

California Arbovirus Surveillance Bulletin #1

Week 15 Friday, April 14, 2023



WEEKLY UPDATE

Humans

No human infections have been reported in 2023.

2022 Final Summary

West Nile virus (WNV): In 2022, a total of 209 symptomatic and 14 asymptomatic infections with WNV were reported from 28 counties. Of the 209 symptomatic cases, 164 (78%) had neuroinvasive disease and 14 (6.7%) fatalities were reported. The median age of all cases was 61 years and 131 (63%) were male. Dates of symptom onset ranged from April 11 to December 8, 2022.

St. Louis encephalitis virus (SLEV): In 2022, 14 SLEV human cases were reported from 7 counties. Of the 14 cases, 11 (79%) cases had neuroinvasive disease and 1 fatality was reported. The median age was 66 years and 6 (43%) were male. Dates of symptom onset ranged from May 31 to October 18, 2022.

Dead Birds

No positive dead birds have been reported in 2023. At this time last year, no dead birds had been reported positive.

Mosquito Pools

No new positives were reported this week. In 2023, 2 WNV positive mosquito pools have been reported from Alameda (1) and Los Angeles (1) counties. At this time last year, 2 WNV positive mosquito pools had been reported from 2 counties.

Sentinel Chickens

No seroconversions have been reported in 2023.

2022 & 2023 YTD West Nile Virus Comparisons		
	2022	2023
Total No. Dead Bird Reports	686	917
No. Positive Counties	2	2
No. Human Cases	0	0
No. Positive Dead Birds / No. Tested	0 / 96	0 / 36
No. Positive Mosquito Pools / No. Tested	2 / 1,716	2 / 1,177
No. Seroconversions / No. Tested	0 / 65	0 / 0

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YTD WNV Activity by Element and County, 2023					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda				1	
Los Angeles				1	
Totals				2	

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	0 / 1					
	YTD	0 / 36					
Chicken Sera	Week	0 / 0	0 / 0	0 / 0			
	YTD	0 / 0	0 / 0	0 / 0			
Mosquito Pools	Week	0 / 281	0 / 281	0 / 281	0 / 0	0 / 0	0 / 0
	YTD	2 / 1,177	0 / 1,176	0 / 1,176	0 / 4	0 / 4	0 / 4

POSITIVES

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus
Alameda	ALCO 676572	29501	Cx. tarsalis	Union City	15	CO2	1/25/23	WNV
Los Angeles	LACW 1007	3	Culiseta incidens	Baldwin Hills	23	CO2	1/19/23	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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