

California Arbovirus Surveillance Bulletin #1

Week 14 Friday, April 8, 2022



Weekly Update

Humans

No human infections have been reported in 2022.

2021 Final Summary

In 2021, a total of 128 symptomatic and 19 asymptomatic infections with West Nile virus (WNV) were reported from 28 counties. Of the 128 symptomatic cases, 96 (75%) had neuroinvasive disease and 12 (9.4%) fatalities were reported. The median age of all cases was 59 years and 80 (63%) were male. Dates of symptom onset ranged from March 31 to November 27, 2021.

Four cases of St. Louis encephalitis virus (SLEV) disease were also reported from four counties in 2021. All cases presented with neuroinvasive disease and no fatalities were reported. The median age was 68 years and two (50%) were male. Dates of symptom onset ranged from August 3 to November 15.

Dead Birds

No positive dead birds have been reported in 2022.

Mosquito Pools

No new positives were reported this week. In 2022, two WNV positive mosquito pools have been reported from Orange (1) and Riverside (1) counties. At this time last year, no positive mosquito pools had been reported.

Sentinel Chickens

No seroconversions have been reported in 2022.

2021 & 2022 YTD West Nile Virus Comparisons		
	2021	2022
Total # Dead Bird Reports	1,038	624
# Positive Counties	0	2
# Human Cases	0	0
# Positive Dead Birds / # Tested	0 / 109	0 / 95
# Positive Mosquito Pools / # Tested	0 / 1,120	2 / 1,412
# Seroconversions / # Tested	0 / 64	0 / 65

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TESTING SUMMARIES

Humans

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

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	5	0
	YTD	94	0

Sentinel Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	0	0	0	0
	YTD	65	0	0	0

Mosquito Pools

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	0 / 241	0 / 241	0 / 241	0 / 0	0 / 0	0 / 0
	YTD	2 / 1,412	0 / 1,355	0 / 1,355	0 / 0	0 / 0	0 / 0

YTD WNV Activity by Element and County, 2022

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Orange				1	
Riverside				1	
Totals	0	0	0	2	0

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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 Vectorborne Disease Surveillance System website, <https://maps.vectorsurv.org>.

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