

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023



WEEKLY UPDATE

Humans

West Nile virus

A total of 15 new human cases of West Nile virus (WNV) were reported this week from 11 counties: Imperial (1), Kern (2), Kings (1), Los Angeles (2), Madera (1), Placer (1), San Bernardino (1), San Joaquin (1), San Luis Obispo (1), Stanislaus (3), and Yolo (1). **This is the first WNV positive human case from Imperial County this year.** In 2023, a total of 286 human cases of WNV have been reported from 32 counties. Of the 286 cases, 208 (73%) had neuroinvasive disease and 10 (3%) were fatal. The median age of the case-patients was 58 years and 181 (63%) of the case-patients were male. The dates of symptom onset ranged from June 30 to October 2. In addition to the 286 WNV human cases, 22 asymptomatic WNV-positive blood donors have been reported from 14 counties: Amador (1), Butte (1), Contra Costa (1), Fresno (2), Kern (2), Kings (2), Los Angeles (4), Orange (1), Riverside (1), San Bernardino (2), San Joaquin (1), San Mateo (1), Stanislaus (1), and Yolo (2). At this time last year, 106 WNV human cases had been reported from 21 counties.

St. Louis encephalitis virus

A total of 2 new human cases of St. Louis encephalitis virus (SLEV) were reported this week from 2 counties: Fresno (1) and Kern (1). In 2023, 8 SLEV human cases have been reported from 5 counties. At this time last year, 9 SLEV human cases had been reported from 4 counties.

Dead Birds

A total of 12 new WNV positive dead birds were reported from 4 counties: Alameda (3), Riverside (2), Sacramento (1), and Santa Clara (6). In 2023, 843 WNV positive dead birds have been reported from 31 counties. At this time last year, 185 WNV positive dead birds had been reported from 24 counties.

Mosquito Pools

West Nile virus

A total of 38 new WNV positive mosquito pools were reported from 7 counties: Contra Costa (1), Fresno (1), Los Angeles (13), Riverside (17), San Bernardino (1), Sonoma (2), and Tulare (3). In 2023, 4,424 WNV positive mosquito pools have been reported from 31 counties. At this time last year, 3,128 WNV positive mosquito pools had been reported from 26 counties.

St. Louis encephalitis virus

A total of 13 new SLEV positive mosquito pools were reported from 4 counties: Fresno (2), Kern (2), Riverside (2), and Tulare (7). In 2023, 727 SLEV positive mosquito pools have been reported from 15 counties. At this time last year, 151 SLEV positive mosquito pools had been reported from 9 counties.

Sentinel Chickens

West Nile virus

A total of 2 new WNV positive chickens were reported this week from 2 counties: Los Angeles (1) and San Benito (1). In 2023, 185 WNV positive chickens have been reported from 17 counties. At this time last year, 144 WNV positive chickens had been reported from 13 counties.

St. Louis encephalitis virus

No new SLEV positive chickens were reported this week. In 2023, 1 SLEV positive chicken has been reported from 1 county. At this time last year, no SLEV positive chickens had been reported.

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023

2022 & 2023 YTD West Nile Virus Comparisons		
	2022	2023
Total No. Dead Bird Reports	4,537	6,290
No. Positive Counties	32	42
No. Human Cases	106	286
No. Positive Dead Birds / No. Tested	185 / 1,222	843 / 1,927
No. Positive Mosquito Pools / No. Tested	3,128 / 39,272	4,424 / 50,830
No. Seroconversions / No. Tested	144 / 4,946	185 / 3,498

YTD WNV Activity by Element and County, 2023					
County	Humans*	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			78	15	4
Butte	18	1	2	69	33
Calaveras					3
Colusa	1		2	2	2
Contra Costa	7		94	25	11
El Dorado	3		4		
Fresno	10	2	1	232	
Glenn	4			1	
Imperial	1			3	
Inyo				2	
Kern	14	2		107	
Kings	7	1		70	
Lake	5		8	25	
Los Angeles	29		44	533	28
Madera	6	1	1	207	
Marin			2		
Merced	8	2		43	22
Monterey	1				
Napa		1	4	7	
Nevada	1		1		2
Orange	3	1	2	182	
Placer	6	1	43	177	
Riverside	12	3	69	176	
Sacramento	29	3	195	342	8
San Benito			1		6
San Bernardino	19	2	11	156	
San Diego			7	1	
San Joaquin	13	2	20	607	
San Luis Obispo	2	2	1		
San Mateo	1		12		
Santa Clara	1	1	117	16	
Shasta	6		2	151	5
Siskiyou		1			
Solano	4		18	24	11
Sonoma			16	6	
Stanislaus	27	2	6	293	
Sutter	6		6	66	19
Tehama					4
Tulare	14	1	5	566	10
Ventura	1		4		
Yolo	22		67	294	10
Yuba	5	1		26	7
Totals	286	30	843	4,424	185

*Asymptomatic human infections are not included.

