

# California Arbovirus Surveillance Bulletin # 16

Week 23 Monday, June 14, 2010

## Weekly Summary

### WEEKLY COMMENTS



#### **Humans**

No human cases have been reported in 2010.

#### **Horses**

No equine cases have been reported in 2010.

#### **Dead Birds & Tree Squirrels**

Seven dead birds from Madera (1) and Santa Clara (6) counties were reported positive for West Nile virus (WNV) last week; all were recently infected with the virus. This is the first detection of WNV activity in Madera County in 2010. To date this year, 18 recently-infected\* WNV positive dead birds have been reported from 4 counties. In addition, 5 other birds from Butte (2), Los Angeles (1), Sacramento (1) and San Joaquin (1) have tested positive for chronic infection with WNV. No positive tree squirrels have been reported this year.

At this time last year, 38 birds from 10 counties, and one tree squirrel had tested positive for WNV. Year-to-date totals from last year and previous years include both recent and chronic infections.

*\*In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section has begun differentiating between chronic and acute infections in West Nile virus 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**

Three WNV positive mosquito pools were reported last week from Madera (1) and Riverside (2) counties. To date this year, 6 mosquito pools from 3 counties have tested positive for WNV. At this time last year, 56 WNV positive mosquito pools had been reported from 8 counties.

#### **Sentinel Chickens**

No seroconversions have been reported in 2010. At this time last year, 3 WNV positive chickens from Los Angeles County had been reported.

**YTD WNV Activity by Element and County, 2010**

County	Humans	Horses	Dead Birds <sup>^</sup>	Mosquito Pools	Sentinel Chickens	Squirrels
Los Angeles			3			
Madera			1	1		
Orange			1			
Riverside				3		
San Bernardino				2		
Santa Clara			13			
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>6</b>	<b>0</b>	<b>0</b>

<sup>^</sup> Chronic infections are not included in county totals.

**Website Information:** For updated information on WNV in California, please visit the California WNV website, [www.westmile.ca.gov](http://www.westmile.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.westmilemaps.usgs.gov](http://www.westmilemaps.usgs.gov).

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2009 & 2010 YTD West Nile Virus Comparisons		
	2009	2010
Total # Dead Bird Reports	6,029	3,540
# Positive Counties	13	6
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	38 / 950	18 / 638
# Positive Mosquito Pools / # Tested	56 / 6,137	6 / 6,074
# Seroconversions / # Tested	3 / 7,527	0 / 7,380
# Positive Squirrels / # Tested	1 / 32	0 / 26

## TEST SUMMARIES

### Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	16	0	0	0	0	0	0	0	0
	YTD	319	0	0	0	0	0	0	0	0
Horses Tested	Week	8	0	0	0	0	0	0	0	0
	YTD	71	0	0	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	76	7
	YTD	638	18
Tree Squirrels	Week	2	0
	YTD	26	0

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive
Chicken Sera	Week	945	0	0	0
	YTD	7,380	0	0	0
Mosquito Pools: RT-PCR	Week	1,746	3	0	0
	YTD	5,992	6	0	0
Mosquito Pools: RAMP	Week	4	0	N/A	N/A
	YTD	82	0	N/A	N/A

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## POSITIVES

### Dead Birds

County	Submitting Agency	City	Zip Code	Species	Reported	Virus	Type of Infection	Test Method
Madera	Madera MVCD	Madera	93638	Western Scrub-Jay	6/2/10	WNV	Recent	RT-PCR
Santa Clara	Santa Clara VCD	Mountain View	94043	American Crow	5/31/10	WNV	Recent	VecTest
Santa Clara	Santa Clara VCD	Palo Alto	94306	Western Scrub-Jay	6/1/10	WNV	Recent	VecTest
Santa Clara	Santa Clara VCD	Saratoga	95070	American Crow	6/2/10	WNV	Recent	VecTest
Santa Clara	Santa Clara VCD	Sunnyvale	94087	American Crow	6/2/10	WNV	Recent	VecTest
Santa Clara	Santa Clara VCD	Campbell	95008	American Crow	6/3/10	WNV	Recent	VecTest
Santa Clara	Santa Clara VCD	Cupertino	95014	American Crow	6/3/10	WNV	Recent	VecTest

### Mosquito Pools

County	Site Code	Pool #	# in Pool	Species	Collected	City	Virus	Test Method
Madera	MADR1007	28	22	Cx quinquefasciatus	6/3/10	Madera	WNV	RT-PCR
Riverside	COAV0035	1788	50	Cx tarsalis	6/8/10	Mecca	WNV	RT-PCR
Riverside	COAV0048	1871	50	Cx tarsalis	6/8/10	Mecca	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).

\*Human denominator data only includes specimens tested at VRDL and does not include additional negative specimens that are tested by local agencies only.

### 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. The WNV Dead Bird Surveillance Coordinator, Erin Parker, can be reached directly at (510) 412-6254.

### 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 (WEE), and St. Louis encephalitis (SLE) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

### Mosquito Pools:

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Mosquito pools are submitted to CVEC and screened for WEE, SLE, 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)*

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