

California Arbovirus Surveillance Bulletin # 10

Week 15 Friday, April 17, 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

Four West Nile virus (WNV) positive dead birds were reported this week from Los Angeles (1) and San Diego (3) counties. This is the first WNV positive dead bird detected in Los Angeles County this year. In 2009, nine birds have tested positive for WNV from four counties.

No WNV positive tree squirrels have been reported this year.

Mosquito Pools

Four WNV positive mosquito pools were reported this week from Contra Costa County. In 2009, seven mosquito pools from Contra Costa County have tested positive for WNV.

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				7		
Fresno			1			
Los Angeles			1		3	
Orange			2			
San Diego			5			
Totals	0	0	9	7	3	0

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2008 & 2009 YTD West Nile Virus Comparisons		
	2008	2009
Total # Dead Bird Reports	3,142	2,457
# Positive Counties	6	5
# Human Cases/ # Tested	0 / 121	0 / 255
# Horse Cases/ # Tested	0 / 0	0 / 32
# Positive Dead Birds/ # Tested	10 / 388	9 / 306
# Positive Mosquito Pools/ # Tested	9 / 692	7 / 1,052
# Positive Chicken Sera/ # Tested	2 / 916	3 / 1,095
# Positive Squirrels/ # Tested	0 / 13	0 / 6

2009 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	20	0	0	0	0	0	0	0	0
	YTD	255	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	70	4
	YTD	306	9
Tree Squirrels	Week	1	0
	YTD	6	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	914	0	0	0
	YTD	1,095	3	0	0
Mosquito Pools: RT-PCR	Week	69	0	0	0
	YTD	1,032	0	0	0
Mosquito Pools: RAMP	Week	9	4	N/A	N/A
	YTD	20	7	N/A	N/A

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POSITIVES

Dead Birds

County	City	Zip	Species	Reported	Tested
Los Angeles	Valencia	91355	American Crow	4/6/09	4/13/09
San Diego	San Diego	92121	American Crow	1/16/09	4/13/09
San Diego	Poway	92064	Red-shouldered Hawk	1/20/09	4/13/09
San Diego	San Diego	92121	American Crow	1/26/09	4/13/09

Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Virus
Contra Costa	CNTR1775	24	Cs inornata	25	4/9/2009	4/13/2009	Pittsburg	WNV
Contra Costa	CNTR2215	27	Cx tarsalis	14	4/9/2009	4/13/2009	Bay Point	WNV
Contra Costa	CNTR1011	28	Cx pipiens	18	4/9/2009	4/13/2009	Pinole	WNV
Contra Costa	CNTR1775	34	Cs inornata	13	4/16/2009	4/16/2009	Pittsburg	WNV

NATIONAL COMMENTS

Final 2008 update: A total of 1,356 human cases were reported nationwide in 2008 in 45 states and the District of Columbia (DC): Alabama (18), Arizona (114), Arkansas (9), California (445), Colorado (71), Connecticut (8), Delaware (1), DC (8), Florida (3), Georgia (8), Idaho (39), Illinois (20), Indiana (4), Iowa (6), Kansas (31), Kentucky (3), Louisiana (49), Maryland (14), Massachusetts (1), Michigan (17), Minnesota (10), Mississippi (65), Missouri (15), Montana (5), Nebraska (47), Nevada (16), New Jersey (10), New Mexico (8), New York (46), North Carolina (3), 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 1,356 individuals, 687 (51%) had neuroinvasive illness. A total of 44 fatalities were reported in Arizona (7), California (15), Colorado (1), Idaho (1), Iowa (1), Illinois (1), Louisiana (1), Mississippi (2), Missouri (1), Nebraska (1), New Jersey (2), New York (6), Ohio (1), Pennsylvania (1), Tennessee (1), Texas (1), and Wisconsin (1). In 2007, a total of 3,630 human cases were reported nationwide.

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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.

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