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023

YTD SLEV Activity by Element and County, 2023			
County	Humans	Mosquito Pools	Sentinel Chickens
Fresno	2	160	
Imperial		3	
Inyo		1	
Kern	2	75	
Kings		44	
Madera		47	
Marin	1		
Merced		12	
Napa		1	
Placer		1	
Riverside		117	
San Joaquin		9	
Shasta		3	1
Stanislaus	2	23	
Tulare		228	
Yolo	1	3	
Totals	8	727	1

TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	15	2	0
	YTD	286	8	0

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Dead Birds	Week	12 / 20					
	YTD	843 / 1,927					
Chicken Sera	Week	2 / 86	0 / 86	0 / 86			
	YTD	185 / 3,498	1 / 3,498	0 / 3,498			
Mosquito Pools	Week	38 / 734	13 / 734	0 / 734	0 / 79	0 / 79	0 / 79
	YTD	4,424 / 50,830	727 / 45,765	0 / 45,765	0 / 965	0 / 965	0 / 965

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Fremont	94538	American Crow	10/24/2023	WNV
Alameda	Alameda Co MAD	Fremont	94536	American Crow	10/27/2023	WNV
Alameda	Alameda Co MAD	Newark	94560	American Crow	10/27/2023	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	10/11/2023	WNV
Riverside	Northwest Mosquito VCD	Riverside	92508	American Crow	10/12/2023	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95832	Red-tailed Hawk	10/24/2023	WNV
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	10/26/2023	WNV
Santa Clara	Santa Clara Co VCD	Gilroy	95020	American Crow	10/26/2023	WNV
Santa Clara	Santa Clara Co VCD	Milpitas	95035	American Crow	10/26/2023	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	10/17/2023	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	10/26/2023	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	10/26/2023	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus
Contra Costa	CNTR 626164	1798	Cx tarsalis	Walnut Creek	50	CO2	10/19/2023	WNV
Fresno	CNSL 1830	813	Cx quinquefasciatus	Clovis	47	GRVD	10/20/2023	SLEV
Fresno	FRNO 122	1011	Cx quinquefasciatus	Fresno	50	GRVD	10/25/2023	WNV
Fresno	FRNO 122	1011	Cx quinquefasciatus	Fresno	50	GRVD	10/25/2023	SLEV
Kern	KERN 2021	1278	Cx quinquefasciatus	Wasco	50	GRVD	10/17/2023	SLEV
Kern	KERN 3066	1279	Cx quinquefasciatus	Lamont	45	GRVD	10/17/2023	SLEV
Los Angeles	GRLA 2032	5942	Cx quinquefasciatus	Northridge	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2034	5938	Cx quinquefasciatus	Tarzana	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2035	5939	Cx quinquefasciatus	Tarzana	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2097	881	Cx quinquefasciatus	La Mirada	50	GRVD	10/13/2023	WNV
Los Angeles	GRLA 2123	895	Cx quinquefasciatus	Harbor City	50	GRVD	10/20/2023	WNV
Los Angeles	GRLA 2539	5944	Cx quinquefasciatus	Porter Ranch	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2540	5945	Cx quinquefasciatus	Porter Ranch	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2552	5953	Cx quinquefasciatus	Glendale	50	GRVD	10/20/2023	WNV
Los Angeles	GRLA 2555	5937	Cx quinquefasciatus	Encino	50	GRVD	10/15/2023	WNV
Los Angeles	GRLA 2636	5935	Cx quinquefasciatus	Lake Balboa	50	BGSENT	10/15/2023	WNV
