

California Arbovirus Surveillance Bulletin #14

Week 23 Friday, June 10, 2016



Weekly Update

Humans

No human cases have been reported in 2016.

Dead Birds

This week, a total of 44 dead birds tested positive for West Nile virus (WNV) from the following 6 counties: Los Angeles (3), Madera (1), Sacramento (14), San Diego (22), Santa Clara (3), and Sutter (1). **These are the first WNV positive birds reported from Madera and Sutter counties this year.** In 2016, 118 dead birds have tested positive for WNV from 8 counties, whereas at this time last year, 58 WNV positive birds had been reported from 10 counties.

Mosquito Pools

West Nile virus

A total of 51 WNV positive mosquito pools were reported this week from the following 14 counties: Fresno (7), Kern (8), Kings (1), Los Angeles (1), Madera (3), Orange (2), Riverside (4), Sacramento (13), San Bernardino (3), San Joaquin (3), Santa Clara (1), Stanislaus (1), Sutter (3), and Tulare (1). **This is the first detection of WNV activity in Fresno, Kings, and Stanislaus counties in 2016.** To date this year, 126 WNV positive mosquito pools have been reported from 15 counties, whereas at this time last year, 84 WNV positive mosquito pools had been reported from 10 counties.

St. Louis encephalitis virus

A total of three mosquito pools tested positive for St. Louis encephalitis virus (SLEV) this week from Kern County. To date this year, 13 SLEV positive mosquito pools have been reported from Kern County.

Sentinel Chickens

This week, a total of 316 sentinel chicken blood samples were tested from 8 counties; no positives were detected. To date this year, no seroconversions have been reported. At this time last year, one WNV seroconversion had been reported from one county.

2015 & 2016 YTD West Nile Virus Comparisons		
	2015	2016
Total # Dead Bird Reports	3,847	2,725
# Positive Counties	19	16
# Human Cases	0	0
# Positive Dead Birds / # Tested	58 / 797	118 / 641
# Positive Mosquito Pools / # Tested	84 / 7,449	126 / 11,158
# Seroconversions / # Tested	1 / 3,749	0 / 1,988

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YTD WNV Activity by Element and County, 2016				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Fresno			7	
Kern			9	
Kings			1	
Los Angeles		12	7	
Madera		1	4	
Orange		5	4	
Riverside			9	
Sacramento		23	16	
San Bernardino			10	
San Diego		64	38	
San Joaquin			7	
Santa Clara		11	1	
Solano		1		
Stanislaus			1	
Sutter		1	5	
Tulare			7	
Totals	0	118	126	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	159	44
	YTD	641	118

Sentinel Chickens

		Total Tested	WNV +	SLEV +	WEEV +
Chicken Sera	Week	316	0	0	0
	YTD	1,988	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	51 / 1,607	3 / 1,025	0 / 1,025	0 / 4	0 / 4	0 / 4
	YTD	126 / 11,158	13 / 6,386	0 / 6,386	0 / 7	0 / 7	0 / 7

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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	Santa Clarita	91355	American Crow	6/1/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Valencia	91355	American Crow	6/1/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Valencia	91355	American Crow	6/2/2016	WNV
Madera	Madera Co MVCD	Madera	93637	American Crow	6/1/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	Yellow-billed Magpie	5/31/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	Yellow-billed Magpie	6/3/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	Yellow-billed Magpie	6/2/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	American Crow	6/2/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	American Crow	6/4/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Western Scrub-Jay	6/5/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	American Crow	6/3/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95825	Yellow-billed Magpie	6/2/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	Western Scrub-Jay	6/3/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/3/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/4/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/5/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/5/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	6/7/2016	WNV
San Diego	San Diego Co VCP	Del Mar	92104	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	6/7/2016	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	6/9/2016	WNV
San Diego	San Diego Co VCP	Oceanside	92058	American Crow	6/7/2016	WNV
San Diego	San Diego Co VCP	Poway	92064	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92111	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92117	American Crow	6/7/2016	WNV
San Diego	San Diego Co VCP	San Diego	92120	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92122	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92123	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/9/2016	WNV
San Diego	San Diego Co VCP	San Diego	92126	American Crow	6/9/2016	WNV
San Diego	San Diego Co VCP	San Diego	92128	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92128	American Crow	6/8/2016	WNV
San Diego	San Diego Co VCP	San Diego	92129	American Crow	6/6/2016	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	6/9/2016	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	6/9/2016	WNV
San Diego	San Diego Co VCP	Valley Center	92082	American Crow	6/9/2016	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94040	American Crow	6/5/2016	WNV

