

California Arbovirus Surveillance Bulletin #25

Week 39 Friday, September 27, 2024



WEEKLY UPDATE

Humans

West Nile virus

A total of 4 new human cases of West Nile virus (WNV) disease were reported this week from 3 counties: Colusa (1), Fresno (2), and Riverside (1). **This is the first human case of WNV disease for Colusa County this year.** In 2024, 63 human cases of WNV disease were reported from 20 counties. Of the 63 cases, 46 (73%) had neuroinvasive disease and 6 (9.5%) were fatal. The median age of the case-patients was 58 years and 40 (63%) of the case-patients were male. The dates of symptom onset ranged from May 28 to September 3. In addition to the 63 cases of WNV disease, 10 asymptomatic WNV-positive blood donors have been reported from 6 counties: Butte (1), Fresno (3), Los Angeles (1), San Bernardino (2), Santa Clara (2), and Stanislaus (1). At this time last year, 183 human cases of WNV disease had been reported from 27 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.

Dead Birds

A total of 23 new WNV positive dead birds were reported from 7 counties: Alameda (2), Los Angeles (2), Madera (1), Merced (1), Sacramento (3), San Mateo (2), and Santa Clara (12). **These are the first WNV positive dead birds reported from Madera and Merced counties this year.** In 2024, 474 WNV positive dead birds have been reported from 20 counties. At this time last year, 696 WNV positive dead birds had been reported from 30 counties.

Mosquito Pools

West Nile virus

A total of 87 new WNV positive mosquito pools were reported from 14 counties: Fresno (6), Imperial (1), Kern (4), Los Angeles (12), Madera (6), Merced (6), Placer (2), San Bernardino (2), San Joaquin (16), Shasta (2), Solano (2), Stanislaus (4), Tulare (22) and Yolo (2). In 2024, 1,835 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 4,135 WNV positive mosquito pools had been reported from 31 counties.

St. Louis encephalitis virus

One new SLEV positive mosquito pool was reported from Fresno County. In 2024, 26 SLEV positive mosquito pools have been reported from 5 counties: Fresno (13), Imperial (1), Kings (3), Madera (4), and Tulare (5). At this time last year, 615 SLEV positive mosquito pools had been reported from 15 counties.

Sentinel Chickens

No new WNV positive chickens were reported this week. In 2024, 139 WNV positive sentinel chickens have been reported from 15 counties. At this time last year, 163 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	5,695	5,504
No. Positive Counties	41	31
No. Human Cases	183	63
No. Positive Dead Birds / No. Tested	696 / 1,694	474 / 1,606
No. Positive Mosquito Pools / No. Tested	4,135 / 45,548	1,835 / 40,797
No. Seroconversions / No. Tested	163 / 3,128	139 / 3,957

YTD WNV Activity by Element and County, 2024					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			50	20	
Butte	11		4	70	27
Calaveras	1				
Colusa	1		1		2
Contra Costa	2		6	10	8
Fresno	10			200	
Imperial				3	
Kern	2			47	
Kings	5			87	
Lake			2	13	5
Los Angeles	2	1	13	157	32
Madera			1	108	
Merced	1		1	41	12
Nevada					1
Orange	1		1	42	
Placer		1	3	93	
Riverside	3		2	217	
Sacramento	2	1	62	53	1
San Bernardino	3		10	76	
San Diego		1	4		
San Joaquin	1	1	6	167	
San Mateo			31		
Santa Clara	3		268	33	
Shasta	1			37	2
Solano			2	13	5
Stanislaus	4			49	
Sutter				32	19
Tehama	1				5
Tulare				172	10
Yolo	5		5	63	3
Yuba	4	1	2	32	7
Totals	63	6	474	1,835	139

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TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	4	0	0
	YTD	63	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	23 / 49
	YTD	474 / 1,606

Chicken Sera	Week	0 / 79	0 / 79	0 / 79
	YTD	139 / 3,957	0 / 3,957	0 / 3,957

Mosquito Pools	Week	87 / 1,698	1 / 1,698	0 / 1,698	0 / 61	0 / 61	0 / 61
	YTD	1,835 / 40,797	26 / 37,923	0 / 37,489	0 / 976	0 / 976	0 / 976

POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Newark	94560	American Crow	9/19/2024	WNV
Alameda	Alameda Co MAD	Castro Valley	94552	American Crow	9/24/2024	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles	90066	American Crow	9/12/2024	WNV
Los Angeles	San Gabriel Valley MVCD	West Covina	91790	American Crow	9/19/2024	WNV
Madera	Madera Co MVCD	Madera	93637	Finch	9/19/2024	WNV
Merced	Merced Co MAD	Atwater	95301	American Crow	9/19/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Rio Linda	95673	California Scrub-Jay	9/20/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	California Scrub-Jay	9/21/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	California Scrub-Jay	9/23/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	9/18/2024	WNV
San Mateo	San Mateo Co MVCD	Atherton	94027	American Crow	9/21/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95128	Unknown - Crow or Raven	9/18/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	Unknown - Crow or Raven	9/19/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95118	American Crow	9/22/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	9/23/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	9/23/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	9/23/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95135	American Crow	9/23/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	Unknown	9/23/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95139	American Crow	9/24/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Crow	9/25/2024	WNV
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	9/25/2024	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95050	Unknown - Crow or Raven	9/25/2024	WNV

