

## California Arbovirus Surveillance Bulletin #17

Week 26 Friday, June 28, 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-nine WNV positive birds were reported this week from Contra Costa (1) Kings (4), Los Angeles (7), Marin (1), Merced (6), Sacramento (6), San Joaquin (1), and Yolo (3) counties, and one WNV positive squirrel was reported from Butte County. **These are the first indications of WNV activity in Butte and Contra Costa counties this year.** An additional 21 dead birds tested positive for chronic WNV infection from 11 counties. In 2013, 66 dead birds have tested positive for WNV from 16 counties, 48 dead birds have tested positive for chronic WNV infection from 20 counties, and one dead squirrel has tested positive for WNV from one county. At this time last year, 223 dead birds had tested positive for WNV from 14 counties.

#### Mosquito Pools

A total of 54 WNV positive mosquito pools were reported this week from twelve counties: Contra Costa (1), Fresno (1), Kern (6), Kings (1), Los Angeles (10), Orange (1), Placer (5), Riverside (1), Sacramento (12), San Bernardino (1), San Joaquin (2), Sutter (4), Tulare (1), Yolo (5), and Yuba (3). **This is the first indication of WNV activity in San Bernardino County in 2013,** and the first WNV positive mosquito pools detected in Contra Costa, Kings, Placer, Yolo, and Yuba counties this year. In 2013, 124 mosquito pools from 16 counties have tested positive for WNV. At this time last year, 282 mosquito pools from 12 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	5,930	5,468
# Positive Counties	18	19
# Human Cases	1	1
# Horse Cases	0	0
# Positive Dead Birds / # Tested	223 / 1,254	66 / 1,072
# Positive Mosquito Pools / # Tested	282 / 9,517	124 / 12,632
# Seroconversions / # Tested	2 / 6,848	1 / 6,241
# Positive Squirrels / # Tested	0 / 51	1 / 50

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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YTD WNV Activity by Element and County, 2013						
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Butte						1
Contra Costa			1	1		
Fresno			1	8		
Kern			1	14		
Kings			5	1		
Lake				1		
Los Angeles			19	37	1	
Marin			2			
Merced			11			
Orange			1	2		
Placer			1	5		
Riverside				6		
Sacramento	1		10	22		
San Bernardino				1		
San Joaquin			4	6		
Solano			2			
Stanislaus			2			
Sutter				8		
Tulare				4		
Ventura			1			
Yolo			4	5		
Yuba			1	3		
<b>Totals</b>	<b>1</b>	<b>0</b>	<b>66</b>	<b>124</b>	<b>1</b>	<b>1</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	127	29
	YTD	1074	66
<b>Tree Squirrels</b>	Week	5	1
	YTD	50	1

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
<b>Chicken Sera</b>	Week	561	0	0	0
	YTD	6,241	1	0	0
<b>Mosquito Pools</b>	Week	1,482	54	0	0
	YTD	12,632	124	0	0