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Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	6/2/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95136	American Crow	6/2/2016	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95991	Mourning Dove	6/7/2016	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1493	148	Cx. quinquefasciatus	Fresno	50	GRVD	6/7/2016	WNV
Fresno	CNSL1912	141	Cx. quinquefasciatus	Fresno	50	GRVD	6/2/2016	WNV
Fresno	FRNO120	56	Cx. quinquefasciatus	Fresno	50	GRVD	6/7/2016	WNV
Fresno	FRNO120	57	Cx. quinquefasciatus	Fresno	47	GRVD	6/7/2016	WNV
Fresno	FRNO132	45	Cx. quinquefasciatus	Fresno	12	GRVD	6/1/2016	WNV
Fresno	FRNO8007	52	Cx. quinquefasciatus		14	CO2	6/7/2016	WNV
Fresno	FRNO8007	58	Cx. quinquefasciatus		15	GRVD	6/7/2016	WNV
Kern	KERN1002	200	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	WNV
Kern	KERN1005	197	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	WNV
Kern	KERN1005	198	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	WNV
Kern	KERN121	189	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	SLEV
Kern	KERN121	190	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	SLEV
Kern	KERN2002	188	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	SLEV
Kern	KERN2005	196	Cx. quinquefasciatus	Bakersfield	38	GRVD	6/1/2016	WNV
Kern	KERN2034	193	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	WNV
Kern	KERN2034	194	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/1/2016	WNV
Kern	KERN2039	219	Cx. quinquefasciatus	Bakersfield	27	GRVD	6/3/2016	WNV
Kern	KERN2043	192	Cx. quinquefasciatus	Bakersfield	21	GRVD	6/1/2016	WNV
Kings	KNGS5506	18	Cx. pipiens	Hanford	50	BGSENT	6/2/2016	WNV
Los Angeles	GRLA3076	5294	Cx. quinquefasciatus	Valley Glen	50	GRVD	6/3/2016	WNV
Madera	MADR12	117	Cx. tarsalis	Madera	50	CO2	6/3/2016	WNV
Madera	MADR12	119	Cx. quinquefasciatus	Madera	50	CO2	6/3/2016	WNV
Madera	MADR195	120	Cx. quinquefasciatus	Madera	25	CO2	6/7/2016	WNV
Orange	ORCO1038	1127	Cx. quinquefasciatus	La Palma	21	GRVD	6/7/2016	WNV
Orange	ORCO198	1117	Cx. quinquefasciatus	La Habra	50	GRVD	6/7/2016	WNV
Riverside	COAV208	2012	Cx. quinquefasciatus	Palm Springs	27	CO2	6/3/2016	WNV
Riverside	COAV208	2052	Cx. quinquefasciatus	Palm Springs	35	GRVD	6/3/2016	WNV
Riverside	COAV208	2137	Cx. quinquefasciatus	Palm Springs	29	CO2	6/9/2016	WNV
Riverside	NWST9200	53	Cx. tarsalis		47	CO2	6/3/2016	WNV
Sacramento	SAYO203039	1105	Cx. pipiens	North Highlands	20	CO2	6/7/2016	WNV
Sacramento	SAYO213002	1083	Cx. pipiens	Sacramento	40	GRVD	6/7/2016	WNV
Sacramento	SAYO213009	1079	Cx. pipiens	Sacramento	6	CO2	6/7/2016	WNV
Sacramento	SAYO213017	1062	Cx. pipiens	Sacramento	50	GRVD	6/7/2016	WNV
Sacramento	SAYO213017	1063	Cx. pipiens	Sacramento	26	GRVD	6/7/2016	WNV
Sacramento	SAYO213023	1103	Cx. pipiens	Sacramento	49	GRVD	6/7/2016	WNV
Sacramento	SAYO213033	1064	Cx. pipiens	Sacramento	8	CO2	6/7/2016	WNV
Sacramento	SAYO213033	1065	Cx. pipiens	Sacramento	5	GRVD	6/7/2016	WNV
Sacramento	SAYO213035	1091	Cx. pipiens	Sacramento	50	CO2	6/7/2016	WNV
Sacramento	SAYO213035	1093	Cx. pipiens	Sacramento	23	GRVD	6/7/2016	WNV
Sacramento	SAYO213040	1084	Cx. pipiens	Sacramento	16	GRVD	6/7/2016	WNV
Sacramento	SAYO213051	1071	Cx. pipiens	Sacramento	25	GRVD	6/7/2016	WNV
Sacramento	SAYO223009	1077	Cx. pipiens	Sacramento	42	GRVD	6/7/2016	WNV
San Bernardino	WVAL5004	951	Cx. quinquefasciatus	Rancho Cucamonga	21	GRVD	6/8/2016	WNV
San Bernardino	WVAL5005	943	Cx. quinquefasciatus	Rancho Cucamonga	17	GRVD	6/8/2016	WNV

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San Bernardino	WVAL5006	953	Cx. quinquefasciatus	Rancho Cucamonga	13	GRVD	6/8/2016	WNV
San Joaquin	SJCM8125	649	Cx. pipiens	Stockton	2	CO2	6/7/2016	WNV
San Joaquin	SJCM8160	586	Cx. tarsalis	Lodi	46	CO2	6/7/2016	WNV
San Joaquin	SJCM8160	587	Cx. pipiens	Lodi	23	CO2	6/7/2016	WNV
Santa Clara	STCL2925	31	Cx. pipiens	San Jose	28	CO2	6/2/2016	WNV
Stanislaus	TRLK410	199	Cx. pipiens	Ceres	40	CO2	6/3/2016	WNV
Sutter	SUYA16	15	Cx. tarsalis	Pleasant Grove	50	REST	6/6/2016	WNV
Sutter	SUYA31	17	Cx. tarsalis	Rio Oso	50	REST	6/6/2016	WNV
Sutter	SUYA31	18	Cx. tarsalis	Rio Oso	50	REST	6/6/2016	WNV
Tulare	DLTA8419	939	Cx. quinquefasciatus	Goshen	50	GRVD	6/7/2016	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.

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