Los Angeles	GRLA 2952	880	Cx quinquefasciatus	South Whittier(La County)	51	GRVD	10/13/2023	WNV
Los Angeles	SGVA 1010	1109	Cx quinquefasciatus	Monrovia	50	GRVD	10/26/2023	WNV
Los Angeles	SGVA 683	1104	Cx quinquefasciatus	Sierra Madre	44	GRVD	10/26/2023	WNV
Riverside	COAV 0	7113	Cx quinquefasciatus	Indio	15	BGSENT	10/20/2023	WNV
Riverside	COAV 0	7228	Cx quinquefasciatus	Indio	50	BGSENT	10/20/2023	WNV
Riverside	COAV 2	7406	Cx tarsalis	Oasis	50	CO2	10/24/2023	SLEV
Riverside	COAV 321	7566	Cx quinquefasciatus	Rancho Mirage	14	BGSENT	10/26/2023	WNV
Riverside	COAV 33	7369	Cx tarsalis	Thermal	50	CO2	10/24/2023	WNV
Riverside	COAV 35	7420	Cx tarsalis	Mecca	50	CO2	10/24/2023	SLEV
Riverside	COAV 411	7564	Cx quinquefasciatus	Rancho Mirage	40	BGSENT	10/26/2023	WNV
Riverside	COAV 418	7600	Cx quinquefasciatus	Indian Wells	50	BGSENT	10/26/2023	WNV
Riverside	COAV 418	7601	Cx quinquefasciatus	Indian Wells	50	BGSENT	10/26/2023	WNV
Riverside	COAV 418	7603	Cx quinquefasciatus	Indian Wells	50	BGSENT	10/26/2023	WNV
Riverside	COAV 418	7604	Cx quinquefasciatus	Indian Wells	40	BGSENT	10/26/2023	WNV
Riverside	COAV 420	7323	Cx quinquefasciatus	La Quinta	43	BGSENT	10/24/2023	WNV
Riverside	COAV 6	7459	Cx tarsalis	Oasis	50	CO2	10/24/2023	WNV
Riverside	COAV 763	7328	Cx quinquefasciatus	La Quinta	50	BGSENT	10/24/2023	WNV
Riverside	COAV 763	7329	Cx quinquefasciatus	La Quinta	42	BGSENT	10/24/2023	WNV
Riverside	COAV 781	7431	Cx quinquefasciatus	Palm Desert	50	BGSENT	10/26/2023	WNV
Riverside	COAV 783	7519	Cx quinquefasciatus	Palm Desert	26	BGSENT	10/26/2023	WNV
Riverside	COAV 791	7415	Cx quinquefasciatus	Palm Springs	50	BGSENT	10/25/2023	WNV
Riverside	COAV 820	7508	Cx quinquefasciatus	Palm Springs	18	BGSENT	10/25/2023	WNV
San Bernardino	WVAL 9005	3116	Cx quinquefasciatus	Upland	12	GRVD	10/26/2023	WNV
Sonoma	MARN 560	669	Cx stigmatosoma	Petaluma	8	GRVD	10/24/2023	WNV
Sonoma	MARN 565	668	Cx tarsalis	Petaluma	1	CO2-EVS	10/24/2023	WNV
Tulare	DLTA 64073	6987	Cx quinquefasciatus	Dinuba	21	BGSENT	10/12/2023	WNV
Tulare	DLTA 64163	6978	Cx quinquefasciatus	Dinuba	13	GRVD	10/12/2023	SLEV

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023

Tulare	DLTA 6417	6933	Cx quinquefasciatus	Dinuba	35	BGSENT	10/10/2023	SLEV
Tulare	DLTA 751732	6935	Cx quinquefasciatus	Yetterm	27	CO2	10/10/2023	SLEV
Tulare	DLTA 7625	6900	Cx quinquefasciatus	Woodlake	10	BGSENT	10/10/2023	WNV
Tulare	DLTA 8413	6941	Cx quinquefasciatus	Visalia	50	BGSENT	10/10/2023	SLEV
Tulare	DLTA 8527	6955	Cx quinquefasciatus	Visalia	50	BGSENT	10/11/2023	SLEV
Tulare	DLTA 8532	6907	Cx quinquefasciatus	Visalia	17	BGSENT	10/10/2023	WNV
Tulare	DLTA 9503	6960	Cx quinquefasciatus	Visalia	31	BGSENT	10/11/2023	SLEV
Tulare	DLTA 9506	6944	Cx quinquefasciatus	Visalia	11	BGSENT	10/11/2023	SLEV

Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Los Angeles	LACW 1012	Venice	10/19/2023	WNV	2049
San Benito	SBVC 0	Hollister	10/25/2023	WNV	1963

California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 27, 2023

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