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## POSITIVES

### Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Butte	Butte MVCD	Chico	95928	Northern Mockingbird	6/11/2013	WNV	Chronic	RT-PCR
Butte	Butte MVCD	Chico	95973	Western Gray Squirrel	6/17/2013	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Antioch	94509	American Crow	6/26/2013	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Concord	94521	American Crow	6/13/2013	WNV	Chronic	RT-PCR
Contra Costa	Contra Costa MVCD	Martinez	94553	American Crow	6/16/2013	WNV	Chronic	RT-PCR
Kings	Kings MAD	Hanford	93230	House Sparrow	6/17/2013	WNV	Chronic	RT-PCR
Kings	Kings MAD	Lemoore	93245	American Crow	6/17/2013	WNV	Recent	RT-PCR
Kings	Kings MAD	Lemoore	93245	American Crow	6/17/2013	WNV	Recent	RT-PCR
Kings	Kings MAD	Lemoore	93245	American Crow	6/14/2013	WNV	Recent	RT-PCR
Kings	Kings MAD	Lemoore	93245	American Crow	6/14/2013	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Los Angeles	90065	Swainson's Thrush	5/17/2013	WNV	Chronic	RT-PCR
Los Angeles	Greater LA VCD - SFS	Cerritos	90703	American Crow	5/22/2013	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Long Beach	90815	American Crow	5/22/2013	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Long Beach	90815	American Crow	6/3/2013	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - Syl.	Sherman Oaks	91411	American Crow	6/16/2013	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - Syl.	Van Nuys	91411	American Crow	6/17/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Torrance	90503	American Crow	6/14/2013	WNV	Chronic	RT-PCR
Los Angeles	LA West VCD	Torrance	90504	American Crow	6/14/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Torrance	90504	American Crow	6/12/2013	WNV	Recent	RT-PCR
Marin	Marin-Sonoma MVCD	Novato	94949	American Crow	6/18/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Dos Palos	93620	Western Scrub-Jay	6/13/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Gustine	95322	Yellow-billed Magpie	6/12/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Gustine	95322	American Crow	6/13/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Merced	95340	Western Scrub-Jay	6/17/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Merced	95348	American Crow	6/17/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Merced	95348	American Crow	6/18/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Winton	95388	Barn Owl	6/17/2013	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Auburn	95603	Golden-Crowned Sparrow	4/23/2013	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Auburn	95603	Lesser Goldfinch	6/11/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Citrus Heights	95610	American Crow	6/24/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elverta	95626	Northern Mockingbird	6/12/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Herald	95638	House Finch	6/17/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Gold River	95670	Spotted Towhee	6/16/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	House Sparrow	6/24/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	Western Scrub-Jay	6/16/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95815	Western Scrub-Jay	6/20/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95815	Western Scrub-Jay	6/21/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95823	House Finch	6/18/2013	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95828	American Crow	6/19/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95831	American Crow	6/24/2013	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Stockton	95207	Finch	6/18/2013	WNV	Recent	RT-PCR
San Mateo	San Mateo MAD	Emerald Lake Hills	94062	Red-shouldered Hawk	6/17/2013	WNV	Chronic	RT-PCR
San Mateo	San Mateo MAD	Redwood City	94062	American Goldfinch	6/12/2013	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara VCD	Los Altos	94022	White-tailed Kite	6/17/2013	WNV	Chronic	RT-PCR
Stanislaus	East Side MAD	Modesto	95350	Purple Finch	6/12/2013	WNV	Chronic	RT-PCR
Yolo	Sac-Yolo MVCD	West Sacramento	95605	American Robin	6/12/2013	WNV	Chronic	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	Western Scrub-Jay	6/17/2013	WNV	Chronic	RT-PCR

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Yolo	Sac-Yolo MVCD	Davis	95618	American Crow	6/20/2013	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95618	American Crow	6/24/2013	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95618	Northern Mockingbird	6/17/2013	WNV	Chronic	RT-PCR
Yolo	Sac-Yolo MVCD	Woodland	95695	American Crow	6/23/2013	WNV	Recent	RT-PCR

### Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Contra Costa	CNTR2972	126	Discovery Bay	Cx. tarsalis	50	CO2	6/28/2013	WNV	RAMP
Fresno	CNSL1814	147	Clovis	Cx. quinquefasciatus	29	GRVD	6/20/2013	WNV	RTPCR
Kern	KERN2014	148	Bakersfield	Cx. quinquefasciatus	31	GRVD	6/19/2013	WNV	RTPCR
Kern	KERN2020	146	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/19/2013	WNV	RTPCR
Kern	KERN2027	147	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/19/2013	WNV	RTPCR
Kern	KERN2027	152	Bakersfield	Cx. tarsalis	45	CO2	6/19/2013	WNV	RTPCR
Kern	KERN2030	150	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/19/2013	WNV	RTPCR
Kern	KERN2051	168	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/21/2013	WNV	RTPCR
Kings	KNGS4001	40	Hanford	Cx. pipiens	21	CO2	6/19/2013	WNV	RTPCR
Los Angeles	GRLA2065	521	Gardena	Cx. quinquefasciatus	48	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	GRLA2133	506	Wilmington	Cx. quinquefasciatus	50	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	GRLA2133	507	Wilmington	Cx. quinquefasciatus	49	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	GRLA3032	515	Carson	Cx. quinquefasciatus	50	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	GRLA3032	516	Carson	Cx. quinquefasciatus	50	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	GRLA3068	511	Wilmington	Cx. quinquefasciatus	50	GRVD	6/18/2013	WNV	RTPCR
Los Angeles	LACW1004	208	Lawndale	Cx. quinquefasciatus	50	GRVD	6/19/2013	WNV	RTPCR
Los Angeles	LACW1004	209	Lawndale	Cx. quinquefasciatus	50	GRVD	6/19/2013	WNV	RTPCR
Los Angeles	LACW1004	210	Lawndale	Cx. quinquefasciatus	24	GRVD	6/19/2013	WNV	RTPCR
Los Angeles	LACW1085	233	Torrance	Cx. tarsalis	50	CO2	6/20/2013	WNV	RTPCR
Orange	ORCO169	591	Orange	Cx. quinquefasciatus	34	GRVD	6/19/2013	WNV	RTPCR
Placer	PLCR1113	474	Pleasant Grove	Cx. pipiens	45	CO2	6/27/2013	WNV	RTPCR
Placer	PLCR1113	477	Pleasant Grove	Cx. tarsalis	50	CO2	6/27/2013	WNV	RTPCR
Placer	PLCR0017	498	Sheridan	Cx. tarsalis	50	CO2	6/27/2013	WNV	RTPCR
Placer	PLCR0017	501	Sheridan	Cx. tarsalis	21	CO2	6/27/2013	WNV	RTPCR
Placer	PLCR0519	503	Roseville	Cx. tarsalis	5	CO2	6/27/2013	WNV	RTPCR
Riverside	NWST0099	19	Norco	Cx. quinquefasciatus	38	REST	6/5/2013	WNV	RTPCR
Sacramento	SAYO204005	1480	Citrus Heights	Cx. tarsalis	4	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO204011	1484	Citrus Heights	Cx. tarsalis	17	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO204011	1485	Citrus Heights	Cx. pipiens	34	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO204011	1486	Citrus Heights	Cx. pipiens	33	GRVD	6/21/2013	WNV	RTPCR
Sacramento	SAYO204015	1478	Citrus Heights	Cx. pipiens	33	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO204015	1479	Citrus Heights	Cx. pipiens	23	GRVD	6/21/2013	WNV	RTPCR
Sacramento	SAYO213035	1487	Sacramento	Cx. tarsalis	7	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO213035	1488	Sacramento	Cx. pipiens	37	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO223009	1490	Sacramento	Cx. tarsalis	6	CO2	6/21/2013	WNV	RTPCR
Sacramento	SAYO252014	1715	Walnut Grove	Cx. tarsalis	16	CO2	6/25/2013	WNV	RTPCR
Sacramento	SAYO252014	1716	Walnut Grove	Cx. pipiens	5	CO2	6/25/2013	WNV	RTPCR
Sacramento	SAYO280001	1725	Rio Vista	Cx. tarsalis	39	CO2	6/25/2013	WNV	RTPCR
San Bernardino	WVAL2012	481	Chino	Cx. stigmatosoma	29	CO2	6/25/2013	WNV	RTPCR
San Joaquin	SJCM8111	549	Stockton	Cx. erythrothorax	50	CO2	6/25/2013	WNV	RTPCR
San Joaquin	SJCM8135	602	Mountain House	Cx. tarsalis	8	CO2	6/27/2013	WNV	RTPCR
Sutter	SUYA30	110	Live Oak	Cx. tarsalis	40	REST	6/24/2013	WNV	RTPCR
Sutter	SUYA31	98	Rio Oso	Cx. tarsalis	50	REST	6/24/2013	WNV	RTPCR
Sutter	SUYA31	99	Rio Oso	Cx. tarsalis	25	REST	6/24/2013	WNV	RTPCR
Sutter	SUYA31	115	Rio Oso	Cx. tarsalis	31	REST	6/25/2013	WNV	RTPCR
Tulare	TLRE10	10	Allensworth	Cx. tarsalis	26	CO2	6/25/2013	WNV	RTPCR
Yolo	SAYO103007	1576	Dunnigan	Cx. tarsalis	50	CO2	6/21/2013	WNV	RTPCR
Yolo	SAYO135016	1542	Woodland	Cx. tarsalis	50	CO2	6/21/2013	WNV	RTPCR

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Yolo	SAYO136010	1604	Woodland	Cx. tarsalis	50	CO2	6/21/2013	WNV	RTPCR
Yolo	SAYO136010	1606	Woodland	Cx. tarsalis	50	CO2	6/21/2013	WNV	RTPCR
Yolo	SAYO144003	1462	Davis	Cx. tarsalis	50	CO2	6/20/2013	WNV	RTPCR
Yuba	SUYA7	94	Marysville	Cx. tarsalis	43	REST	6/24/2013	WNV	RTPCR
Yuba	SUYA7	113	Marysville	Cx. pipiens	10	REST	6/25/2013	WNV	RTPCR
Yuba	SUYA97	95	Marysville	Cx. tarsalis	12	REST	6/24/2013	WNV	RTPCR

### 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.

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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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*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).*