

California Arbovirus Surveillance Bulletin #30

Week 43 Friday, October 28, 2022



WEEKLY UPDATE

Humans

West Nile virus

A total of 7 human cases of West Nile virus (WNV) illness were reported this week from 3 counties: Kern (1), Los Angeles (3), and Tulare (3). In 2022, a total of 106 cases have been reported from 21 counties. Of the 106 cases, 83 (78%) had neuroinvasive illness and 7 (7%) were fatal. The median age of the cases was 60 years and 68 (64%) were male. The dates of symptom onset ranged from April 11 to October 2. In addition to the 106 WNV cases, 10 asymptomatic WNV-positive blood donors have been reported from 5 counties: Fresno (3), Kern (1), Los Angeles (4), Orange (1), and San Joaquin (1). At this time last year, 92 WNV cases had been reported from 23 counties.

St. Louis encephalitis virus

A single (1) human case of St. Louis encephalitis virus (SLEV) was reported this week from Tulare County. In 2022, 9 SLEV human cases have been reported from 4 counties: Fresno (1), Kern (3), Stanislaus (1), and Tulare (4). At this time last year, 1 SLEV case had been reported from one county.

Dead Birds

No WNV positive dead birds were reported this week. In 2022, 185 WNV positive dead birds have been reported from 24 counties. At this time last year, 208 WNV positive dead birds had been reported from 19 counties.

Mosquito Pools

West Nile virus

A total of 28 WNV positive mosquito pools were reported this week from 5 counties: Fresno (1), Los Angeles (23), San Bernardino (1), Stanislaus (1), and Tulare (2). In 2022, 3,128 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 2,256 WNV positive pools had been reported from 25 counties.

St. Louis encephalitis virus

A total of 3 SLEV positive mosquito pools were reported this week from 3 counties: Fresno (1), Kern (1), and Tulare (1). In 2022, 152 SLEV positive mosquito pools from 10 counties have been reported: Fresno (14), Imperial (6), Kern (12), Kings (27), Los Angeles (1), Madera (18), Riverside (56), 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 new positive chickens were reported this week. In 2022, 144 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 #30

Week 43 Friday, October 28, 2022

2021 & 2022 YTD West Nile Virus Comparisons		
	2021	2022
Total No. Dead Bird Reports	4,847	4,537
No. Positive Counties	36	32
No. Human Cases	92	106
No. Positive Dead Birds / No. Tested	209 / 1,610	185 / 1,222
No. Positive Mosquito Pools / No. Tested	2,256 / 37,113	3,128 / 39,272
No. Seroconversions / No. Tested	88 / 5,482	144 / 4,946

YTD WNV Activity by Element and County, 2022					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Butte	3		2	39	27
Colusa					3
Contra Costa			1	2	5
Fresno	14		2	296	
Glenn	1				
Imperial				1	
Kern	16	3		99	
Kings	6	1		105	
Lake			2	7	3
Los Angeles	16	1	46	553	32
Madera	3		2	132	
Merced	7		1	20	16
Napa				1	
Nevada		1	1		
Orange	4		1	32	
Placer	1		5	89	
Riverside			5	123	
Sacramento		2	40	42	6
San Bernardino			7	98	
San Joaquin	3	1	1	208	
San Luis Obispo		1			
Santa Clara	1		26	22	
Shasta	1		1	39	3
Solano	2		9	12	
Sonoma	1		1		
Stanislaus	10	1		70	
Sutter	1		4	31	16
Tehama	3	2			6
Tulare	9	3	2	1,030	10
Ventura			1		
Yolo	3		24	65	4
Yuba	1		1	12	13
Totals	106	16	185	3,128	144

California Arbovirus Surveillance Bulletin #30

Week 43 Friday, October 28, 2022

TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	7	1	0
	YTD	106	9	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	0 / 3
	YTD	185 / 1,222