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Mosquito Pools

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Fresno	CNSL 3552	276	Cx quinquefasciatus	Orange Cove	50	GRVD	09/19/2024	WNV
Fresno	FRWS 1202	308	Cx tarsalis	Dos Palos	50	CO2	09/24/2024	WNV
Fresno	FRWS 1202	311	Cx tarsalis	Dos Palos	50	CO2	09/24/2024	WNV
Fresno	FRWS 300031	307	Cx tarsalis	Firebaugh	47	CO2	09/24/2024	WNV
Fresno	FRWS 3201	306	Cx tarsalis	Firebaugh	27	CO2	09/24/2024	WNV
Fresno	FRWS 410003	296	Cx tarsalis	Kerman	50	BGSENT	09/19/2024	SLEV
Fresno	FRWS 5116	318	Cx tarsalis	Tranquility	50	CO2	09/24/2024	WNV
Imperial	IMPR 10	184	Cx quinquefasciatus	Niland	12	BGSENT	09/23/2024	WNV
Kern	DLNO 0	163	Cx tarsalis	Delano	50	CO2	09/12/2024	WNV
Kern	DLNO 0	164	Cx tarsalis	Delano	50	CO2	09/12/2024	WNV
Kern	DLNO 166	161	Cx quinquefasciatus	Delano	30	BGSENT	09/05/2024	WNV
Kern	DLNO 44	169	Cx quinquefasciatus	Delano	38	BGSENT	09/19/2024	WNV
Los Angeles	GRLA 2007	5885	Cx quinquefasciatus	Toluca Lake	50	GRVD	09/16/2024	WNV
Los Angeles	GRLA 2295	759	Cx quinquefasciatus	Los Angeles	50	GRVD	09/20/2024	WNV
Los Angeles	GRLA 2604	5894	Cx quinquefasciatus	Eagle Rock	44	GRVD	09/18/2024	WNV
Los Angeles	GRLA 3062	758	Cx quinquefasciatus	Los Angeles- Florence- Firestone	47	GRVD	09/20/2024	WNV
Los Angeles	GRLA 3069	5887	Cx quinquefasciatus	Valley Village	23	GRVD	09/16/2024	WNV
Los Angeles	LACW 1004	946	Cx quinquefasciatus	Lawndale	29	CO2	09/10/2024	WNV
Los Angeles	LACW 1054	954	Cx quinquefasciatus	Inglewood	50	CO2	09/12/2024	WNV
Los Angeles	LACW 1054	955	Cx quinquefasciatus	Inglewood	50	CO2	09/12/2024	WNV
Los Angeles	LACW 1054	956	Cx quinquefasciatus	Inglewood	41	CO2	09/12/2024	WNV
Los Angeles	SGVA 1498	735	Cx quinquefasciatus	West Covina	39	GRVD	09/26/2024	WNV
Los Angeles	SGVA 474	726	Cx quinquefasciatus	San Gabriel	50	GRVD	09/24/2024	WNV
Los Angeles	SGVA 961	730	Cx quinquefasciatus	Alhambra	50	GRVD	09/24/2024	WNV
Madera	MADR 12354	640	Cx quinquefasciatus	Madera	31	CO2	09/17/2024	WNV
Madera	MADR 12363	653	Cx tarsalis	Madera	50	CO2	09/19/2024	WNV
Madera	MADR 259	645	Cx tarsalis	Madera	44	CO2	09/17/2024	WNV
Madera	MADR 690	658	Cx quinquefasciatus	Madera	50	CO2	09/19/2024	WNV
Madera	MADR 732	643	Cx tarsalis	Madera	33	CO2	09/17/2024	WNV
Madera	MADR 756	676	Cx tarsalis	Madera	50	CO2	09/19/2024	WNV
Merced	MERC 201523	622	Cx tarsalis	Atwater	32	CO2	09/25/2024	WNV
Merced	MERC 215779	618	Cx pipiens	Mcswain	50	CO2	09/25/2024	WNV
Merced	MERC 293427	616	Cx pipiens	Atwater	39	CO2	09/25/2024	WNV
Merced	MERC 342485	632	Cx tarsalis	Atwater	28	CO2	09/25/2024	WNV
Merced	MERC 666518	611	Cx pipiens	Atwater	48	CO2	09/25/2024	WNV
Merced	MERC 727855	609	Cx pipiens	Franklin	32	CO2	09/25/2024	WNV
Placer	PLCR 191218	1657	Cx stigmatosoma	Roseville	3	CO2	09/24/2024	WNV
Placer	PLCR 194232	1646	Cx tarsalis	Pleasant Grove	50	CO2	09/24/2024	WNV
San Bernardino	WVAL 5758	2203	Cx quinquefasciatus	Ontario	27	BGSENT	09/27/2024	WNV
San Bernardino	SANB 536	363	Cx stigmatosoma	San Bernardino	5	GRVD	9/6/2024	WNV
San Joaquin	SJCM 8032	1679	Cx tarsalis	Escalon	13	CO2	09/24/2024	WNV

