

## California Arbovirus Surveillance Bulletin #16

Week 25 Friday, June 21, 2013



### WEEKLY UPDATE

#### Human Cases

No new cases were reported this week. In 2013, one human case of West Nile virus (WNV) has been reported from Sacramento County. At this time last year, one WNV case had been reported from Kern County.

#### Horses

No equine cases have been reported in 2013.

#### Dead Birds & Squirrels

Twenty WNV positive birds were reported this week from Kern (1), Los Angeles (8), Merced (2), Placer (1), Sacramento (1), San Joaquin (3), Solano (1), Stanislaus (2), and Yolo (1) counties. **These are the first WNV positive dead birds from Kern and San Joaquin counties and the first indication of WNV activity in Placer, Stanislaus, and Yolo counties this year.** An additional two dead birds tested positive for chronic WNV infection from two counties. In 2013, 37 dead birds have tested positive for WNV from 15 counties and an additional 27 dead birds have tested positive for chronic WNV infection from 16 counties. At this time last year, 169 dead birds had tested positive for WNV from 13 counties.

#### Mosquito Pools

A total of 31 WNV positive mosquito pools were reported this week from seven counties: Kern (5), Lake (1), Los Angeles (13), Riverside (5), Sacramento (2), San Joaquin (2), and Sutter (3). **This is the first indication of WNV activity in Lake and Riverside counties this year.** In 2013, 70 mosquito pools from 10 counties have tested positive for WNV. At this time last year, 222 mosquito pools from 10 counties had tested positive for WNV.

#### Sentinel Chickens

No new seroconversions were reported this week. In 2013, one chicken from Los Angeles County has tested positive for antibodies to WNV. At this time last year, two WNV seroconversions had been detected in two different flocks located in Riverside County.

2012 & 2013 YTD West Nile Virus Comparisons		
	2012	2013
Total # Dead Bird Reports	5,149	4,832
# Positive Counties	16	19
# Human Cases	1	1
# Horse Cases	0	0
# Positive Dead Birds / # Tested	169 / 1,117	37 / 947
# Positive Mosquito Pools / # Tested	222 / 8,102	70 / 11,150
# Seroconversions / # Tested	2 / 6,255	1 / 5,680
# Positive Squirrels / # Tested	0 / 50	0 / 45

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.westmilemaps.usgs.gov](http://www.westmilemaps.usgs.gov)

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## YTD WNV Activity by Element and County, 2013

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Fresno			1	7		
Kern			1	8		
Kings			1			
Lake				1		
Los Angeles			12	27	1	
Marin			1			
Merced			5			
Orange			1	1		
Placer			1			
Riverside				5		
Sacramento	1		4	10		
San Joaquin			3	4		
Solano			2			
Stanislaus			2			
Sutter				4		
Tulare				3		
Ventura			1			
Yolo			1			
Yuba			1			
<b>Totals</b>	<b>1</b>	<b>0</b>	<b>37</b>	<b>70</b>	<b>1</b>	<b>0</b>

## TESTING SUMMARIES

### Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
<b>Human Cases</b>	Week	0	0	0	0	0	0
	YTD	1	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 & Squirrels

		Number Tested	WNV Positive (recent only)
<b>Dead Birds</b>	Week	131	20
	YTD	947	37
<b>Tree Squirrels</b>	Week	4	0
	YTD	45	0

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
<b>Chicken Sera</b>	Week	675	0	0	0
	YTD	5,680	1	0	0
<b>Mosquito Pools</b>	Week	1,085	31	0	0
	YTD	11,150	70	0	0

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### POSITIVES

#### Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Kern	Kern MVCD	Bakersfield	93308	Western Scrub-Jay	6/10/2013	WNV	Recent	RT-PCR
Los Angeles	LA Vet	Hawthorne	90250	American Crow	6/5/2013	WNV	Chronic	RT-PCR
Los Angeles	LA Vet	Lomita	90717	American Crow	6/5/2013	WNV	Recent	RT-PCR
Los Angeles	LA Vet	Lomita	90717	American Crow	5/28/2013	WNV	Recent	RT-PCR
Los Angeles	LA Vet	Lomita	90717	American Crow	6/1/2013	WNV	Recent	RT-PCR
Los Angeles	LA Vet	Rancho Palos Verdes	90275	American Crow	6/1/2013	WNV	Recent	RT-PCR
Los Angeles	LA Vet	Rolling Hills Estates	90274	American Crow	6/2/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Lomita	90717	American Crow	6/10/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Rolling Hills Estates	90274	American Crow	6/5/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Rolling Hills Estates	90274	American Crow	6/11/2013	WNV	Recent	RT-PCR
Merced	Merced MAD	Merced	95340	American Crow	6/10/2013	WNV	Recent	RT-PCR
Merced	Merced MAD	Merced	95348	American Crow	6/11/2013	WNV	Recent	RT-PCR
Placer	Placer MVCD	Roseville	95747	American Robin	6/5/2013	WNV	Recent	RT-PCR
Sacramento	Saco-Yolo MVCD	Sacramento	95864	American Crow	6/17/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95834	Western Scrub-Jay	6/7/2013	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin MVCD	Manteca	95336	Western Scrub-Jay	5/30/2013	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Manteca	95336	Western Scrub-Jay	5/30/2013	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Stockton	95207	Western Scrub-Jay	6/17/2013	WNV	Recent	RT-PCR
Solano	Solano MAD	Fairfield	94533	Western Scrub-Jay	6/17/2013	WNV	Recent	RAMP
Stanislaus	East Side MAD	Modesto	95354	American Crow	6/10/2013	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Modesto	95354	American Crow	6/10/2013	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	Western Scrub-Jay	6/11/2013	WNV	Recent	RT-PCR

#### Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Kern	KERN0121	124	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/13/2013	WNV	RT-PCR
Kern	KERN2020	117	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/12/2013	WNV	RT-PCR
Kern	KERN2043	108	Bakersfield	Cx. quinquefasciatus	48	GRVD	6/11/2013	WNV	RT-PCR
Kern	KERN3020	121	Bakersfield	Cx. quinquefasciatus	50	CO2	6/12/2013	WNV	RT-PCR
Kern	WEST6237	58	Maricopa	Cx. tarsalis	50	CO2	6/19/2013	WNV	RT-PCR
Lake	LAKE0202	18		Cx. tarsalis	50	CO2	6/19/2013	WNV	RT-PCR
Los Angeles	GRLA2100	401	Norwalk	Cx. quinquefasciatus	40	GRVD	6/11/2013	WNV	RT-PCR
Los Angeles	GRLA2115	413	Bell	Cx. quinquefasciatus	47	GRVD	6/12/2013	WNV	RT-PCR
Los Angeles	GRLA2116	424	Bell	Cx. quinquefasciatus	50	GRVD	6/12/2013	WNV	RT-PCR
Los Angeles	GRLA2116	425	Bell	Cx. quinquefasciatus	47	GRVD	6/12/2013	WNV	RT-PCR
Los Angeles	GRLA2166	363	Montebello	Cx. quinquefasciatus	50	GRVD	6/11/2013	WNV	RT-PCR

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Los Angeles	GRLA2247	375	Pico Rivera	Cx. quinquefasciatus	50	GRVD	6/11/2013	WNV	RT-PCR
Los Angeles	GRLA2247	377	Pico Rivera	Cx. quinquefasciatus	50	GRVD	6/11/2013	WNV	RT-PCR
Los Angeles	GRLA2957	491	Hawaiian Gardens	Cx. quinquefasciatus	50	GRVD	6/14/2013	WNV	RT-PCR
Los Angeles	GRLA3038	5480	Valley Village	Cx. quinquefasciatus	50	GRVD	6/13/2013	WNV	RT-PCR
Los Angeles	GRLA3041	394	Artesia	Cx. quinquefasciatus	50	GRVD	6/11/2013	WNV	RT-PCR
Los Angeles	GRLA3047	454	Downey	Cx. quinquefasciatus	14	GRVD	6/12/2013	WNV	RT-PCR
Los Angeles	GRLA3056	421	Cudahy	Cx. quinquefasciatus	50	GRVD	6/12/2013	WNV	RT-PCR
Los Angeles	GRLA3066	5492	North Hollywood	Cx. quinquefasciatus	53	CO2	6/13/2013	WNV	RT-PCR
Riverside	RIVR0031	158	Nuevo	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
Riverside	RIVR0032	159	Nuevo	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
Riverside	RIVR0032	160	Nuevo	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
Riverside	RIVR0089	166	Nuevo92571	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
Riverside	RIVR0089	170	Nuevo92571	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
Sacramento	SAYO204014	1407	Citrus Heights	Cx. pipiens	15	GRVD	6/18/2013	WNV	RT-PCR
Sacramento	SAYO242012	1435	Elk Grove	Cx. tarsalis	49	CO2	6/18/2013	WNV	RT-PCR
San Joaquin	SJCM8008	469	Manteca	Cx. tarsalis	50	CO2	6/18/2013	WNV	RT-PCR
San Joaquin	SJCM8008	471	Manteca	Cx. pipiens	22	CO2	6/18/2013	WNV	RT-PCR
Sutter	SUYA0016	85	Trowbridge	Cx. tarsalis	47	REST	6/17/2013	WNV	RT-PCR
Sutter	SUYA0044	93	Pleasant Grove	Cx. pipiens	10	REST	6/18/2013	WNV	RT-PCR
Sutter	SUYA0063	88	Pennington	Cx. tarsalis	40	REST	6/17/2013	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.

#### **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.

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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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