

## California Arbovirus Surveillance Bulletin #26

Week 42 Friday, October 22, 2021



### Weekly Update

#### **Humans**

##### West Nile virus

A total of 13 human cases of West Nile virus (WNV) illness were reported this week from 8 counties: El Dorado (1), Fresno (2), Kings (2), Los Angeles (2), Orange (1), San Joaquin (3), Solano (1), and Stanislaus (1). **This is the first WNV case reported from El Dorado County this year.** In 2021, a total of 88 WNV human cases have been reported from 22 counties. Of the 88 cases, 65 (74%) had neuroinvasive illness and 6 (6.8%) were fatal. The median age of the cases was 59 years, and 54 (61%) were male. Dates of symptom onset ranged from March 31 to October 6. In addition to the 88 cases, 16 asymptomatic WNV infections have been reported from Butte (1), Fresno (2), Kern (2), Kings (2), Los Angeles (3), Madera (1), Merced (1), San Bernardino (1), San Joaquin (1), Stanislaus (1), and Yolo (1) counties. At this time last year, 123 WNV cases had been reported from 20 counties.

##### St. Louis encephalitis virus

No new cases were reported this week. In 2021, one human case of St. Louis encephalitis virus (SLEV) disease has been reported from Fresno County. At this time last year, one SLEV case had been reported from one county.

#### **Dead Birds**

No new WNV positive dead birds were reported this week. In 2021, 208 WNV positive dead birds have been reported from 19 counties. At this time last year, 314 WNV positive dead birds had been reported from 20 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 8 WNV positive mosquito pools were reported this week from 5 counties: Fresno (1), Los Angeles (4), Orange (1), Riverside (1), and Sacramento (1). In 2021, 2,255 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 2,534 WNV positive mosquito pools had been reported from 27 counties.

##### St. Louis encephalitis virus

No SLEV positive mosquito pools were reported this week. In 2021, 44 SLEV positive mosquito pools have been reported from 8 counties: Fresno (7), Imperial (3), Kings (1), Madera (3), Merced (2), Riverside (22), Stanislaus (2), and Tulare (4). At this time last year, 504 SLEV positive mosquito pools had been reported from 9 counties.

#### **Sentinel Chickens**

##### West Nile virus

One WNV positive chicken was reported this week from Butte County. In 2021, 88 WNV positive chickens have been reported from 12 counties. At this time last year, 123 WNV positive chickens had been reported from 15 counties.

##### St. Louis encephalitis virus

No SLEV positive chickens were reported this week. In 2021, 2 SLEV positive chickens have been reported from Merced County. At this time last year, no SLEV positive chickens had been reported.

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<b>YTD WNV Activity by Element and County, 2021</b>					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			2		
Amador		1			
Butte	13		2	80	27
Colusa					1
Contra Costa	2		3	8	
El Dorado	1				
Fresno	6	2		219	
Glenn	2				
Kern	3			103	
Kings	5	1		34	
Lake				4	4
Los Angeles	13		43	258	3
Madera	3			131	
Merced	5	1	1	10	19
Napa				1	
Nevada			2		
Orange	2		7	49	
Placer	2		5	63	
Riverside	1			108	
Sacramento		2	100	120	1
San Bernardino	1		1	9	
San Diego	2				
San Joaquin	5	3	17	389	
San Luis Obispo	2				
Santa Clara			1	4	
Shasta	3			28	3
Solano	2		2	22	
Sonoma			1	2	
Stanislaus	7	1	2	152	
Sutter			1	18	11
Tehama					5
Tulare	7		7	375	8
Ventura			1		
Yolo	1		10	56	4
Yuba		2		12	2
<b>Totals</b>	<b>88</b>	<b>13</b>	<b>208</b>	<b>2,255</b>	<b>88</b>

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2020 & 2021 YTD West Nile Virus Comparisons		
	2020	2021
Total # Dead Bird Reports	5,112	4,800
# Positive Counties	37	35
# Human Cases	123	88
# Positive Dead Birds / # Tested	314 / 1,431	208 / 1,605
# Positive Mosquito Pools / # Tested	2,534 / 37,674	2,255 / 36,754
# Seroconversions / # Tested	123 / 5,786	88 / 5,369

### TESTING SUMMARIES

#### Humans

		WNV	SLEV	WEEV
Human Cases	Week	13	0	0
	YTD	88	1	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	18	0
	YTD	1,605	208

#### Sentinel Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	153	1	0	0
	YTD	5,369	88	2	0

#### Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	8 / 656	0 / 560	0 / 560	0 / 65	0 / 65	0 / 65
	YTD	2,255 / 36,754	44 / 33,865	0 / 31,184	0 / 730	0 / 730	0 / 730

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### NEW POSITIVES

#### Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	FRWS300026	375	Cx. quinquefasciatus	Firebaugh	28	CO2	10/19/2021	WNV
Los Angeles	GRLA2500	5764	Cx. quinquefasciatus	Elysian Valley	49	GRVD	10/13/2021	WNV
Los Angeles	GRLA3046	720	Cx. quinquefasciatus	Bellflower	23	GRVD	10/14/2021	WNV
Los Angeles	SGVA1010	1170	Cx. quinquefasciatus	Monrovia	25	GRVD	10/20/2021	WNV
Los Angeles	SGVA875	1145	Cx. quinquefasciatus	Walnut	26	GRVD	10/20/2021	WNV
Orange	ORCO1033	4651	Cx. quinquefasciatus	Tustin	11	GRVD	10/19/2021	WNV
Riverside	COAV58	5054	Cx. tarsalis	North Shore	50	CO2	10/19/2021	WNV
Sacramento	SAYO233015	7175	Cx. pipiens	Sacramento	2	GRVD	10/15/2021	WNV

#### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Butte	BUCO0007	Chico	10/12/2021	WNV	2572

### 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.

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*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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