

# California Arbovirus Surveillance Bulletin # 15

Week 21 Friday, May 27, 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**

One bird from Santa Clara County was reported positive for West Nile virus (WNV) this week. To date this year, 7 WNV positive dead birds from 4 counties have been detected, and an additional 10 birds have tested positive for chronic\* WNV infection.

At this time last year, 6 birds from 2 counties (Los Angeles and Santa Clara) 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 WNV positive mosquito pool from San Bernardino County was reported this week; this is the first detection of WNV activity in San Bernardino County in 2011. To date this year, 4 WNV positive mosquito pools have been reported from 3 counties.

At this time last year, 2 mosquito pools from 2 counties (Riverside and San Bernardino) 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 <sup>^</sup>	Mosquito Pools	Sentinel Chickens	Squirrels
Los Angeles			1	2		
Orange			1			
Riverside				1		
Sacramento			1			
San Bernardino				1		
Santa Clara			4			
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>0</b>

<sup>^</sup> 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	2,707	2,413
# Positive Counties	4	6
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	6 / 457	7 / 501
# Positive Mosquito Pools / # Tested	2 / 3,731	4 / 4,248
# Seroconversions / # Tested	0 / 5,741	0 / 3,948
# Positive Squirrels / # Tested	0 / 18	0 / 24

## 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	78	1
	YTD	501	7
Tree Squirrels	Week	5	0
	YTD	24	0

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	528	0	0	0
	YTD	3,948	0	0	0
Mosquito Pools: RT-PCR	Week	643	1	0	0
	YTD	4,247	4	0	0
Mosquito Pools: RAMP	Week	0	0	N/A	N/A
	YTD	1	0	N/A	N/A

## POSITIVES

### Dead Birds

County	Agency	City	Zip	Species	Collected	Virus	Type of Infection	Method
Santa Clara	Santa Clara VCD	San Jose	95136	American Crow	5/16/2011	WNV	Recent	VecTest

### Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	City	Virus	Method
San Bernardino	WVAL1009	111	Cx. stigmatosoma	5	5/16/2011	Ontario Airport	WNV	RT-PCR

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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).

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### **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.

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### **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.

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### **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](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.calsurv.org](http://www.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC website, [www.cdc.gov](http://www.cdc.gov), and the USGS website, [www.westnilemaps.usgs.gov](http://www.westnilemaps.usgs.gov)*

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