

California Arbovirus Surveillance Bulletin #13

Week 26 Friday, June 29, 2018



Weekly Update

Humans

No new human cases were reported this week. To date this year, a total of 9 human cases of West Nile virus (WNV) illness have been reported from 6 counties. Of the 9 case patients, 5 (56%) had neuroinvasive illness; no fatalities have been reported. The median age of the individuals is 60 years (range: 14–78 years) and 5 are male. At this time last year, 3 human WNV cases had been reported from 3 counties.

Dead Birds

A total of 8 WNV positive dead birds were reported this week from 4 counties: Riverside (1), Sacramento (4), San Joaquin (1), Santa Clara (1), and Yolo (1). **This is the first positive dead bird from San Joaquin County, and the first detection of WNV in Yolo County this year.** In 2018, a total of 35 WNV positive dead birds have been reported from 12 counties. At this time last year, 39 WNV positive dead birds had been reported from 12 counties.

Mosquito Pools

West Nile virus

A total of 16 WNV positive mosquito pools were reported this week from 4 counties: Merced (1), Riverside (1), Sacramento (9), and San Joaquin (5). **This is the first detection of WNV activity in Merced County this year.** In 2018, 47 mosquito pools have tested positive for WNV from 8 counties. At this time last year, 412 WNV positive mosquito pools had been reported from 14 counties.

St. Louis encephalitis virus

A total of 18 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 3 counties: Fresno (1), Kern (4), and Tulare (13). In 2018, 29 SLEV positive mosquito pools have been reported from 3 counties: Fresno (2), Kern (9), and Tulare (18) counties. At this time last year, 4 SLEV positive mosquito pools had been reported from 2 counties.

Sentinel Chickens

No seroconversions have been reported in 2018. At this time last year, 1 WNV positive chicken had been reported from 1 county.

2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	3,426	3,045
# Positive Counties	17	17
# Human Cases	3	9
# Positive Dead Birds / # Tested	39 / 815	35 / 695
# Positive Mosquito Pools / # Tested	47 / 16,451	47 / 12,966
# Seroconversions / # Tested	1 / 4,158	0 / 3,687

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YTD WNV Activity by Element and County, 2018				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		4	7	
El Dorado		2		
Fresno	1			
Humboldt		1		
Kern	2			
Los Angeles	2	2		
Merced			1	
Riverside	2	2	5	
Sacramento	1	12	22	
San Bernardino	1		2	
San Joaquin		1	8	
San Mateo		2		
Santa Clara		6	1	
Santa Cruz		1		
Stanislaus		1		
Tulare			1	
Yolo		1		
Totals	9	35	47	0

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	0	0	0
	YTD	9	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	79	8
	YTD	695	35

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	427	0	0	0
	YTD	3,687	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	16 / 1,664	18 / 1,441	0 / 1,285	0 / 60	0 / 60	0 / 60
		YTD	47 / 12,966	29 / 10,435	0 / 9,624	0 / 295	0 / 295	0 / 295

