

## California Arbovirus Surveillance Bulletin #13

Week 28 Friday, July 10, 2020



### Weekly Update

#### **Humans**

**One human case of West Nile virus (WNV) illness was reported this week from Los Angeles County.** In 2020, 2 human WNV cases have been reported from 2 counties: Los Angeles (1) and Stanislaus (1). Of the 2 cases, 1 (50%) had neuroinvasive illness; no fatalities have been reported. In addition, one asymptomatic WNV-positive blood donor has been reported from Stanislaus County. At this time last year, one human WNV case had been reported from one county (Imperial).

#### **Dead Birds**

A total of 11 WNV positive dead birds were reported this week from 3 counties: Los Angeles (5), Orange (1), and Sacramento (5). **This is the first detection of WNV activity in Orange County this year.** In 2020, a total of 34 WNV positive dead birds have been reported from 9 counties. At this time last year, 20 WNV positive dead birds had been reported from 7 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 44 WNV positive mosquito pools were reported this week from 10 counties: Fresno (4), Los Angeles (3), Madera (1), Merced (4), Riverside (5), Sacramento (4), San Joaquin (1), Stanislaus (19), Sutter (2), and Tulare (1). **This is the first detection of WNV activity in Sutter County this year.** In 2020, a total of 179 WNV positive mosquito pools have been reported from 15 counties. At this time last year, 582 WNV positive mosquito pools had been reported from 13 counties.

##### St. Louis encephalitis virus

A total of 16 St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from 2 counties: Fresno (2) and Riverside (14). In 2020, a total of 68 SLEV positive mosquito pools have been reported from Fresno (9), Imperial (7), Kern (2), and Riverside (50) counties. At this time last year, 33 SLEV positive mosquito pools had been reported from 4 counties.

#### **Sentinel Chickens**

**One WNV seroconversion was reported this week from Merced County; this is the first WNV positive chicken reported in 2020.** At this time last year, no seroconversions had been reported.

**California Arbovirus Surveillance Bulletin #13**

Week 28 Friday, July 10, 2020

<b>2019 &amp; 2020 YTD West Nile Virus Comparisons</b>		
	<b>2019</b>	<b>2020</b>
Total # Dead Bird Reports	2,859	2,505
# Positive Counties	16	18
# Human Cases	1	2
# Positive Dead Birds / # Tested	20 / 836	34 / 591
# Positive Mosquito Pools / # Tested	582 / 16,814	179 / 14,824
# Seroconversions / # Tested	0 / 3,727	1 / 2,485

<b>YTD WNV Activity by Element and County, 2020</b>					
<b>County</b>	<b>Humans*</b>	<b>Horses</b>	<b>Dead Birds</b>	<b>Mosquito Pools</b>	<b>Sentinel Chickens</b>
Amador		1			
Fresno			3	23	
Imperial				1	
Kern				1	
Kings				1	
Los Angeles	1		6	14	
Madera				2	
Merced			1	5	1
Napa			1		
Orange			1		
Riverside				26	
Sacramento			12	6	
San Diego				1	
San Joaquin			1	4	
Santa Clara			5	7	
Stanislaus	1		4	78	
Sutter				2	
Tulare				8	
<b>Totals</b>	<b>2</b>	<b>1</b>	<b>34</b>	<b>179</b>	<b>1</b>

*\*Does not include asymptomatic infections*

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Week 28 Friday, July 10, 2020

## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	1	0	0
	YTD	2	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	60	11
	YTD	591	34

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	292	1	0	0
	YTD	2,485	1	0	0

### Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	44 / 1,509	16 / 1,508	0 / 1,388	0 / 13	0 / 13	0 / 13
		YTD	179 / 14,824	68 / 14,736	0 / 13,829	0 / 97	0 / 97	0 / 97

## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91401	American Crow	6/23/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91401	Cooper's Hawk	7/1/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91423	American Crow	6/21/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91423	American Crow	7/6/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	North Hollywood	91601	American Crow	6/30/2020	WNV
Orange	Orange Co VCD	Irvine	92620	Red-shouldered Hawk	6/24/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	House Sparrow	6/30/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	California Scrub-Jay	7/6/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	California Scrub-Jay	7/7/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	California Scrub-Jay	6/30/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	California Scrub-Jay	7/3/2020	WNV

## California Arbovirus Surveillance Bulletin #13

Week 28 Friday, July 10, 2020

### Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1122	677	Cx. quinquefasciatus	Fresno	50	GRVD	7/2/2020	SLEV
Fresno	CNSL1270	355	Cx. quinquefasciatus	Fresno	39	GRVD	7/2/2020	WNV
Fresno	CNSL8044	651	Cx. quinquefasciatus	Fresno	50	GRVD	6/30/2020	WNV
Fresno	CNSL8075	339	Cx. quinquefasciatus	Fresno	50	GRVD	7/1/2020	WNV
Fresno	CNSL8127	653	Cx. quinquefasciatus	Fresno	50	GRVD	6/30/2020	SLEV
Fresno	CNSL8127	653	Cx. quinquefasciatus	Fresno	50	GRVD	6/30/2020	WNV
Los Angeles	GRLA2247	280	Cx. quinquefasciatus	Pico Rivera	50	GRVD	6/24/2020	WNV
Los Angeles	GRLA2636	5362	Cx. quinquefasciatus	Van Nuys	50	GRVD	7/2/2020	WNV
Los Angeles	GRLA3048	277	Cx. quinquefasciatus	Pico Rivera	42	GRVD	6/24/2020	WNV
Madera	MADR227	108	Cx. tarsalis	Madera	50	CO2	7/2/2020	WNV
Merced	MERC44020	217	Cx. tarsalis	Merced	50	CO2	7/8/2020	WNV
Merced	MERC44020	219	Cx. tarsalis	Merced	50	CO2	7/8/2020	WNV
Merced	MERC44020	233	Cx. tarsalis	Merced	50	CO2	7/8/2020	WNV
Merced	MERC44021	251	Cx. pipiens	Winton	19	CO2	7/9/2020	WNV
Riverside	COAV0	2815	Cx. quinquefasciatus	Indio	38	CO2	7/7/2020	SLEV
Riverside	COAV0	2835	Cx. quinquefasciatus	Indio	11	GRVD	7/9/2020	WNV
Riverside	COAV0	2982	Cx. tarsalis	Indio	50	CO2	7/10/2020	SLEV
Riverside	COAV0	2983	Cx. tarsalis	Indio	50	CO2	7/10/2020	SLEV
Riverside	COAV0	2984	Cx. tarsalis	Indio	50	CO2	7/10/2020	SLEV
Riverside	COAV0	2986	Cx. tarsalis	Indio	50	CO2	7/10/2020	SLEV
Riverside	COAV0	2996	Cx. quinquefasciatus	Indio	39	GRVD	7/9/2020	WNV
Riverside	COAV0	2998	Cx. quinquefasciatus	Indio	15	GRVD	7/9/2020	WNV
Riverside	COAV131	2994	Cx. quinquefasciatus	Oasis	10	CO2	7/7/2020	SLEV
Riverside	COAV15	2919	Cx. tarsalis	Mecca	10	CO2	7/7/2020	SLEV
Riverside	COAV17	2954	Cx. tarsalis	Mecca	12	CO2	7/7/2020	SLEV
Riverside	COAV17	3027	Cx. tarsalis	Mecca	32	CO2	7/10/2020	SLEV
Riverside	COAV27	2921	Cx. tarsalis	Thermal	43	CO2	7/7/2020	SLEV
Riverside	COAV27	3007	Cx. tarsalis	Thermal	50	CO2	7/10/2020	SLEV
Riverside	COAV30	2928	Cx. quinquefasciatus	Mecca	50	CO2	7/7/2020	SLEV
Riverside	COAV320	2963	Cx. quinquefasciatus	Palm Desert	10	GRVD	7/9/2020	WNV
Riverside	COAV414	2964	Cx. quinquefasciatus	Palm Desert	6	GRVD	7/9/2020	WNV
Riverside	COAV416	2825	Cx. quinquefasciatus	La Quinta	37	GRVD	7/7/2020	SLEV
Riverside	COAV419	2817	Cx. quinquefasciatus	La Quinta	18	GRVD	7/7/2020	SLEV
Sacramento	SAYO205010	2240	Cx. pipiens	Orangevale	10	GRVD	7/2/2020	WNV
Sacramento	SAYO214054	1800	Cx. pipiens	Fair Oaks	16	GRVD	6/26/2020	WNV
Sacramento	SAYO214054	2235	Cx. pipiens	Fair Oaks	10	GRVD	7/2/2020	WNV
Sacramento	SAYO223006	2264	Cx. tarsalis	Sacramento	19	CO2	7/7/2020	WNV
San Joaquin	SJCM8070	837	Cx. tarsalis	Galt	16	CO2	7/9/2020	WNV
Stanislaus	EAST1004	20223	Cx. tarsalis	Modesto	50	CO2	7/2/2020	WNV
Stanislaus	EAST1004	20224	Cx. tarsalis	Modesto	50	CO2	7/2/2020	WNV
Stanislaus	EAST1009	20205	Cx. tarsalis	Ripon	22	CO2	6/30/2020	WNV
Stanislaus	EAST1046	20214	Cx. pipiens	Modesto	35	CO2	7/1/2020	WNV
Stanislaus	EAST1088	20208	Cx. pipiens	Modesto	50	GRVD	7/1/2020	WNV
Stanislaus	EAST1088	20209	Cx. pipiens	Modesto	50	GRVD	7/1/2020	WNV
Stanislaus	EAST1088	20215	Cx. pipiens	Modesto	16	CO2	7/1/2020	WNV
Stanislaus	EAST2002	20213	Cx. pipiens	Modesto	23	CO2	7/1/2020	WNV
Stanislaus	EAST2002	20216	Cx. pipiens	Modesto	34	CO2	7/2/2020	WNV
Stanislaus	EAST2021	20211	Cx. pipiens	modesto	36	GRVD	7/1/2020	WNV
Stanislaus	TRLK1209	323	Cx. pipiens	Ceres	31	CO2	7/7/2020	WNV
Stanislaus	TRLK1301	330	Cx. pipiens	Denair	20	CO2	7/7/2020	WNV

