

## California Arbovirus Surveillance Bulletin #14

Week 27 Friday, July 6, 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 15 WNV positive dead birds were reported this week from 2 counties: Sacramento (14), and Yolo (1). In 2018, a total of 50 WNV positive dead birds have been reported from 12 counties. At this time last year, 51 WNV positive dead birds had been reported from 12 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 59 WNV positive mosquito pools were reported this week from 7 counties: Kern (1), Orange (1), Placer (1), Riverside (1), Sacramento (21), San Joaquin (33), and Yolo (1). **This is the first detection of WNV activity in Orange and Placer counties this year.** In 2018, 106 mosquito pools have tested positive for WNV from 12 counties. At this time last year, 490 WNV positive mosquito pools had been reported from 15 counties.

##### St. Louis encephalitis virus

A total of 15 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 3 counties: Kern (6), Riverside (3), and Tulare (6). **This is the first detection of SLEV activity in Riverside County this year.** In 2018, 44 SLEV positive mosquito pools have been reported from 4 counties: Fresno (2), Kern (15), Riverside (3), and Tulare (24). At this time last year, 5 SLEV positive mosquito pools had been reported from 2 counties.

#### **Sentinel Chickens**

No seroconversions have been reported in 2018. At this time last year, 2 WNV positive chickens had been reported from 1 county.

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<b>2017 &amp; 2018 YTD West Nile Virus Comparisons</b>		
	<b>2017</b>	<b>2018</b>
Total # Dead Bird Reports	3,656	3,648
# Positive Counties	18	19
# Human Cases	3	9
# Positive Dead Birds / # Tested	51 / 892	50 / 743
# Positive Mosquito Pools / # Tested	490 / 18,245	106 / 15,466
# Seroconversions / # Tested	2 / 4,652	0 / 3,975

<b>YTD WNV Activity by Element and County, 2018</b>				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		4	7	
El Dorado		2		
Fresno	1			
Humboldt		1		
Kern	2		1	
Los Angeles	2	2		
Merced			1	
Orange			1	
Placer			1	
Riverside	2	2	6	
Sacramento	1	26	43	
San Bernardino	1		2	
San Joaquin		1	41	
San Mateo		2		
Santa Clara		6	1	
Santa Cruz		1		
Stanislaus		1		
Tulare			1	
Yolo		2	1	
<b>Totals</b>	<b>9</b>	<b>50</b>	<b>106</b>	<b>0</b>

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## 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	48	15
	YTD	743	50

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	288	0	0	0
	YTD	3,975	0	0	0

### Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		59 / 2,500	15 / 1,300	0 / 1,103	0 / 0	0 / 0	0 / 0
		YTD	106 / 15,466	44 / 11,735	0 / 10,727	0 / 295	0 / 295

## New Positives

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	California Scrub-Jay	7/2/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	American Robin	6/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	California Scrub-Jay	6/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Lesser Goldfinch	7/3/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95814	Cooper's Hawk	6/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95815	American Crow	6/27/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95815	American Crow	7/1/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95816	Anna's Hummingbird	7/2/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Northern Mockingbird	6/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	California Scrub-Jay	6/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	California Scrub-Jay	6/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	California Scrub-Jay	6/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	6/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	7/3/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	Nuttall's Woodpecker	6/29/2018	WNV

