

California Arbovirus Surveillance Bulletin #13

Week 22 Friday, June 3, 2016



Weekly Update

Humans

No human cases have been reported in 2016.

Dead Birds

This week, a total of 21 dead birds tested positive for West Nile virus (WNV) from the following three counties: Los Angeles (3), Sacramento (6), and San Diego (12). In 2016, 74 dead birds have tested positive for WNV from 6 counties, whereas at this time last year, 53 WNV positive birds had been reported from 9 counties.

Mosquito Pools

West Nile virus

A total of 48 WNV positive mosquito pools were reported this week from the following eight counties: Los Angeles (2), Madera (1), Sacramento (3), San Bernardino (1), San Diego (36), San Joaquin (2), Sutter (2), and Tulare (1). **This is the first detection of WNV activity in Madera and Sutter counties in 2016.** To date this year, 75 WNV positive mosquito pools have been reported from 11 counties, whereas at this time last year, 66 WNV positive mosquito pools had been reported from seven counties.

St. Louis encephalitis virus

A total of one mosquito pool tested positive for St. Louis encephalitis virus (SLEV) this week from Kern County. To date this year, 10 SLEV positive mosquito pools have been reported from Kern County.

Sentinel Chickens

This week, a total of 437 sentinel chicken blood samples were tested from 16 counties; no positives were detected. To date this year, no seroconversions have been reported.

2015 & 2016 YTD West Nile Virus Comparisons		
	2015	2016
Total # Dead Bird Reports	3,521	2,438
# Positive Counties	13	13
# Human Cases	0	0
# Positive Dead Birds / # Tested	53 / 738	74 / 482
# Positive Mosquito Pools / # Tested	66 / 6,252	75 / 9,551
# Seroconversions / # Tested	0 / 3,045	0 / 1,672

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YTD WNV Activity by Element and County, 2016				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Kern			1	
Los Angeles		9	6	
Madera			1	
Orange		5	2	
Riverside			5	
Sacramento		9	3	
San Bernardino			7	
San Diego		42	38	
San Joaquin			4	
Santa Clara		8		
Solano		1		
Sutter			2	
Tulare			6	
Totals	0	74	75	0

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Number of Cases Reported	Week	0	0	0
	YTD	0	0	0

Dead Birds

		Total Tested	WNV Positive
Dead Birds	Week	60	21
	YTD	482	74

Sentinel Chickens

		Total Tested	WNV +	SLEV +	WEEV +
Chicken Sera	Week	437	0	0	0
	YTD	1,672	0	0	0

Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		48 / 1,736	1 / 975	0 / 975	0 / 0	0 / 0	0 / 0
		75 / 9,551	10 / 5,811	0 / 5,811	0 / 3	0 / 3	0 / 3

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NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD - SFS	Sunland-Tujunga	91040	American Crow	5/25/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Thousand Oaks	91360	American Crow	5/23/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Valencia	91355	American Crow	5/27/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	Western Scrub-Jay	5/27/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	Western Scrub-Jay	5/27/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	5/31/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	5/31/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/1/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/1/2016	WNV
San Diego	San Diego Co VCP	Del Mar	92014	American Crow	6/2/2016	WNV
San Diego	San Diego Co VCP	Poway	92064	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92124	American Crow	6/2/2016	WNV
San Diego	San Diego Co VCP	San Diego	92124	American Crow	6/2/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/2/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/2/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	5/31/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	6/2/2016	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Kern	KERN121	174	Cx. quinquefasciatus	Bakersfield	50	GRVD	5/27/16	SLEV
Los Angeles	GRLA2952	271	Cx. quinquefasciatus	South Whittier	39	GRVD	5/24/16	WNV
Los Angeles	GRLA3046	289	Cx. quinquefasciatus	Bellflower	50	GRVD	5/25/16	WNV
Madera	MADR1095	106	Cx. quinquefasciatus	Madera	50	CO2	5/26/16	WNV
Sacramento	SAYO213009	858	Cx. pipiens	Sacramento	15	GRVD	6/1/16	WNV
Sacramento	SAYO213046	799	Cx. pipiens	Sacramento	32	CO2	6/1/16	WNV
Sacramento	SAYO223002	804	Cx. tarsalis	Sacramento	20	CO2	6/1/16	WNV
San Bernardino	WVAL2020	901	Cx. quinquefasciatus	Fwy CA 71	14	GRVD	6/2/16	WNV
San Diego	SAND10554	480	Cx. tarsalis	Imperial Beach	50	CO2	5/10/16	WNV
San Diego	SAND18	512	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND18	514	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND18	516	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV

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San Diego	SAND18	518	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND18	522	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND18	526	Cx. tarsalis	Del Mar	48	CO2	5/17/16	WNV
San Diego	SAND18	538	Cx. tarsalis	Del Mar	50	CO2	5/17/16	WNV
San Diego	SAND18	593	Cx. tarsalis	Del Mar	50	CO2	5/24/16	WNV
San Diego	SAND254	456	Cx. tarsalis	Del Mar	50	CO2	5/10/16	WNV
San Diego	SAND254	458	Cx. tarsalis	Del Mar	47	CO2	5/10/16	WNV
San Diego	SAND254	500	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND254	501	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND254	502	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND254	503	Cx. tarsalis	Del Mar	50	CO2	5/14/16	WNV
San Diego	SAND254	566	Cx. tarsalis	Del Mar	50	CO2	5/20/16	WNV
San Diego	SAND254	588	Cx. tarsalis	Del Mar	50	CO2	5/24/16	WNV
San Diego	SAND45	432	Cx. tarsalis	San Diego	36	CO2	4/30/16	WNV
San Diego	SAND45	435	Cx. tarsalis	San Diego	50	CO2	5/3/16	WNV
San Diego	SAND45	470	Cx. tarsalis	San Diego	28	CO2	5/10/16	WNV
San Diego	SAND45	486	Cx. tarsalis	San Diego	50	CO2	5/14/16	WNV
San Diego	SAND45	545	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND45	548	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND45	551	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND45	552	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND45	554	Cx. tarsalis	San Diego	47	CO2	5/17/16	WNV
San Diego	SAND45	590	Cx. tarsalis	San Diego	50	CO2	5/24/16	WNV
San Diego	SAND45	591	Cx. tarsalis	San Diego	50	CO2	5/24/16	WNV
San Diego	SAND481	494	Cx. tarsalis	San Diego	17	CO2	5/14/16	WNV
San Diego	SAND481	524	Cx. tarsalis	San Diego	50	CO2	5/14/16	WNV
San Diego	SAND481	559	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND481	594	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Diego	SAND59	568	Cx. tarsalis	Del Mar	50	CO2	5/20/16	WNV
San Diego	SAND59	569	Cx. tarsalis	Del Mar	49	CO2	5/20/16	WNV
San Diego	SAND59	599	Cx. tarsalis	Del Mar	50	CO2	5/24/16	WNV
San Diego	SAND73	543	Cx. tarsalis	San Diego	50	CO2	5/17/16	WNV
San Joaquin	SJCM8076	478	Cx. tarsalis	Stockton	22	CO2	6/1/16	WNV
San Joaquin	SJCM8076	479	Cx. pipiens	Stockton	31	CO2	6/1/16	WNV
Sutter	SUYA16	3	Cx. tarsalis	Pleasant Grove	50	REST	5/31/16	WNV
Sutter	SUYA16	4	Cx. tarsalis	Pleasant Grove	50	REST	5/31/16	WNV
Tulare	DLTA9606	778	Cx. quinquefasciatus	Farmersville	30	GRVD	6/1/16	WNV

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.

Dead Birds

Oral swab samples from corvids are collected onto RNA preservation cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

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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, and St. Louis encephalitis viruses by EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory 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.

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov
