

California Arbovirus Surveillance Bulletin #12

Week 25 Friday, June 22, 2018



Weekly Update

Humans

Five human cases of West Nile virus (WNV) illness were reported this week from 5 counties: Fresno (1), Kern (1), Los Angeles (1), Sacramento (1), and San Bernardino (1). Note that these cases had onset in early 2018, but likely represent prior year infections. To date this year, a total of 9 human WNV cases 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, 2 human cases of West Nile virus (WNV) illness had been reported from 2 counties.

Dead Birds

Six WNV positive dead birds were reported this week from 5 counties: El Dorado (1), Los Angeles (1), Riverside (1), Sacramento (2), and Santa Cruz (1). **This is the first detection of WNV in Santa Cruz County this year.** In 2018, a total of 27 WNV positive dead birds have been reported from 10 counties. At this time last year, 27 WNV positive dead birds had been reported from 11 counties.

Mosquito Pools

West Nile virus

A total of 21 WNV positive mosquito pools were reported this week from 6 counties: Alameda (4), Riverside (3), Sacramento (11), San Bernardino (1), San Joaquin (1), and Tulare (1). **This is the first detection of WNV in Tulare County this year.** In 2018, 31 mosquito pools have tested positive for WNV from 7 counties. At this time last year, 301 WNV positive mosquito pools had been reported from 13 counties.

St. Louis encephalitis virus

Seven mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 3 counties: Fresno (1), Kern (3), and Tulare (3). **This is the first detection of SLEV activity in Fresno County this year.** In 2018, 11 mosquito pools have tested positive for SLEV from Fresno (1), Kern (5), and Tulare (5) counties. At this time last year, 1 SLEV positive mosquito pool had been reported from 1 county.

Sentinel Chickens

No seroconversions have been reported in 2018.

2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	3,145	2,591
# Positive Counties	16	15
# Human Cases	2	9
# Positive Dead Birds / # Tested	27 / 705	27 / 614
# Positive Mosquito Pools / # Tested	301 / 14,776	31 / 11,302
# Seroconversions / # Tested	0 / 3,739	0 / 3,260

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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		
Riverside	2	1	4	
Sacramento	1	8	13	
San Bernardino	1		2	
San Joaquin			3	
San Mateo		2		
Santa Clara		5	1	
Santa Cruz		1		
Stanislaus		1		
Tulare			1	
Totals	9	27	31	0

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	5	0	0
	YTD	9	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	95	6
	YTD	614	27

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	326	0	0	0
	YTD	3,260	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	21 / 1,734	7 / 1,452	0 / 1,298	0 / 40	0 / 40	0 / 40
		YTD	31 / 11,302	11 / 8,994	0 / 8,339	0 / 235	0 / 235	0 / 235

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New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
El Dorado	El Dorado Co Env Management	El Dorado Hills	95762	Unknown - songbird	6/13/2018	WNV
Los Angeles	Los Angeles Co West VCD	Agoura Hills	91301	American Crow	6/13/2018	WNV
Riverside	Northwest Mosquito VCD	Riverside	92503	House Sparrow	6/4/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	California Scrub-Jay	6/18/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	6/18/2018	WNV
Santa Cruz	Santa Cruz MVCD	Santa Cruz	95062	American Crow	6/13/2018	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Alameda	ALCO100070	19893	Cx. tarsalis	Union City	23	MMT	6/19/18	WNV
Alameda	ALCO100070	119819	Cx. erythrothorax	Union City	20	CO2	6/15/18	WNV
Alameda	ALCO168398	19727	Cx. tarsalis	Union City	32	CO2	6/7/18	WNV
Alameda	ALCO31	119802	Cx. tarsalis	Union City	49	MMT	6/15/18	WNV
Fresno	FRNO178	276	Cx. quinquefasciatus		53	GRVD	6/13/18	SLEV
Kern	KERN121	142	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/15/18	SLEV
Kern	KERN2020	117	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/13/18	SLEV
Kern	KERN2024	129	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/14/18	SLEV
Riverside	COAV0	2500	Cx. quinquefasciatus		50	GRVD	6/21/18	WNV
Riverside	COAV320	2506	Cx. quinquefasciatus	Palm Desert	50	GRVD	6/21/18	WNV
Riverside	COAV415	2304	Cx. quinquefasciatus	Indian Wells	28	GRVD	6/16/18	WNV
Sacramento	SAYO202006	1653	Cx. pipiens	Sacramento	50	GRVD	6/19/18	WNV
Sacramento	SAYO204020	1646	Cx. pipiens	Sacramento	13	CO2	6/19/18	WNV
Sacramento	SAYO212026	1636	Cx. pipiens	Sacramento	9	CO2	6/19/18	WNV
Sacramento	SAYO212026	1637	Cx. pipiens	Sacramento	38	CO2	6/19/18	WNV
Sacramento	SAYO213009	1639	Cx. pipiens	Sacramento	50	GRVD	6/19/18	WNV
Sacramento	SAYO214020	1532	Cx. pipiens	Rancho Cordova	39	GRVD	6/15/18	WNV
Sacramento	SAYO222011	1753	Cx. pipiens	Sacramento	50	GRVD	43270	WNV
Sacramento	SAYO222059	1744	Cx. pipiens	Sacramento	50	GRVD	6/19/18	WNV
Sacramento	SAYO222064	1591	Cx. pipiens	Sacramento	45	CO2	6/19/18	WNV
Sacramento	SAYO222065	1582	Cx. pipiens	Sacramento	50	GRVD	6/19/18	WNV
Sacramento	SAYO232038	1589	Cx. pipiens	Sacramento	28	GRVD	6/19/18	WNV
San Bernardino	WVAL5006	678	Cx. quinquefasciatus	Rancho Cucamonga	27	GRVD	43271	WNV
San Joaquin	SJCM8161	576	Cx. pipiens	Ripon	6	CO2	43269	WNV
Tulare	DLTA8520	1328	Cx. quinquefasciatus	Visalia	48	GRVD	6/19/18	SLEV
Tulare	DLTA9506	1178	Cx. quinquefasciatus	Visalia	17	BGSENT	6/14/18	SLEV
Tulare	DLTA9506	1180	Cx. tarsalis	Visalia	10	BGSENT	6/14/18	SLEV
Tulare	DLTA9603	1486	Cx. quinquefasciatus	Exeter	30	GRVD	6/21/18	WNV

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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/arbovet/maps/ADB_Diseases_Map/index.html

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