

California Arbovirus Surveillance Bulletin #1

Week 5 Friday, January 31, 2014



WEEKLY UPDATE

Humans

No human cases or asymptomatic infections have been reported in 2014.

Dead Birds & Squirrels

One West Nile virus (WNV) positive dead bird has been reported from Santa Clara County. This is the first WNV positive bird detected in 2014. Historically, the earliest positive dead birds detected in California were reported on January 3, 2005, from both Santa Clara and Sonoma counties.

Mosquito Pools

No positive mosquito pools have been reported in 2014.

Sentinel Chickens

One WNV positive chicken has been detected in a chicken flock located in Los Angeles County. The chicken was bled on January 2, 2014 and tested positive for WNV antibodies. The chicken was previously bled on December 10, 2013 and had tested negative, indicating that transmission of WNV occurred sometime between December 10, 2013 and January 2, 2014. Prior to this year, the earliest seroconversion detected was on January 2, 2007, from a flock in Imperial County.

2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	493	365
# Positive Counties	0	2
# Human Cases	0	0
# Positive Dead Birds / # Tested	0 / 122	1 / 23
# Positive Mosquito Pools / # Tested	0 / 177	0 / 94
# Seroconversions / # Tested	0 / 114	1 / 119

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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TESTING SUMMARIES

Humans

		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

Dead Birds

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	23	1
	YTD	23	1

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	119	1	0	0
	YTD	119	1	0	0
Mosquito Pools: RT-PCR	Week	94	0	0	0
	YTD	94	0	0	0

Positives

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Santa Clara	Santa Clara MVCD	Campbell	95008	American Crow	1/22/14	WNV	RT-PCR

Sentinel chickens

County	Site Code	City	Date Bled	Virus	Band 01
Los Angeles	LACW1005	El Segundo	1/2/2014	WNV	1327

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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.

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