

California Arbovirus Surveillance Bulletin #10

Week 17 Friday, April 27, 2012



WEEKLY UPDATE

Human Cases

No human cases have been reported in 2012.

Horses

No equine cases have been reported in 2012.

Dead Birds & Squirrels

This week, one dead bird from Sacramento County tested positive for chronic* West Nile virus (WNV) infection; no recent positives were reported. To date this year, four dead birds have tested positive (recent) for WNV from four counties, and an additional 10 dead birds have tested positive for chronic WNV infection from Sacramento (8) and Yolo (2) counties.

**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

No positive mosquito pools were reported this week. In 2012, one mosquito pool from Riverside County has tested positive for WNV.

Sentinel Chickens

No seroconversions have been reported in 2012.

YTD WNV Activity by Element and County, 2012

County	Humans	Horses	Dead Birds*	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa			1			
Los Angeles			1			
Riverside				1		
Sacramento			1			
Santa Clara			1			
Totals	0	0	4	1	0	0

**Total does not include chronic infections*

2011 & 2012 YTD West Nile Virus Comparisons

	2011	2012
Total # Dead Bird Reports	1,462	1,658
# Positive Counties	2	5
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	1 / 286	4 / 339
# Positive Mosquito Pools / # Tested	1 / 2,179	1 / 1,613
# Seroconversions / # Tested	0 / 1,670	0 / 1,493
# Positive Squirrels / # Tested	0 / 5	0 / 17

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TESTING SUMMARIES

Humans and Horses

		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 & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	16	0
	YTD	339	4
Tree Squirrels	Week	3	0
	YTD	17	0

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	439	0	0	0
	YTD	1,493	0	0	0
Mosquito Pools: RT-PCR	Week	430	0	0	0
	YTD	1,613	1	0	0

POSITIVES

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Sacramento	Sac-Yolo MVCD	Elk Grove	95624	House Finch	4/15/2012	WNV	Chronic	RT-PCR

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

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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.

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.

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.