## California Arbovirus Surveillance Bulletin #13

Week 28 Friday, July 10, 2020

Stanislaus	TRLK1905	341	Cx. pipiens	Denair	36	CO2	7/7/2020	WNV
Stanislaus	TRLK20217	318	Cx. pipiens	Denair	24	CO2	7/2/2020	WNV
Stanislaus	TRLK406	328	Cx. pipiens	Turlock	21	CO2	7/7/2020	WNV
Stanislaus	TRLK432	355	Cx. pipiens	Turlock	50	CO2	7/7/2020	WNV
Stanislaus	TRLK432	356	Cx. pipiens	Turlock	30	CO2	7/7/2020	WNV
Stanislaus	TRLK432	357	Cx. tarsalis	Turlock	36	CO2	7/7/20	WNV
Stanislaus	TRLK516	335	Cx. tarsalis	Denair	26	CO2	7/7/2020	WNV
Sutter	SUYA5	178	Cx. tarsalis	Live Oak	28	CO2	7/7/2020	WNV
Sutter	SUYA63	212	Cx. tarsalis	Live Oak	50	REST	7/7/2020	WNV
Tulare	DLTA6408	1083	Cx. quinquefasciatus	Dinuba	20	BGSENT	7/2/2020	WNV

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Merced	MERC1302	Los Banos	7/2/2020	WNV	1957

## 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 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.maps.calsurv.org](http://www.maps.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC websites: [www.cdc.gov](http://www.cdc.gov) and [www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

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Week 28 Friday, July 10, 2020

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