

California Arbovirus Surveillance Bulletin # 20

Week 26 Friday, July 1, 2011

Weekly Summary

WEEKLY COMMENTS



Humans

No human cases have been reported in 2011.

Horses

No equine cases have been reported in 2011.

Dead Birds & Squirrels

Six West Nile virus (WNV) positive dead birds were reported this week from Contra Costa (1), Los Angeles (2), Riverside (1) and Santa Clara (2) counties. This is the first detection of WNV activity in Contra Costa County in 2011, and the first positive dead bird reported from Riverside County in 2011. In addition, two dead birds from Sacramento County tested positive for chronic infection with WNV. To date this year, 29 dead birds from 9 counties have tested positive for WNV. In addition, 13 birds have tested positive for chronic* WNV infection.

At this time last year, 40 birds from 11 counties, and 1 tree squirrel from 1 county (Butte) had tested positive for WNV.

**In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section began differentiating between chronic and acute infections in WNV positive dead birds. Birds considered to have chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility.*

Mosquito Pools

A total of 15 WNV positive mosquito pools were reported this week from the following 5 counties: Fresno (6), Kern (3), Los Angeles (3), Santa Clara (1), and Tulare (2). This the first positive mosquito pool reported from Santa Clara County this year. To date this year, 31 mosquito pools from 7 counties have tested positive for WNV.

At this time last year, 48 mosquito pools from 10 counties had tested positive for WNV.

Sentinel Chickens

No seroconversions have been reported in 2011.

YTD WNV Activity by Element and County, 2011

County	Humans	Horses	Dead Birds [^]	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa			1			
Fresno				7		
Kern				5		
Kings			1			
Los Angeles			6	5		
Orange			4			
Riverside			1	1		
Sacramento			1			
San Bernardino				1		
Santa Clara			9	1		
Tulare			5	11		
Ventura			1			
Totals	0	0	29	31	0	0

[^] Chronic infections are not included in county totals

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2010 & 2011 YTD West Nile Virus Comparisons		
	2010	2011
Total # Dead Bird Reports	4,659	3,780
# Positive Counties	17	12
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	40 / 887	29 / 853
# Positive Mosquito Pools / # Tested	48 / 9,752	31 / 8,733
# Seroconversions / # Tested	0 / 10,015	0 / 7,577
# Positive Squirrels / # Tested	1 / 38	0 / 41

TEST SUMMARIES

Human & Horse Cases

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	0	0	0	0	0	0
	YTD	0	0	0	0	0	0
Horse Cases	Week	0	0	0	0	0	0
	YTD	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	67	6
	YTD	853	29
Tree Squirrels	Week	5	0
	YTD	41	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	497	0	0	0
	YTD	7,577	0	0	0
Mosquito Pools: RT-PCR	Week	1,241	15	0	0
	YTD	8,723	31	0	0
Mosquito Pools: RAMP	Week	0	0	N/A	N/A
	YTD	10	0	N/A	N/A

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POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Collected	Virus	Type of Infection	Method
Contra Costa	Contra Costa MVCD	Walnut Creek	94598	American Crow	6/29/2011	WNV	Recent	RAMP
Los Angeles	San Gabriel Valley MVCD	Baldwin Park	91706	American Crow	6/22/2011	WNV	Recent	RAMP
Los Angeles	Los Angeles Co Vet	Cerritos	90703	American Crow	6/13/2011	WNV	Recent	RT-PCR
Riverside	Northwest Mosquito VCD	Riverside	92505	American Crow	6/15/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95842	House Finch	6/14/2011	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	American Crow	6/20/2011	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	American Crow	6/20/2011	WNV	Recent	VecTest
Santa Clara	Santa Clara Co VCD	Sunnyvale	94089	American Crow	6/20/2011	WNV	Recent	VecTest

Mosquitoes

County	Site Code	Pool #	Species	# in Pool	City	Collected	Virus	Method
Fresno	CNSL1267	132	Cx. quinquefasciatus	43	Clovis	6/28/2011	WNV	RTPCR
Fresno	CNSL4026	353	Cx. quinquefasciatus	50	Selma	6/24/2011	WNV	RTPCR
Fresno	CNSL4027	352	Cx. quinquefasciatus	50	Selma	6/24/2011	WNV	RTPCR
Fresno	CNSL4041	355	Cx. quinquefasciatus	50	Selma	6/24/2011	WNV	RTPCR
Fresno	CNSL4099	356	Cx. quinquefasciatus	50	Selma	6/24/2011	WNV	RTPCR
Fresno	CNSL4129	354	Cx. quinquefasciatus	50	Selma	6/24/2011	WNV	RTPCR
Kern	KERN0092	783	Cx. tarsalis	50	Bakersfield	6/22/2011	WNV	RTPCR
Kern	KERN0121	886	Cx. quinquefasciatus	50	Bakersfield	6/24/2011	WNV	RTPCR
Kern	KERN2001	882	Cx. quinquefasciatus	13	Bakersfield	6/24/2011	WNV	RTPCR
Los Angeles	GRLA2549	5736	Cx. quinquefasciatus	50	Granada Hills	6/23/2011	WNV	RTPCR
Los Angeles	GRLA2635	5702	Cx. quinquefasciatus	50	Van Nuys	6/23/2011	WNV	RTPCR
Los Angeles	GRLA3049	752	Cx. stigmatosoma	22	Downey	6/24/2011	WNV	RTPCR
Santa Clara	STCL2599	3860	Cx. pipiens	24	Sunnyvale	6/23/2011	WNV	RTPCR
Tulare	DLTA8521	107	Cx. quinquefasciatus	50	Visalia	6/29/2011	WNV	RTPCR
Tulare	DLTA9504	72	Cx. quinquefasciatus	50	Visalia	6/24/2011	WNV	RTPCR

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).

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.

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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.

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 (WEEV), and St. Louis encephalitis (SLEV) 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 WEEV, SLEV, 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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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
