

# California Arbovirus Surveillance Bulletin #11

Week 24 Friday, June 15, 2018



## Weekly Update

### Humans

**Four human cases of West Nile virus (WNV) illness were reported this week from three counties: Kern (1), Los Angeles (1), and Riverside (2). These are the first human cases of WNV reported in California in 2018.** Of the four case patients, two had neuroinvasive illness. At this time last year, 2 human cases of West Nile virus (WNV) illness had been reported from 2 counties.

### Dead Birds

Seven WNV positive dead birds were reported this week from five counties: Alameda (2), Sacramento (2), Santa Clara (2), and Stanislaus (1). **This is the first detection of WNV in Stanislaus County this year.** In 2018, a total of 21 WNV positive dead birds have been reported from 8 counties. At this time last year, 25 WNV positive dead birds had been reported from 10 counties.

### Mosquito Pools

#### West Nile virus

Six WNV positive mosquito pools were reported this week from five counties: Alameda (1), Riverside (1), Sacramento (1), San Joaquin (2), and Santa Clara (1). **This is the first detection of WNV in San Joaquin County this year.** In 2018, 10 mosquito pools have tested positive for WNV from 6 counties. At this time last year, 157 WNV positive mosquito pools had been reported from 10 counties.

#### St. Louis encephalitis virus

**Two mosquito pools from Kern County tested positive for St. Louis encephalitis virus (SLEV) this week; this is the first detection of SLEV activity in Kern County this year.** In 2018, 4 mosquito pools have tested positive for SLEV from Kern (2) and Tulare (2) counties.

### Sentinel Chickens

No seroconversions have been reported in 2018.

2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	2,787	2,332
# Positive Counties	14	12
# Human Cases	2	4
# Positive Dead Birds / # Tested	25 / 640	21 / 519
# Positive Mosquito Pools / # Tested	157 / 12,882	10 / 9,568
# Seroconversions / # Tested	0 / 3,244	0 / 2,934

*Website Information:* For updated information on WNV in California, please visit the California WNV website, [www.westmile.ca.gov](http://www.westmile.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://www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](https://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

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YTD WNV Activity by Element and County, 2018				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		4	3	
El Dorado		1		
Humboldt		1		
Kern	1			
Los Angeles	1	1		
Riverside	2		1	
Sacramento		6	2	
San Bernardino			1	
San Joaquin			2	
San Mateo		2		
Santa Clara		5	1	
Stanislaus		1		
<b>Totals</b>	<b>4</b>	<b>21</b>	<b>10</b>	<b>0</b>

## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	4	0	0
	YTD	4	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	82	7
	YTD	519	21

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	393	0	0	0
	YTD	2,934	0	0	0

### Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	6 / 1,514	2 / 1,282	0 / 1,157	0 / 46	0 / 40	0 / 46
		YTD	10 / 9,568	4 / 7,542	0 / 7,041	0 / 201	0 / 195	0 / 201

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## New Positives

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Castro Valley	94552	House Sparrow	5/31/2018	WNV
Alameda	Alameda Co MAD	Union City	94587	American Crow	6/8/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	California Scrub-Jay	6/11/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95815	American Crow	6/10/2018	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Crow	6/4/2018	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	American Crow	6/1/2018	WNV
Stanislaus	East Side MAD	Modesto	95358	California Scrub-Jay	6/6/2018	WNV

### Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Alameda	ALCO31	197970	<i>Cx. tarsalis</i>	Union City	32	CO2	6/8/2018	WNV
Kern	KERN2020	92	<i>Cx. quinquefasciatus</i>	Bakersfield	50	GRVD	6/6/2018	SLEV
Kern	KERN2028	91	<i>Cx. quinquefasciatus</i>	Bakersfield	50	GRVD	6/6/2018	SLEV
Riverside	COAV415	2267	<i>Cx. quinquefasciatus</i>	Indian Wells	50	BGSENT	6/14/2018	WNV
Sacramento	SAYO243017	1156	<i>Cx. pipiens</i>	Elk Grove	50	CO2	6/7/2018	WNV
San Joaquin	SJCM8018	422	<i>Cx. tarsalis</i>	Stockton	50	CO2	6/12/2018	WNV
San Joaquin	SJCM8018	423	<i>Cx. tarsalis</i>	Stockton	50	CO2	6/12/2018	WNV
Santa Clara	STCL1221	360	<i>Cx. pipiens</i>	Sunnyvale	1	CO2	6/7/2018	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:

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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.

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