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**Mosquitoes**

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Kern	KERN121	233	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/29/18	SLEV
Kern	KERN2010	211	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/27/18	SLEV
Kern	KERN2020	212	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/27/18	SLEV
Kern	KERN2021	221	Cx. quinquefasciatus	Wasco	50	GRVD	6/28/18	WNV
Kern	KERN2024	222	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/28/18	SLEV
Kern	KERN2027	213	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/27/18	SLEV
Kern	KERN2028	214	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/27/18	SLEV
Orange	ORCO236	1764	Cx. quinquefasciatus	Garden Grove	50	GRVD	7/3/18	WNV
Placer	PLCR1113	613	Cx. tarsalis	Pleasant Grove	50	CO2	7/3/18	WNV
Riverside	COAV122	2717	Cx. tarsalis	Mecca	41	CO2	7/3/18	SLEV
Riverside	COAV48	2718	Cx. tarsalis	Mecca	29	CO2	7/3/18	SLEV
Riverside	COAV611	2687	Cx. tarsalis	Mecca	40	CO2	7/3/18	SLEV
Riverside	NWST115	35	Cx. quinquefasciatus	Riverside	24	CO2	6/27/18	WNV
Sacramento	SAYO204051	2291	Cx. pipiens	Citrus Heights	9	GRVD	6/29/18	WNV
Sacramento	SAYO212033	2415	Cx. tarsalis	Sacramento	50	CO2	7/3/18	WNV
Sacramento	SAYO212033	2416	Cx. tarsalis	Sacramento	50	CO2	7/3/18	WNV
Sacramento	SAYO212033	2417	Cx. tarsalis	Sacramento	50	CO2	7/3/18	WNV
Sacramento	SAYO212033	2422	Cx. pipiens	Sacramento	50	GRVD	7/3/18	WNV
Sacramento	SAYO213048	2400	Cx. pipiens	Sacramento	26	GRVD	7/3/18	WNV
Sacramento	SAYO215005	2293	Cx. tarsalis	Folsom	5	CO2	6/29/18	WNV
Sacramento	SAYO222011	2122	Cx. pipiens	Sacramento	50	GRVD	6/28/18	WNV
Sacramento	SAYO222011	2501	Cx. pipiens	Sacramento	50	GRVD	7/3/18	WNV
Sacramento	SAYO222059	2129	Cx. pipiens	Sacramento	50	GRVD	6/28/18	WNV
Sacramento	SAYO222059	2506	Cx. pipiens	Sacramento	50	GRVD	7/3/18	WNV
Sacramento	SAYO222059	2507	Cx. pipiens	Sacramento	50	GRVD	7/3/18	WNV
Sacramento	SAYO233023	2139	Cx. tarsalis	Elk Grove	19	CO2	6/29/18	WNV
Sacramento	SAYO233023	2142	Cx. pipiens	Elk Grove	50	GRVD	6/29/18	WNV
Sacramento	SAYO233089	2517	Cx. pipiens	Elk Grove	50	GRVD	7/3/18	WNV
Sacramento	SAYO235001	2304	Cx. tarsalis	Wilton	1	CO2	6/29/18	WNV
Sacramento	SAYO243009	2350	Cx. pipiens	Elk Grove	50	GRVD	7/3/18	WNV
Sacramento	SAYO243013	2345	Cx. pipiens	Elk Grove	2	GRVD	7/3/18	WNV
Sacramento	SAYO243026	2157	Cx. pipiens	Elk Grove	37	CO2	6/29/18	WNV
Sacramento	SAYO245002	2314	Cx. tarsalis	Wilton	30	CO2	6/29/18	WNV
Sacramento	SAYO254011	2297	Cx. tarsalis	Galt	1	GRVD	6/29/18	WNV
San Joaquin	SJCM8018	844	Cx. tarsalis	Stockton	50	CO2	7/3/18	WNV
San Joaquin	SJCM8018	846	Cx. tarsalis	Stockton	50	CO2	7/3/18	WNV
San Joaquin	SJCM8018	847	Cx. tarsalis	Stockton	50	CO2	7/3/18	WNV
San Joaquin	SJCM8018	864	Cx. tarsalis	Stockton	100	CO2	7/3/18	WNV
San Joaquin	SJCM8018	865	Cx. tarsalis	Stockton	100	CO2	7/3/18	WNV
San Joaquin	SJCM8078	832	Cx. tarsalis	Stockton	13	CO2	7/3/18	WNV
San Joaquin	SJCM8079	993	Cx. pipiens	Manteca	14	CO2	7/3/18	WNV
San Joaquin	SJCM8125	975	Cx. pipiens	Stockton	40	CO2	7/3/18	WNV
San Joaquin	SJCM8161	948	Cx. tarsalis	Ripon	50	CO2	7/3/18	WNV
San Joaquin	SJCM8161	949	Cx. tarsalis	Ripon	46	CO2	7/3/18	WNV
San Joaquin	SJCM8161	950	Cx. pipiens	Ripon	50	CO2	7/3/18	WNV
San Joaquin	SJCM8161	951	Cx. pipiens	Ripon	11	CO2	7/3/18	WNV
San Joaquin	SJCM8206	889	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	890	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	891	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	892	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	893	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV

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San Joaquin	SJCM8206	895	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	898	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	899	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	900	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	901	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	902	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	903	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	904	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	905	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	907	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	908	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	910	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	911	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8206	914	Cx. tarsalis	Lodi	50	CO2	7/3/18	WNV
San Joaquin	SJCM8211	836	Cx. pipiens	Stockton	19	CO2	7/3/18	WNV
San Joaquin	SJCM8215	1008	Cx. pipiens	Stockton	17	CO2	7/5/18	WNV
Tulare	DLTA8427	1757	Cx. quinquefasciatus	Visalia	20	GRVD	6/29/18	SLEV
Tulare	DLTA8531	1719	Cx. quinquefasciatus	Visalia	36	GRVD	6/29/18	SLEV
Tulare	DLTA8531	1793	Cx. quinquefasciatus	Visalia	20	GRVD	7/3/18	SLEV
Tulare	DLTA9401	1823	Cx. quinquefasciatus	Visalia	17	GRVD	7/3/18	SLEV
Tulare	DLTA9505	1827	Cx. quinquefasciatus	Visalia	13	GRVD	7/3/18	SLEV
Tulare	DLTA9506	1730	Cx. quinquefasciatus	Visalia	12	GRVD	6/29/18	SLEV
Yolo	SAYO146006	2439	Cx. pipiens	Davis	26	GRVD	7/3/18	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 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](http://www.westnile.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 websites: [www.cdc.gov](http://www.cdc.gov) and [https://wwwn.cdc.gov/arbonet/maps/ADB\\_Diseases\\_Map/index.html](https://wwwn.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html)

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