

California Arbovirus Surveillance Bulletin #33

Week 46 Friday, November 18, 2022



WEEKLY UPDATE

Humans

West Nile virus

A total of 11 human cases of West Nile virus (WNV) illness were reported this week from 5 counties: Kern (1), Los Angeles (3), Orange (5), San Mateo (1), and Stanislaus (1). **This is the first WNV human case reported for San Mateo County this year.** In 2022, a total of 131 cases have been reported from 24 counties. Of the 131 cases, 105 (80%) had neuroinvasive illness and 10 (8%) were fatal. The median age of the cases was 60 years and 85 (65%) were male. The dates of symptom onset ranged from April 11 to November 2. In addition to the 131 WNV cases, 13 asymptomatic WNV-positive blood donors have been reported from 5 counties: Fresno (3), Kern (1), Los Angeles (7), Orange (1), and San Joaquin (1). At this time last year, 106 WNV cases had been reported from 26 counties.

St. Louis encephalitis virus

A single (1) new case of St. Louis encephalitis virus (SLEV) was reported this week from Sacramento County. **This is the first SLEV human case reported for Sacramento County this year.** In 2022, 11 SLEV human cases have been reported from 6 counties: Fresno (1), Kern (3), Los Angeles (1), Sacramento (1), Stanislaus (1), and Tulare (4). At this time last year, 3 SLEV cases had been reported from 3 counties.

Dead Birds

No WNV positive dead birds were reported this week. In 2022, 185 WNV positive dead birds have been reported from 23 counties. At this time last year, 209 WNV positive dead birds had been reported from 19 counties.

Mosquito Pools

West Nile virus

A total of 3 WNV positive mosquito pools were reported this week from Los Angeles County. In 2022, 3,165 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 2,260 WNV positive pools had been reported from 25 counties.

St. Louis encephalitis virus

No SLEV positive mosquito pools were reported this week. In 2022, 153 SLEV positive mosquito pools from 10 counties have been reported: Fresno (14), Imperial (6), Kern (12), Kings (27), Los Angeles (1), Madera (18), Riverside (57), San Joaquin (1), Stanislaus (1), and Tulare (16). At this time last year, 44 SLEV positive pools had been reported from 8 counties.

Sentinel Chickens

No WNV positive sentinel chickens were reported this week. In 2022, 145 WNV positive chickens have been reported from 13 counties. At this time last year, 88 WNV positive chickens had been reported from 12 counties.

California Arbovirus Surveillance Bulletin #33

Week 46 Friday, November 18, 2022

2021 & 2022 YTD West Nile Virus Comparisons		
	2021	2022
Total No. Dead Bird Reports	5,020	4,708
No. Positive Counties	38	33
No. Human Cases	106	131
No. Positive Dead Birds / No. Tested	209 / 1,686	185 / 1,262
No. Positive Mosquito Pools / No. Tested	2,260 / 37,890	3,165 / 40,278
No. Seroconversions / No. Tested	88 / 5,765	145 / 5,154

YTD WNV Activity by Element and County, 2022					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Butte	3		2	39	27
Colusa	1				3
Contra Costa			1	2	5
Fresno	14		2	296	
Glenn	1				
Imperial				1	
Kern	17	3		99	
Kings	7	1		105	
Lake			2	7	3
Los Angeles	25	1	46	578	33
Madera	3		2	132	
Merced	7		1	20	16
Napa				1	
Nevada		1	1		
Orange	8		1	39	
Placer	2		5	89	
Riverside			5	125	
Sacramento	1	2	40	42	6
San Bernardino			7	100	
San Joaquin	4	1	1	208	
San Luis Obispo		1			
San Mateo	1				
Santa Clara	1		26	23	
Shasta	1		1	39	3
Solano	2		9	12	
Sonoma	1		1		
Stanislaus	14	1		70	
Sutter	1		4	31	16
Tehama	3	2			6
Tulare	10	3	2	1,030	10
Ventura			1		
Yolo	3		24	65	4
Yuba	1		1	12	13
Totals	131	16	185	3,165	145

California Arbovirus Surveillance Bulletin #33

Week 46 Friday, November 18, 2022

TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	11	1	0
	YTD	131	11	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	0 / 1
	YTD	185 / 1,262

Chicken Sera	Week	0 / 70	0 / 70	0 / 70
	YTD	145 / 5,154	0 / 5,154	0 / 5,154

Mosquito Pools	Week	3 / 145	0 / 145	0 / 145	0 / 0	0 / 0	0 / 0
	YTD	3,165 / 40,278	153 / 36,514	0 / 35,099	0 / 666	0 / 666	0 / 666

POSITIVES

Mosquito Pools

County	Site code	Pool #	Species	City	# in Pool	Trap type	Collected	Virus
Los Angeles	SGVA 451	1259	Cx. quinquefasciatus	Glendora	20	GRVD	11/16/2022	WNV
Los Angeles	SGVA 479	1230	Cx. quinquefasciatus	Altadena	15	GRVD	11/3/2022	WNV
Los Angeles	SGVA 1070	1229	Cx. quinquefasciatus	Bradbury	17	GRVD	11/3/2022	WNV

California Arbovirus Surveillance Bulletin #33

Week 46 Friday, November 18, 2022

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, <https://westnile.ca.gov>, or the California Vector-Borne Disease Surveillance System website, <https://maps.vectorsurv.org>.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Hannah Romo: Hannah.romo@cdph.ca.gov