

# California Arbovirus Surveillance Bulletin # 19

Week 25 Friday, June 24, 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**

Eleven West Nile virus (WNV) positive dead birds were reported this week from Kings (1), Los Angeles (3), Orange (2), Santa Clara (1), Tulare (3) and Ventura (1) counties. This is the first detection of WNV activity in Kings and Ventura counties in 2011. In addition, one dead bird from Los Angeles County tested positive for chronic infection with WNV. To date this year, 23 dead birds from 7 counties have tested positive for WNV. In addition, 11 birds have tested positive for chronic\* WNV infection.

At this time last year, 27 birds from 8 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**

Ten WNV positive mosquito pools were reported this week from Fresno (1) and Tulare (9) counties. This is the first detection of WNV activity in Fresno County in 2011, and the first positive mosquito pools reported from Tulare County this year. To date this year, 16 mosquito pools from 6 counties have tested positive for WNV.

At this time last year, 21 mosquito pools from 5 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 <sup>^</sup>	Mosquito Pools	Sentinel Chickens	Squirrels
Fresno				1		
Kern				2		
Kings			1			
Los Angeles			4	2		
Orange			4			
Riverside				1		
Sacramento			1			
San Bernardino				1		
Santa Clara			7			
Tulare			5	9		
Ventura			1			
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>16</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	4,254	3,403
# Positive Counties	12	11
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	27 / 797	23 / 786
# Positive Mosquito Pools / # Tested	21 / 7,988	16 / 7,492
# Seroconversions / # Tested	0 / 9,296	0 / 7,080
# Positive Squirrels / # Tested	1 / 37	0 / 36

## 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	64	11
	YTD	786	23
Tree Squirrels	Week	1	0
	YTD	36	0

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	903	0	0	0
	YTD	7,080	0	0	0
Mosquito Pools: RT-PCR	Week	1,031	10	0	0
	YTD	7,482	16	0	0
Mosquito Pools: RAMP	Week	4	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
Kings	Kings MAD	Hanford	93230	American Crow	6/13/2011	WNV	Recent	RT-PCR
Los Angeles	San Gabriel Valley MVCD	Covina	91723	American Crow	6/17/2011	WNV	Recent	RAMP
Los Angeles	Los Angeles Co Vet	Cerritos	90703	American Crow	6/8/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA Co VCD - SFS	Cerritos	90703	American Crow	6/14/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Lancaster	93536	American Crow	6/2/2011	WNV	Chronic	RT-PCR
Orange	Orange Co VCD	Cypress	90630	American Crow	6/16/2011	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Cypress	90630	American Crow	6/16/2011	WNV	Recent	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	6/13/2011	WNV	Recent	VecTest
Tulare	Delta VCD	Visalia	93277	American Crow	6/8/2011	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93291	American Crow	6/9/2011	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	6/10/2011	WNV	Recent	RT-PCR
Ventura	City Of Moorpark VCD	Moorpark	93021	American Crow	6/14/2011	WNV	Recent	RT-PCR

### Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	City	Virus	Method
Fresno	CNSL4024	341	Cx. quinquefasciatus	50	6/21/2011	Selma	WNV	RT-PCR
Tulare	DLTA8533	22	Cx. quinquefasciatus	48	6/15/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9506	24	Cx. quinquefasciatus	46	6/15/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9506	25	Cx. quinquefasciatus	50	6/15/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9505	49	Cx. quinquefasciatus	25	6/21/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9505	50	Cx. quinquefasciatus	44	6/21/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9505	51	Cx. quinquefasciatus	36	6/21/2011	Visalia	WNV	RT-PCR
Tulare	DLTA8533	57	Cx. quinquefasciatus	49	6/22/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9506	59	Cx. quinquefasciatus	50	6/22/2011	Visalia	WNV	RT-PCR
Tulare	DLTA9506	62	Cx. quinquefasciatus	36	6/22/2011	Visalia	WNV	RT-PCR

## 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.

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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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*Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: [tina.feiszli@cdph.ca.gov](mailto:tina.feiszli@cdph.ca.gov)*

*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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