

California Arbovirus Surveillance Bulletin #28

Week 42 Friday, October 18, 2024



WEEKLY UPDATE

Humans

West Nile virus

A total of 6 new human cases of West Nile virus (WNV) disease were reported this week from 3 counties: Contra Costa (1), Kern (2), and Los Angeles (3). In 2024, 89 human cases of WNV disease were reported from 22 counties. Of the 89 cases, 68 (76%) had neuroinvasive disease and 10 (11%) were fatal. The median age of the case-patients was 59 years and 56 (63%) of the case-patients were male. The dates of symptom onset ranged from May 28 to September 24. In addition to the 89 cases of WNV disease, 15 asymptomatic WNV-positive blood donors have been reported from 7 counties: Butte (1), Contra Costa (1), Fresno (3), Los Angeles (5), San Bernardino (2), Santa Clara (2), and Stanislaus (1). At this time last year, 271 human cases of WNV disease had been reported from 31 counties.

St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 6 human cases of SLEV disease had been reported from 5 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 11 new WNV positive dead birds were reported from 5 counties: Los Angeles (1), Placer (1), Riverside (1), San Mateo (3), and Santa Clara (5). In 2024, 505 WNV positive dead birds have been reported from 21 counties. At this time last year, 831 WNV positive dead birds had been reported from 31 counties.

Mosquito Pools

West Nile virus

A total of 28 new WNV positive mosquito pools were reported from 7 counties: Fresno (1), Kern (1), Los Angeles (12), Merced (1), Orange (3), Tulare (9), and Yolo (1). In 2024, 1,990 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 4,386 WNV positive mosquito pools had been reported from 31 counties.

St. Louis encephalitis virus

No new SLEV positive mosquito pools were reported this week. 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, 714 SLEV positive mosquito pools had been reported from 15 counties.

Sentinel Chickens

A total of 2 new WNV positive sentinel chickens were reported this week from 2 counties: Solano (1) and Los Angeles (1). In 2024, 155 WNV positive sentinel chickens have been reported from 16 counties. At this time last year, 183 WNV positive sentinel 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	6,172	5,876
No. Positive Counties	42	32
No. Human Cases	271	89
No. Positive Dead Birds / No. Tested	831 / 1,907	505 / 1,716
No. Positive Mosquito Pools / No. Tested	4,386 / 50,096	1,990 / 45,784
No. Seroconversions / No. Tested	183 / 3,412	155 / 4,404

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	3		6	10	8
Fresno	11		1	208	
Glenn	1				
Imperial				3	
Kern	5			48	
Kings	5			87	
Lake			3	13	7
Los Angeles	11	1	17	196	41
Madera			1	110	
Merced	2		1	44	12
Nevada					1
Orange	1		1	48	
Placer		1	4	93	
Riverside	4		3	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			35		
Santa Clara	3		279	34	
Shasta	1			37	2
Solano			2	13	6
Stanislaus	5			56	
Sutter				32	20
Tehama	1	1			6
Tulare				236	10
Yolo	8		6	66	3
Yuba	4	1	2	32	7
Totals	89	7	505	1,990	155

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TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	6	0	0
	YTD	89	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	11 / 25
	YTD	505 / 1,716

Chicken Sera	Week	2 / 120	0 / 120	0 / 120
	YTD	155 / 4,404	0 / 4,404	0 / 4,404

Mosquito Pools	Week	28 / 1,229	0 / 1,132	0 / 1,132	0 / 15	0 / 15	0 / 15
	YTD	1,990 / 45,784	34 / 42,407	0 / 42,430	0 / 1,149	0 / 1,149	0 / 1,149

POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD	Atwater Village	90039	House Finch	10/8/2024	WNV
Placer	Placer MVCD	Roseville	95661	Yellow-billed Magpie	10/14/2024	WNV
Riverside	Northwest Mosquito VCD	Corona	92880	American Crow	10/8/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	10/10/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	10/15/2024	WNV
San Mateo	San Mateo Co MVCD	San Mateo	94403	American Crow	10/16/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	10/7/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Crow	10/7/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	10/8/2024	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	10/10/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	10/16/2024	WNV

Mosquito Pools

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Fresno	CNSL 5172	300	Cx quinquefasciatus	Kingsburg	50	GRVD	10/8/2024	WNV
Kern	KERN 2031	425	Cx quinquefasciatus	Bakersfield	50	GRVD	10/9/2024	WNV
Los Angeles	GRLA 2414	5989	Cx quinquefasciatus	Granada Hills	50	GRVD	10/8/2024	WNV
Los Angeles	GRLA 2421	5990	Cx quinquefasciatus	Panorama City	43	GRVD	10/8/2024	WNV
Los Angeles	GRLA 2580	5981	Cx quinquefasciatus	Sherman Oaks	50	GRVD	10/8/2024	WNV
Los Angeles	GRLA 2635	5991	Cx quinquefasciatus	Lake Balboa	50	GRVD	10/9/2024	WNV
Los Angeles	GRLA 2636	5992	Cx quinquefasciatus	Lake Balboa	50	GRVD	10/9/2024	WNV
Los Angeles	GRLA 2651	5983	Cx quinquefasciatus	Sepulveda Basin	47	GRVD	10/8/2024	WNV
Los Angeles	GRLA 2953	820	Cx quinquefasciatus	Santa Fe Springs	27	GRVD	10/9/2024	WNV
Los Angeles	GRLA 3034	5988	Cx quinquefasciatus	North Hills	50	GRVD	10/8/2024	WNV
Los Angeles	GRLA 3073	837	Cx quinquefasciatus	Lincoln Heights	15	GRVD	10/11/2024	WNV

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Los Angeles	SGVA 297	840	Cx quinquefasciatus	Monterey Park	50	GRVD	10/15/2024	WNV
Los Angeles	SGVA 64	818	Cx quinquefasciatus	West Covina	50	GRVD	10/15/2024	WNV
Los Angeles	SGVA 695	841	Cx quinquefasciatus	Rosemead	50	GRVD	10/15/2024	WNV
Merced	MERC 938126	906	Cx tarsalis	Los Banos	50	BGPRO-S	10/11/2024	WNV
Orange	ORCO 3	3083	Cx quinquefasciatus	Garden Grove	30	GRVD	10/9/2024	WNV
Orange	ORCO 317	3168	Cx quinquefasciatus	Fullerton	33	GRVD	10/15/2024	WNV
Orange	ORCO 332	3139	Cx quinquefasciatus	Fullerton	32	GRVD	10/11/2024	WNV
Tulare	DLNO 235	184	Cx quinquefasciatus	Teviston	50	CO2	9/24/2024	WNV
Tulare	DLTA 300004	4524	Cx quinquefasciatus	Visalia	14	BGSENT	10/9/2024	WNV
Tulare	DLTA 8424	4594	Cx quinquefasciatus	Visalia	26	BGSENT	10/10/2024	WNV
Tulare	DLTA 85161	4560	Cx quinquefasciatus	Visalia	43	CO2	10/10/2024	WNV
Tulare	DLTA 85293	4538	Cx quinquefasciatus	Visalia	12	GRVD	10/10/2024	WNV
Tulare	DLTA 94121	4551	Cx quinquefasciatus	Visalia	50	BGSENT	10/10/2024	WNV
Tulare	DLTA 95063	4563	Cx quinquefasciatus	Visalia	47	BGSENT	10/10/2024	WNV
Tulare	DLTA 9511	4515	Cx quinquefasciatus	Famersville	50	BGSENT	10/9/2024	WNV
Tulare	DLTA 9511	4516	Cx quinquefasciatus	Famersville	50	BGSENT	10/9/2024	WNV
Yolo	SAYO 103007	5678	Cx tarsalis	Dunnigan	1	GRVD	10/16/2024	WNV

Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Los Angeles	LONG 4	Long Beach	10/14/2024	WNV	2361
Solano	SOLA 148	Fairfield	10/10/2024	WNV	3262

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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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