

California Arbovirus Surveillance Bulletin #27

Week 41 Friday, October 11, 2024



WEEKLY UPDATE

Humans

West Nile virus

A total of 9 new human cases of West Nile virus (WNV) disease were reported this week from 7 counties: Glenn (1), Kern (1), Los Angeles (2), Merced (1), Riverside (1), San Diego (1), and Yolo (2). **This is the first human case of WNV disease for Glenn County this year.** In 2024, 83 human cases of WNV disease were reported from 22 counties. Of the 83 cases, 62 (75%) had neuroinvasive disease and 9 (11%) were fatal. The median age of the case-patients was 59 years and 51 (61%) of the case-patients were male. The dates of symptom onset ranged from May 28 to September 22. In addition to the 83 cases of WNV disease, 14 asymptomatic WNV-positive blood donors have been reported from 6 counties: Butte (1), Fresno (3), Los Angeles (5), San Bernardino (2), Santa Clara (2), and Stanislaus (1). At this time last year, 244 human cases of WNV disease had been reported from 30 counties.

St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 3 human cases of SLEV disease had been reported from 2 counties.

Dengue virus

In 2024, there have been 7 locally acquired dengue infections reported from 2 counties: Los Angeles (6) and San Diego (1). Locally acquired and travel associated dengue cases are indicated in the CDPH Weekly Update on Number of Dengue Infections:

<https://westnile.ca.gov/pdfs/WeeklyUpdateDengueInfectionsCA.pdf>

Dead Birds

A total of 6 new WNV positive dead birds were reported from 4 counties: Alameda (1), Sacramento (1), San Mateo (1), and Santa Clara (3). In 2024, 494 WNV positive dead birds have been reported from 21 counties. At this time last year, 806 WNV positive dead birds had been reported from 30 counties.

Mosquito Pools

West Nile virus

A total of 58 new WNV positive mosquito pools were reported from 8 counties: Los Angeles (7), Madera (2), Orange (3), San Joaquin (13), Santa Clara (1), Stanislaus (1), Tulare (30), and Yolo (1). In 2024, 1,962 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 4,305 WNV positive mosquito pools had been reported from 31 counties.

St. Louis encephalitis virus

A total of 6 new SLEV positive mosquito pools were reported from 2 counties: Fresno (1) and Tulare (5). In 2024, 34 SLEV positive mosquito pools have been reported from 5 counties: Fresno (14), Imperial (1), Kings (3), Madera (4), and Tulare (12). At this time last year, 691 SLEV positive mosquito pools had been reported from 15 counties.

Sentinel Chickens

A total of 4 new WNV positive chickens were reported this week from 1 county: Los Angeles (4). In 2024, 153 WNV positive sentinel chickens have been reported from 16 counties. At this time last year, 179 WNV positive chickens had been reported from 17 counties.

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2023 & 2024 YTD West Nile Virus Comparisons		
	2023	2024
Total No. Dead Bird Reports	6,037	5,764
No. Positive Counties	42	32
No. Human Cases	244	83
No. Positive Dead Birds / No. Tested	806 / 1,864	494 / 1,691
No. Positive Mosquito Pools / No. Tested	4,305 / 48,688	1,962 / 44,253
No. Seroconversions / No. Tested	179 / 3,332	153 / 4,285

YTD WNV Activity by Element and County, 2024					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			53	20	1
Butte	11		4	70	28
Calaveras	1				
Colusa	1		1		2
Contra Costa	2		6	10	8
Fresno	11		1	207	
Glenn	1				
Imperial				3	
Kern	3			47	
Kings	5			87	
Lake			3	13	7
Los Angeles	8	1	16	184	40
Madera			1	110	
Merced	2		1	43	12
Nevada					1
Orange	1		1	45	
Placer		1	3	93	
Riverside	4		2	217	
Sacramento	3	1	66	53	1
San Bernardino	4		10	76	
San Diego	2	1	4		
San Joaquin	2	1	6	188	
San Mateo			32		
Santa Clara	3		274	34	
Shasta	1			37	2
Solano			2	13	5
Stanislaus	5			56	
Sutter				32	20
Tehama	1	1			6
Tulare				227	10
Yolo	8		6	65	3
Yuba	4	1	2	32	7
Totals	83	7	494	1,962	153

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TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	9	0	0
	YTD	83	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	6 / 47
	YTD	494 / 1,691

Chicken Sera	Week	4 / 80	0 / 80	0 / 80
	YTD	153 / 4,285	0 / 4,285	0 / 4,285

Mosquito Pools	Week	58 / 1,785	6 / 1,697	0 / 1,697	0 / 68	0 / 68	0 / 68
	YTD	1,962 / 44,253	34 / 41,037	0 / 41,060	0 / 1,134	0 / 1,134	0 / 1,134

POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Pleasanton	94566	American Crow	10/6/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	California Scrub-Jay	10/7/2024	WNV
San Mateo	San Mateo Co MVCD	San Carlos	94070	American Crow	9/30/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	10/3/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95136	American Crow	10/4/2024	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	American Crow	10/4/2024	WNV

Mosquito Pools

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Fresno	FRWS 4102	379	Cx tarsalis	Kerman	50	CO2	10/8/2024	SLEV
Los Angeles	GRLA 2116	802	Cx quinquefasciatus	Cudahy	25	GRVD	10/3/2024	WNV
Los Angeles	GRLA 2123	787	Cx quinquefasciatus	Harbor City	30	BGSENT	9/29/2024	WNV
Los Angeles	GRLA 3045	791	Cx quinquefasciatus	Whittier	50	GRVD	10/2/2024	WNV
Los Angeles	GRLA 3062	814	Cx quinquefasciatus	Los Angeles	50	GRVD	10/4/2024	WNV
Los Angeles	GRLA 3063	813	Cx quinquefasciatus	Watts	18	GRVD	10/4/2024	WNV
Los Angeles	SGVA 960	783	Cx quinquefasciatus	Rosemead	32	GRVD	10/8/2024	WNV
Los Angeles	SGVA 967	789	Cx quinquefasciatus	Temple City	50	GRVD	10/8/2024	WNV
Madera	MADR 12360	705	Cx quinquefasciatus	Madera	50	CO2	10/4/2024	WNV
Madera	MADR 247	680	Cx quinquefasciatus	Chowchilla	29	CO2	10/1/2024	WNV
Orange	ORCO 302	2893	Cx quinquefasciatus	Anaheim	30	GRVD	10/1/2024	WNV
Orange	ORCO 325	3047	Cx quinquefasciatus	La Habra	19	GRVD	10/8/2024	WNV
Orange	ORCO 340	2900	Cx quinquefasciatus	Santa Ana	36	GRVD	10/1/2024	WNV
San Joaquin	SJCM 8009	1931	Cx tarsalis	Stockton	36	CO2	10/8/2024	WNV
San Joaquin	SJCM 8206	1941	Cx tarsalis	Lodi	50	CO2	10/8/2024	WNV

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San Joaquin	SJCM 8206	1945	Cx tarsalis	Lodi	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8206	1947	Cx tarsalis	Lodi	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1919	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1920	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1921	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1922	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1923	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1925	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8210	1927	Cx pipiens	Escalon	50	CO2	10/8/2024	WNV
San Joaquin	SJCM 8253	1916	Cx tarsalis	Linden	9	CO2	10/8/2024	WNV
San Joaquin	SJCM 8253	1917	Cx pipiens	Linden	16	CO2	10/8/2024	WNV
Santa Clara	STCL 31680	2958	Cx pipiens	Los Altos	45	GRVD	10/3/2024	WNV
Stanislaus	TRLK 17131	884	Cx pipiens	Turlock	24	CO2	10/8/2024	WNV
Tulare	DLTA 300011	3868	Cx quinquefasciatus	Visalia	37	BGSENT	10/1/2024	WNV
Tulare	DLTA 300016	3882	Cx tarsalis	Visalia	17	BGSENT	10/1/2024	WNV
Tulare	DLTA 73161	4298	Cx quinquefasciatus	Traver	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 73161	4300	Cx stigmatosoma	Traver	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	3847	Cx quinquefasciatus	Goshen	50	BGSENT	10/1/2024	SLEV
Tulare	DLTA 8324	3848	Cx quinquefasciatus	Goshen	50	BGSENT	10/1/2024	SLEV
Tulare	DLTA 8324	3851	Cx quinquefasciatus	Goshen	50	BGSENT	10/1/2024	SLEV
Tulare	DLTA 8324	3856	Cx quinquefasciatus	Goshen	50	BGSENT	10/1/2024	WNV
Tulare	DLTA 8324	4258	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4259	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4260	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4261	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4262	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4263	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4264	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4265	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8324	4266	Cx quinquefasciatus	Goshen	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 8422	3999	Cx quinquefasciatus	Goshen	50	BGSENT	10/2/2024	WNV
Tulare	DLTA 8436	3928	Cx quinquefasciatus	Visalia	29	BGSENT	10/2/2024	WNV
Tulare	DLTA 85184	4198	Cx quinquefasciatus	Visalia	38	BGSENT	10/4/2024	WNV
Tulare	DLTA 8527	4052	Cx quinquefasciatus	Visalia	26	GRVD	10/2/2024	WNV
Tulare	DLTA 94023	4130	Cx quinquefasciatus	Visalia	50	BGSENT	10/3/2024	WNV
Tulare	DLTA 9403	4033	Cx quinquefasciatus	Visalia	21	BGSENT	10/2/2024	WNV
Tulare	DLTA 94032	4210	Cx quinquefasciatus	Visalia	48	BGSENT	10/4/2024	WNV
Tulare	DLTA 9411	4017	Cx quinquefasciatus	Visalia	50	BGSENT	10/2/2024	WNV
Tulare	DLTA 9411	4018	Cx quinquefasciatus	Visalia	50	BGSENT	10/2/2024	WNV
Tulare	DLTA 9411	4019	Cx quinquefasciatus	Visalia	50	BGSENT	10/2/2024	WNV
Tulare	DLTA 9411	4025	Cx quinquefasciatus	Visalia	50	BGSENT	10/2/2024	WNV
Tulare	DLTA 94121	4107	Cx quinquefasciatus	Visalia	20	BGSENT	10/3/2024	WNV
Tulare	DLTA 94122	4186	Cx quinquefasciatus	Visalia	50	BGSENT	10/4/2024	SLEV
Tulare	DLTA 9505	4337	Cx quinquefasciatus	Visalia	50	BGSENT	10/8/2024	SLEV
Tulare	DLTA 9505	4337	Cx quinquefasciatus	Visalia	50	BGSENT	10/8/2024	WNV
Tulare	DLTA 9506	3834	Cx quinquefasciatus	Visalia	50	BGSENT	10/1/2024	WNV
Tulare	DLTA 95063	4123	Cx quinquefasciatus	Visalia	50	BGSENT	10/3/2024	WNV
Tulare	DLTA 961314	4083	Cx quinquefasciatus	Exeter	43	CO2	10/3/2024	WNV
Yolo	SAYO 103007	5522	Cx tarsalis	Dunnigan	50	CO2	10/8/2024	WNV

Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04
Los Angeles	LONG 2	Long Beach	9/30/2024	WNV	2336	2338	2339	2343

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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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