

California Arbovirus Surveillance Bulletin #1

Week 15 Friday, April 12, 2024



WEEKLY UPDATE

Humans

No human infections have been reported in 2024.

2023 Final Summary

West Nile virus: In 2023, a total of 428 symptomatic and 33 asymptomatic infections with West Nile virus (WNV) were reported from 34 counties. Of the 428 symptomatic cases, 320 (75%) had neuroinvasive disease and 19 (4.4%) fatalities were reported. The median age of all cases was 60 years and 273 (64%) were male. Dates of symptom onset ranged from June 30 to December 10, 2023.

St. Louis encephalitis virus: In 2023, 18 St. Louis encephalitis virus (SLEV) human cases were reported from 9 counties. Of the 18 cases, 11 (61%) cases had neuroinvasive disease and 2 fatalities were reported. The median age was 62 years and 15 (83%) were male. Dates of symptom onset ranged from May 20 to October 13, 2023.

Dead Birds

A total of 4 new WNV positive dead birds were reported from 2 counties: Alameda (2) and Santa Clara (2). In 2024, a total of 11 WNV positive birds have been reported in 4 counties. At this time last year, no WNV positive dead birds had been reported.

Mosquito Pools

No new WNV positive mosquito pools were reported this week. In 2024, 1 WNV positive mosquito pool has been reported from one county: Alameda County (1). At this time last year, 2 WNV positive mosquito pools had been reported from 2 counties.

Sentinel Chickens

No seroconversions have been reported in 2024.

2023 & 2024 YTD West Nile Virus Comparisons		
	2023	2024
Total No. Dead Bird Reports	917	699
No. Positive Counties	2	4
No. Human Cases	0	0
No. Positive Dead Birds / No. Tested	0 / 36	11 / 67
No. Positive Mosquito Pools / No. Tested	2 / 1,177	1 / 1,921
No. Seroconversions / No. Tested	0 / 0	0 / 0

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YTD WNV Activity by Element and County, 2024					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			4	1	
San Diego			2		
San Mateo			2		
Santa Clara			3		
Totals			11	1	

TESTING SUMMARIES

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

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Dead Birds	Week	4 / 11					
	YTD	11 / 67					
Chicken Sera	Week	0 / 0	0 / 0	0 / 0			
	YTD	0 / 0	0 / 0	0 / 0			
Mosquito Pools	Week	0 / 247	0 / 247	0 / 247	0 / 22	0 / 22	0 / 22
	YTD	1 / 1,921	0 / 1,824	0 / 1,824	0 / 91	0 / 91	0 / 91

POSITIVES

Dead birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Alameda	94501	American Crow	3/25/2024	WNV
Alameda	Alameda Co MAD	Alameda	94501	Unknown - Crow or Raven	4/4/2024	WNV
Alameda	Alameda Co MAD	Union City	94587	American Crow	1/11/2024	WNV
Alameda	Alameda Co MAD	Union City	94587	Unknown - Crow or Raven	3/4/2024	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	1/17/2024	WNV
San Diego	San Diego Co VCP	Escondido	92027	Common Raven	3/2/2024	WNV
San Mateo	San Mateo Co MVCD	Foster City	94404	American Crow	1/18/2024	WNV
San Mateo	San Mateo Co MVCD	Foster City	94404	American Crow	2/20/2024	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94041	American Crow	1/19/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	3/18/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	3/18/2024	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus
Alameda	ALCO 7071	31609	Cx tarsalis	Union City	5	CO2	3/8/2024	WNV

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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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