

California Arbovirus Surveillance Bulletin #33

Week 47 Friday, Nov 22, 2024



WEEKLY UPDATE

Humans

West Nile virus

A total of 5 new human cases of West Nile virus (WNV) disease were reported this week from 3 counties: Fresno (1), Kern (3), and Kings (1). In 2024, 117 human cases of WNV disease were reported from 23 counties. Of the 117 cases, 90 (77%) had neuroinvasive disease and 12 (10%) were fatal. The median age of the case-patients was 60 years and 76 (65%) of the case-patients were male. The dates of symptom onset ranged from May 28 to October 17. In addition to the 117 cases of WNV disease, 16 asymptomatic WNV-positive blood donors have been reported from 7 counties: Butte (1), Contra Costa (1), Fresno (3), Los Angeles (6), San Bernardino (2), Santa Clara (2), and Stanislaus (1). At this time last year, 343 human cases of WNV disease had been reported from 35 counties.

St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 16 human cases of SLEV disease had been reported from 9 counties.

Dengue virus

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 2 new WNV positive dead birds were reported this week from 2 counties: Riverside (1) and Tulare (1). **This is the first WNV positive dead bird reported from Tulare County this year.** In 2024, 533 WNV positive dead birds have been reported from 22 counties. At this time last year, 849 WNV positive dead birds had been reported from 31 counties.

Mosquito Pools

West Nile virus

No new WNV positive mosquito pools were reported this week. In 2024, 2,003 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 4,512 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, 728 SLEV positive mosquito pools had been reported from 15 counties.

Sentinel Chickens

No new WNV positive sentinel chickens were reported this week. In 2024, 158 WNV positive sentinel chickens have been reported from 16 counties. At this time last year, 187 WNV positive sentinel chickens had been reported from 17 counties.

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Week 47 Friday, Nov 22, 2024

2023 & 2024 YTD West Nile Virus Comparisons		
	2023	2024
Total No. Dead Bird Reports	6,609	6,290
No. Positive Counties	42	32
No. Human Cases	343	117
No. Positive Dead Birds / No. Tested	849 / 1,953	533 / 1,777
No. Positive Mosquito Pools / No. Tested	4,512 / 52,375	2,003 / 47,990
No. Seroconversions / No. Tested	187 / 3,704	158 / 4,757

YTD WNV Activity by Element and County, 2024					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			53	20	2
Butte	11		4	70	28
Calaveras	1				
Colusa	1		1		2
Contra Costa	3		6	10	8
Fresno	15		1	208	
Glenn	1				
Imperial				3	
Kern	12			48	
Kings	6			87	
Lake			3	13	7
Los Angeles	20	1	17	205	41
Madera			1	110	
Merced	3		1	44	12
Nevada					1
Orange	1		1	52	
Placer		1	4	93	
Riverside	4		4	217	
Sacramento	5	1	66	53	1
San Bernardino	5		10	76	
San Diego	2	1	7		
San Joaquin	2	1	6	188	
San Mateo			36		
Santa Clara	3		301	34	
Shasta	1			37	2
Solano			2	13	8
Stanislaus	5			56	
Sutter				32	20
Tehama	2	1			6
Tulare	1		1	236	10
Yolo	9		6	66	3
Yuba	4	1	2	32	7
Totals	117	7	533	2,003	158

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Week 47 Friday, Nov 22, 2024

TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	5	0	
	YTD	117	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	2 / 11
	YTD	533 / 1,777

Chicken Sera	Week	0 / 23	0 / 23	0 / 23
	YTD	158 / 4,757	0 / 4,757	0 / 4,757

Mosquito Pools	Week	0 / 135	0 / 135	0 / 135	0 / 10	0 / 10	0 / 10
	YTD	2,003 / 47,990	34 / 44,342	0 / 44,365	0 / 1,415	0 / 1,415	0 / 1,415

POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Riverside	Northwest Mosquito VCD	Riverside	92506	House Finch	11/8/2024	WNV
Tulare	Central CAHFS	Exeter	93221	Macaw	10/26/2024	WNV

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Week 47 Friday, Nov 22, 2024

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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