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New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	6/18/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	California Scrub-Jay	6/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Cooper's Hawk	6/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Northern Mockingbird	6/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	American Crow	6/25/2018	WNV
San Joaquin	San Joaquin Co MVCD	Woodbridge	95258	American Crow	6/26/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	6/18/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	American Crow	6/26/2018	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	FRNO116	308	Cx. quinquefasciatus	Fresno	50	GRVD	6/20/2018	SLEV
Kern	KERN2014	164	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/20/2018	SLEV
Kern	KERN2028	161	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/20/2018	SLEV
Kern	KERN2051	178	Cx. quinquefasciatus	Bakersfield	47	GRVD	6/21/2018	SLEV
Kern	KERN3020	172	Cx. quinquefasciatus	Bakersfield	36	CO2	6/20/2018	SLEV
Merced	MERC1005	142	Cx. pipiens	Atwater	34	CO2	6/27/2018	WNV
Riverside	COAVO	2607	Cx. quinquefasciatus		15	CO2	6/28/2018	WNV
Sacramento	SAYO212033	1971	Cx. pipiens	Sacramento	30	CO2	6/26/2018	WNV
Sacramento	SAYO212033	1972	Cx. pipiens	Sacramento	50	GRVD	6/26/2018	WNV
Sacramento	SAYO222011	1992	Cx. pipiens	Sacramento	50	GRVD	6/26/2018	WNV
Sacramento	SAYO222064	1934	Cx. pipiens	Sacramento	19	GRVD	6/26/2018	WNV
Sacramento	SAYO222065	1938	Cx. pipiens	Sacramento	50	GRVD	6/26/2018	WNV
Sacramento	SAYO233067	2045	Cx. pipiens	Elk Grove	50	GRVD	6/26/2018	WNV
Sacramento	SAYO233067	2046	Cx. pipiens	Elk Grove	43	GRVD	6/26/2018	WNV
Sacramento	SAYO233093	2079	Cx. pipiens	Elk Grove	50	GRVD	6/26/2018	WNV
Sacramento	SAYO243009	2032	Cx. pipiens	Elk Grove	31	CO2	6/26/2018	WNV
San Joaquin	SJCM8125	693	Cx. pipiens	Stockton	23	CO2	6/26/2018	WNV
San Joaquin	SJCM8160	808	Cx. tarsalis	Lodi	50	CO2	6/26/2018	WNV
San Joaquin	SJCM8198	710	Cx. tarsalis	Stockton	50	CO2	6/26/2018	WNV
San Joaquin	SJCM8203	700	Cx. tarsalis	Lodi	50	CO2	6/26/2018	WNV
San Joaquin	SJCM8203	707	Cx. tarsalis	Lodi	50	CO2	6/26/2018	WNV
Tulare	DLTA8519	1656	Cx. quinquefasciatus	Visalia	45	GRVD	6/27/2018	SLEV
Tulare	DLTA8531	1559	Cx. quinquefasciatus	Visalia	10	GRVD	6/26/2018	SLEV
Tulare	DLTA8531	1561	Cx. quinquefasciatus	Visalia	41	GRVD	6/26/2018	SLEV
Tulare	DLTA9402	1610	Cx. quinquefasciatus	Visalia	14	BGSENT	6/27/2018	SLEV
Tulare	DLTA9412	1568	Cx. quinquefasciatus	Visalia	30	GRVD	6/26/2018	SLEV
Tulare	DLTA9505	1563	Cx. quinquefasciatus	Visalia	21	GRVD	6/26/2018	SLEV
Tulare	DLTA9506	1572	Cx. quinquefasciatus	Visalia	36	GRVD	6/26/2018	SLEV
Tulare	TLRE192407	33	Cx. quinquefasciatus	Visalia	50	GRVD	6/26/2018	SLEV
Tulare	TLRE192507	31	Cx. quinquefasciatus	Visalia	50	GRVD	6/26/2018	SLEV
Tulare	TLRE192507	32	Cx. quinquefasciatus	Visalia	50	GRVD	6/26/2018	SLEV
Tulare	TLRE192508	38	Cx. quinquefasciatus	Visalia	50	GRVD	6/26/2018	SLEV
Tulare	TLRE192508	40	Cx. quinquefasciatus	Visalia	50	GRVD	6/26/2018	SLEV
Tulare	TLRE202402	15	Cx. quinquefasciatus	Tulare	50	GRVD	6/20/2018	SLEV

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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 with a plaque reduction neutralization test (PRNT).

Dead Birds

Oral swab samples collected from bird carcasses are tested at the UC Davis Arbovirus Research and Training laboratory (DART) or at a local agency for West Nile virus by RT-qPCR.

Sentinel Chickens:

Dried blood spot samples from sentinel chickens are tested at the California Department of Public Health Vector-Borne Disease Laboratory for IgG antibodies to West Nile, St. Louis encephalitis, and western equine encephalomyelitis viruses by an EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are tested at DART or at a local agency for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex RT-qPCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested at DART for chikungunya, dengue, and Zika viral RNA by a separate RT-qPCR.

Website Information: For updated information on WNV and SLEV 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 websites: www.cdc.gov and https://wwwn.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html

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