

# California Arbovirus Surveillance Bulletin # 22

Week 28 Friday, July 15, 2011

## Weekly Summary

### WEEKLY COMMENTS



#### **Humans**

No human cases have been reported in 2011. At this time last year, 2 cases of West Nile virus (WNV) had been reported from Stanislaus County, and an asymptomatic infection had been detected in a blood donor from Madera County.

#### **Horses**

No equine cases have been reported in 2011.

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

Seven WNV positive dead birds were reported this week from Los Angeles (4), Sacramento (2), and Tulare (1) counties. In addition, six dead birds tested positive for chronic infection with WNV. In 2011, 44 dead birds from 9 counties have tested positive for WNV. In addition, 23 birds have tested positive for chronic\* WNV infection. No positive squirrels were reported this week.

At this time last year, 66 birds from 16 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**

This week, 43 WNV positive mosquito pools were reported from the following 8 counties: Fresno (1), Kern (7), Los Angeles (16), Orange (8), Sacramento (2), San Joaquin (1), Stanislaus (3), and Tulare (5). This is the first detection of WNV activity in San Joaquin and Stanislaus counties in 2011, and the first positive mosquito pools reported from Orange County this year. In 2011, 89 mosquito pools from 11 counties have tested positive for WNV.

At this time last year, 202 mosquito pools from 15 counties had tested positive for WNV.

#### **Sentinel Chickens**

Three WNV seroconversions were reported this week from one flock in Kern County. These are the first WNV positive chickens detected in 2011. At this time last year, 8 chickens (four flocks) had tested positive for WNV from 2 counties (Imperial and Riverside).

2010 & 2011 YTD West Nile Virus Comparisons		
	2010	2011
Total # Dead Bird Reports	5,721	4,443
# Positive Counties	20	14
# Human Cases	2	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	66 / 1,033	44 / 983
# Positive Mosquito Pools / # Tested	202 / 11,934	89 / 11,547
# Seroconversions / # Tested	8 / 11,946	3 / 8,977
# Positive Squirrels / # Tested	1 / 41	0 / 46

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YTD WNV Activity by Element and County, 2011						
County	Humans	Horses	Dead Birds <sup>^</sup>	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa			1			
Fresno				9		
Kern				17	3	
Kings			1			
Los Angeles			14	25		
Orange			4	8		
Riverside			1	1		
Sacramento			3	3		
San Bernardino				1		
San Joaquin				1		
Santa Clara			10	1		
Stanislaus				3		
Tulare			9	20		
Ventura			1			
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>44</b>	<b>89</b>	<b>3</b>	<b>0</b>

<sup>^</sup>Chronic infections are not included in total

## TEST SUMMARIES

### Human & Horse Cases

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
<b>Human Cases</b>	Week	0	0	0	0	0	0
	YTD	0	0	0	0	0	0
<b>Horse Cases</b>	Week	0	0	0	0	0	0
	YTD	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
<b>Dead Birds</b>	Week	58	7
	YTD	983	44
<b>Tree Squirrels</b>	Week	2	0
	YTD	46	0

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
<b>Chicken Sera</b>	Week	598	3	0	0
	YTD	8,977	3	0	0
<b>Mosquito Pools: RT-PCR</b>	Week	1,728	43	0	0
	YTD	11,512	89	0	0
<b>Mosquito Pools: RAMP</b>	Week	0	0	N/A	N/A
	YTD	35	0	N/A	N/A

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## POSITIVES

### Dead Birds

County	Agency	City	Zip	Species	Collected	Virus	Type of Infection	Method
Los Angeles	Los Angeles Co Vet	Long Beach	90807	American Crow	6/27/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA Co VCD - SFS	Cerritos	90703	American Crow	6/29/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Cerritos	90703	American Crow	6/30/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA Co VCD - SFS	Long Beach	90815	American Crow	7/1/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Reseda	91335	American Crow	6/30/2011	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	American Crow	7/5/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	Western Scrub-Jay	7/6/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95820	Northern Mockingbird	6/30/2011	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Northern Mockingbird	7/4/2011	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin Co MVCD	Lodi	95240	House Finch	7/5/2011	WNV	Chronic	RT-PCR
Tulare	Delta VCD	Visalia	93291	Western Scrub-Jay	6/30/2011	WNV	Recent	RT-PCR
Tulare	Delta VCD	Woodlake	93286	House Finch	6/30/2011	WNV	Chronic	RT-PCR
Ventura	City Of Moorpark VCD	Moorpark	93021	House Finch	7/5/2011	WNV	Chronic	RT-PCR

### Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	City	Virus	Method
Fresno	CNSL4083	397	Cx. quinquefasciatus	50	7/8/2011	Selma	WNV	RTPCR
Kern	KERN0121	1077	Cx. quinquefasciatus	50	7/8/2011	Bakersfield	WNV	RTPCR
Kern	KERN2025	1074	Cx. quinquefasciatus	36	7/8/2011	Bakersfield	WNV	RTPCR
Kern	KERN2031	1047	Cx. quinquefasciatus	21	7/7/2011	Bakersfield	WNV	RTPCR
Kern	KERN0035	1028	Cx. tarsalis	50	7/7/2011	Bakersfield	WNV	RTPCR
Kern	KERN0035	1031	Cx. tarsalis	50	7/7/2011	Bakersfield	WNV	RTPCR
Kern	KERN0041	1025	Cx. tarsalis	41	7/6/2011	Lost Hills	WNV	RTPCR
Kern	KERN0043	1103	Cx. tarsalis	13	7/8/2011	Shafter	WNV	RTPCR
Los Angeles	GRLA2229	908	Cx. quinquefasciatus	50	7/8/2011	Rowland Heights	WNV	RTPCR
Los Angeles	GRLA2230	911	Cx. quinquefasciatus	50	7/8/2011	Diamond Bar	WNV	RTPCR
Los Angeles	GRLA2230	912	Cx. quinquefasciatus	23	7/8/2011	Diamond Bar	WNV	RTPCR
Los Angeles	GRLA2557	5842	Cx. quinquefasciatus	50	7/6/2011	Reseda	WNV	RTPCR
Los Angeles	GRLA2574	5835	Cx. quinquefasciatus	50	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2574	5836	Cx. quinquefasciatus	50	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2574	5846	Cx. quinquefasciatus	50	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2574	5847	Cx. stigmatosoma	50	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2580	5833	Cx. quinquefasciatus	27	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2580	5834	Cx. stigmatosoma	16	7/6/2011	Sherman Oaks	WNV	RTPCR
Los Angeles	GRLA2952	868	Cx. quinquefasciatus	50	7/6/2011	South Whittier	WNV	RTPCR
Los Angeles	GRLA2952	870	Cx. quinquefasciatus	28	7/6/2011	South Whittie	WNV	RTPCR
Los Angeles	GRLA2954	857	Cx. quinquefasciatus	50	7/6/2011	Cerritos	WNV	RTPCR
Los Angeles	GRLA2954	858	Cx. quinquefasciatus	50	7/6/2011	Cerritos	WNV	RTPCR
Los Angeles	GRLA2954	860	Cx. quinquefasciatus	45	7/6/2011	Cerritos	WNV	RTPCR
Los Angeles	GRLA2956	855	Cx. quinquefasciatus	50	7/6/2011	Lakewood	WNV	RTPCR
Orange	ORCO0004	522	Cx. quinquefasciatus	35	7/13/2011	Huntington Beach	WNV	RTPCR
Orange	ORCO0050	437	Cx. quinquefasciatus	17	7/6/2011	Buena Park	WNV	RTPCR
Orange	ORCO0050	530	Cx. quinquefasciatus	26	7/13/2011	Buena Park	WNV	RTPCR
Orange	ORCO0082	458	Cx. quinquefasciatus	50	7/7/2011	Cypress	WNV	RTPCR
Orange	ORCO0082	460	Cx. quinquefasciatus	50	7/7/2011	Cypress	WNV	RTPCR
Orange	ORCO0082	461	Cx. quinquefasciatus	50	7/7/2011	Cypress	WNV	RTPCR
Orange	ORCO0082	462	Cx. quinquefasciatus	50	7/7/2011	Cypress	WNV	RTPCR
Orange	ORCO0082	464	Cx. quinquefasciatus	29	7/7/2011	Cypress	WNV	RTPCR
Sacramento	SAYO234013	1981	Cx. tarsalis	8	7/12/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO244003	1991	Cx. tarsalis	35	7/12/2011	Wilton	WNV	RTPCR

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San Joaquin	SJCM8026	176	Cx. tarsalis	50	7/6/2011	Stockton	WNV	RTPCR
Stanislaus	TRLK0432	229	Cx. pipiens	50	7/12/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0432	231	Cx. pipiens	50	7/12/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0530	222	Cx. pipiens	21	7/12/2011	Turlock	WNV	RTPCR
Tulare	DLTA8530	147	Cx. quinquefasciatus	29	7/7/2011	Visalia	WNV	RTPCR
Tulare	DLTA8531	171	Cx. quinquefasciatus	26	7/13/2011	Visalia	WNV	RTPCR
Tulare	DLTA8532	172	Cx. quinquefasciatus	23	7/13/2011	Visalia	WNV	RTPCR
Tulare	DLTA9412	166	Cx. quinquefasciatus	10	7/12/2011	Visalia	WNV	RTPCR
Tulare	DLTA9505	150	Cx. tarsalis	12	7/8/2011	Visalia	WNV	RTPCR

## Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Kern	DLNO0035	McFarland South	7/7/2011	WNV	1460	1464	1465

## 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.

### 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.

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)