Chicken Sera	Week	0 / 67	0 / 67	0 / 67
	YTD	144 / 4,946	0 / 4,946	0 / 4,946

Mosquito Pools	Week	28 / 704	3 / 704	0 / 703	0 / 59	0 / 59	0 / 59
	YTD	3,128 / 39,272	152 / 35,604	0 / 34,189	0 / 586	0 / 586	0 / 586

POSITIVES

Mosquito Pools

County	Site code	Pool #	Species	City	# in Pool	Trap type	Collected	Virus
Fresno	CNSL 4198	174	Cx. quinquefasciatus	Fowler	27	GRVD	10/19/2022	WNV
Fresno	CNSL 6366	176	Cx. quinquefasciatus	Riverdale	50	GRVD	10/20/2022	SLEV
Kern	DLNO 1	242	Cx. quinquefasciatus	McFarland	22	GRVD	10/21/2022	SLEV
Los Angeles	GRLA 2166	967	Cx. quinquefasciatus	Montebello	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 2194	970	Cx. quinquefasciatus	South El Monte	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 2268	964	Cx. quinquefasciatus	Cerritos	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 2383	981	Cx. quinquefasciatus	Whittier	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 2580	6039	Cx. quinquefasciatus	Sherman Oaks	50	GRVD	10/18/2022	WNV
Los Angeles	GRLA 2724	6068	Cx. quinquefasciatus	Winnetka	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 2952	958	Cx. quinquefasciatus	South Whittier	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 3040	960	Cx. quinquefasciatus	La Mirada	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 3042	974	Cx. quinquefasciatus	Hacienda Heights	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 3044	971	Cx. quinquefasciatus	South El Monte	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 3046	950	Cx. quinquefasciatus	Bellflower	50	GRVD	10/18/2022	WNV
Los Angeles	GRLA 3048	966	Cx. quinquefasciatus	Pico Rivera	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 3052	979	Cx. quinquefasciatus	La Habra Heights	50	GRVD	10/21/2022	WNV
Los Angeles	GRLA 3055	947	Cx. quinquefasciatus	Maywood	49	GRVD	10/18/2022	WNV
Los Angeles	GRLA 3059	940	Cx. quinquefasciatus	Paramount	46	GRVD	10/18/2022	WNV
Los Angeles	GRLA 3060	961	Cx. quinquefasciatus	Norwalk	50	GRVD	10/20/2022	WNV
Los Angeles	GRLA 3063	954	Cx. quinquefasciatus	Watts	50	GRVD	10/19/2022	WNV
Los Angeles	SGVA 1077	1193	Cx. quinquefasciatus	La Puente	50	GRVD	10/26/2022	WNV
Los Angeles	SGVA 285	1190	Cx. quinquefasciatus	Baldwin Park	30	GRVD	10/26/2022	WNV
Los Angeles	SGVA 29	1173	Cx. quinquefasciatus	Pomona	50	GRVD	10/25/2022	WNV
Los Angeles	SGVA 450	1192	Cx. quinquefasciatus	La Puente	50	GRVD	10/26/2022	WNV
Los Angeles	SGVA 477	1183	Cx. quinquefasciatus	West Covina	50	GRVD	10/26/2022	WNV
Los Angeles	SGVA 953	1189	Cx. quinquefasciatus	Covina	33	GRVD	10/26/2022	WNV
San Bernardino	WVAL 5009	1871	Cx. quinquefasciatus	Rancho Cucamonga	14	GRVD	10/25/2022	WNV
Stanislaus	EAST 1088	22200	Cx. pipiens	Modesto	13	CO2	10/19/2022	WNV
Tulare	DLTA 65311	4685	Cx. quinquefasciatus	Cutler	50	CO2	10/18/2022	WNV
Tulare	DLTA 65311	4686	Cx. quinquefasciatus	Cutler	50	CO2	10/18/2022	WNV
Tulare	DLTA 65314	4697	Cx. quinquefasciatus	Yetterm	50	CO2	10/18/2022	SLEV

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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>.

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