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San Joaquin	SJCM 8032	1680	Cx pipiens	Escalon	40	CO2	09/24/2024	WNV
San Joaquin	SJCM 8041	1717	Cx tarsalis	Lodi	43	CO2	09/24/2024	WNV
San Joaquin	SJCM 8143	1774	Cx tarsalis	Stockton	50	CO2	09/25/2024	WNV
San Joaquin	SJCM 8143	1775	Cx tarsalis	Stockton	50	CO2	09/25/2024	WNV
San Joaquin	SJCM 8161	1708	Cx pipiens	Ripon	29	CO2	09/24/2024	WNV
San Joaquin	SJCM 8206	1768	Cx tarsalis	Lodi	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8208	1704	Cx tarsalis	Lodi	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1727	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1728	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1729	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1731	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1732	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1733	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1734	Cx pipiens	Escalon	50	CO2	09/24/2024	WNV
San Joaquin	SJCM 8210	1736	Cx tarsalis	Escalon	20	CO2	09/24/2024	WNV
Shasta	SHAS 130	798	Cx pipiens	Redding	39	CO2	09/25/2024	WNV
Shasta	SHAS 629	785	Cx pipiens	Anderson	50	CO2	09/24/2024	WNV
Solano	SOLA 29	452	Cx tarsalis	Dixon	50	CO2	09/20/2024	WNV
Solano	SOLA 8803	446	Cx tarsalis	Dixon	50	CO2	09/20/2024	WNV
Stanislaus	EAST 2066	24092	Cx pipiens	Modesto	10	CO2	09/18/2024	WNV
Stanislaus	TRLK 1214	715	Cx pipiens	Turlock	50	CO2	09/24/2024	WNV
Stanislaus	TRLK 24342	689	Cx pipiens	Turlock	50	CO2	09/24/2024	WNV
Stanislaus	TRLK 536	695	Cx pipiens	Turlock	50	CO2	09/24/2024	WNV
Tulare	DLNO 0	180	Cx quinquefasciatus	Delano	19	CO2	09/20/2024	WNV
Tulare	DLTA 300011	3499	Cx quinquefasciatus	Visalia	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 300020	3225	Cx quinquefasciatus	Visalia	50	BGSENT	09/18/2024	WNV
Tulare	DLTA 400012	3479	Cx quinquefasciatus	Visalia	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 64064	3436	Cx stigmatosoma	Dinuba	50	CO2	09/24/2024	WNV
Tulare	DLTA 64074	3315	Cx stigmatosoma	Dinuba	12	GRVD	09/20/2024	WNV
Tulare	DLTA 64163	3318	Cx quinquefasciatus	Dinuba	43	GRVD	09/20/2024	WNV
Tulare	DLTA 740744	3458	Cx quinquefasciatus	London	50	CO2	09/24/2024	WNV
Tulare	DLTA 752842	3341	Cx quinquefasciatus	Ivanhoe	45	CO2	09/20/2024	WNV
Tulare	DLTA 8324	3298	Cx quinquefasciatus	Goshen	50	BGSENT	09/19/2024	WNV
Tulare	DLTA 8324	3535	Cx quinquefasciatus	Goshen	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 8324	3540	Cx quinquefasciatus	Goshen	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 8324	3560	Cx quinquefasciatus	Goshen	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 84121	3363	Cx quinquefasciatus	Visalia	21	CO2	09/20/2024	WNV
Tulare	DLTA 842132	3256	Cx quinquefasciatus	Visalia	32	CO2	09/18/2024	WNV
Tulare	DLTA 8424	3290	Cx quinquefasciatus	Visalia	16	BGSENT	09/19/2024	WNV
Tulare	DLTA 9402	3376	Cx quinquefasciatus	Visalia	16	BGSENT	09/20/2024	WNV
Tulare	DLTA 94032	3406	Cx quinquefasciatus	Visalia	50	BGSENT	09/24/2024	WNV
Tulare	DLTA 9504	3215	Cx quinquefasciatus	Visalia	11	BGSENT	09/18/2024	WNV
Tulare	DLTA 9606	3317	Cx quinquefasciatus	Farmersville	14	GRVD	09/20/2024	WNV
Tulare	TLRE 192412	111	Cx quinquefasciatus	Visalia	50	GRVD	09/12/2024	WNV
Tulare	TLRE 192412	112	Cx quinquefasciatus	Visalia	50	GRVD	09/12/2024	WNV

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Yolo	SAYO 136010	5091	Cx tarsalis	Woodland	50	CO2	09/24/2024	WNV
Yolo	SAYO 145016	5030	Cx tarsalis	Davis	45	CO2	09/24/2024	WNV

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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