTD	171	3
Tree Squirrels	Week	4	0
	YTD	4	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	0	0	0	0
	YTD	121	3	0	0
Mosquito Pools: RT-PCR	Week	45	0	0	0
	YTD	700	0	0	0
Mosquito Pools: RAMP	Week	8	1	N/A	N/A
	YTD	8	1	N/A	N/A

POSITIVES

Mosquitoes

County	Site Code	City	Pool #	Species	# in Pool	Collected	Tested
Contra Costa	CNTR0476	Martinez	5	Cx pipiens	50	3/26/09	3/30/09

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NATIONAL COMMENTS

No new update. As of February 13, 2009, 1,338 human cases had been reported nationwide in 2008 in the following 43 states: Alabama (21), Arizona (114), Arkansas (9), California (440), Colorado (71), Connecticut (8), Delaware (1), Florida (2), Georgia (8), Idaho (37), Illinois (19), Indiana (4), Iowa (6), Kansas (31), Kentucky (3), Louisiana (49), Maryland (14), Michigan (17), Minnesota (10), Mississippi (63), Missouri (15), Montana (5), Nebraska (49), Nevada (16), New Jersey (10), New Mexico (8), New York (46), North Dakota (37), Ohio (15), Oklahoma (9), Oregon (16), Pennsylvania (14), Rhode Island (1), South Carolina (1), South Dakota (39), Tennessee (19), Texas (64), Utah (26), Virginia (1), Washington (3), West Virginia (1), Wisconsin (8), and Wyoming (8). Of the 1,338 individuals, 674 (50%) had neuroinvasive illness. As of February 13, 43 fatalities had been reported in Arizona (7), California (15), Colorado (1), Idaho (1), Iowa (1), Illinois (1), Louisiana (1), Mississippi (2), Missouri (1), New Jersey (2), New York (6), Ohio (1), Pennsylvania (1), Tennessee (1), Texas (1), and Wisconsin (1).

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:

Dead birds and tree 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 West Nile virus 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 the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, 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.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6298 or email: tina.feiszli@cdph.ca.gov
