

## California Arbovirus Surveillance Bulletin #29

Week 43 Friday, October 25, 2024



### WEEKLY UPDATE

#### Humans

##### West Nile virus

A total of 9 new human cases of West Nile virus (WNV) disease were reported this week from 4 counties: Kern (4), Los Angeles (2), Sacramento (2), and Tulare (1). **This is the first WNV positive human case from Tulare County this year.** In 2024, 98 human cases of WNV disease were reported from 23 counties. Of the 98 cases, 75 (77%) had neuroinvasive disease and 11 (11%) were fatal. The median age of the case-patients was 59 years and 63 (64%) of the case-patients were male. The dates of symptom onset ranged from May 28 to October 7. In addition to the 98 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, 286 human cases of WNV disease had been reported from 32 counties.

##### St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 8 human cases of SLEV disease had been reported from 5 counties.

##### Dengue virus

In 2024, there have been 9 locally acquired dengue infections reported from 2 counties: Los Angeles (8) and San Diego (1). 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 from 2 counties: San Diego (1) and San Mateo (1). In 2024, 507 WNV positive dead birds have been reported from 21 counties. At this time last year, 843 WNV positive dead birds had been reported from 31 counties.

#### Mosquito Pools

##### West Nile virus

A total of 6 new WNV positive mosquito pools were reported from 1 county: Los Angeles (6). In 2024, 1,996 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 4,424 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, 727 SLEV positive mosquito pools had been reported from 15 counties.

#### Sentinel Chickens

A total of 2 new WNV positive sentinel chickens were reported this week from 1 county: Solano (2). In 2024, 157 WNV positive sentinel chickens have been reported from 16 counties. At this time last year, 185 WNV positive sentinel chickens had been reported from 17 counties.

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<b>2023 &amp; 2024 YTD West Nile Virus Comparisons</b>		
	<b>2023</b>	<b>2024</b>
Total No. Dead Bird Reports	6,290	5,977
No. Positive Counties	42	32
No. Human Cases	286	98
No. Positive Dead Birds / No. Tested	843 / 1,927	507 / 1,731
No. Positive Mosquito Pools / No. Tested	4,424 / 50,830	1,996 / 46,340
No. Seroconversions / No. Tested	185 / 3,498	157 / 4,513

<b>YTD WNV Activity by Element and County, 2024</b>					
<b>County</b>	<b>Humans</b>	<b>Horses</b>	<b>Dead Birds</b>	<b>Mosquito Pools</b>	<b>Sentinel Chickens</b>
Alameda			53	20	1
Butte	11		4	70	28
Calaveras	1				
Colusa	1		1		2
Contra Costa	3		6	10	8
Fresno	11		1	208	
Glenn	1				
Imperial				3	
Kern	9			48	
Kings	5			87	
Lake			3	13	7
Los Angeles	13	1	17	202	41
Madera			1	110	
Merced	2		1	44	12
Nevada					1
Orange	1		1	48	
Placer		1	4	93	
Riverside	4		3	217	
Sacramento	5	1	66	53	1
San Bernardino	4		10	76	
San Diego	2	1	5		
San Joaquin	2	1	6	188	
San Mateo			36		
Santa Clara	3		279	34	
Shasta	1			37	2
Solano			2	13	8
Stanislaus	5			56	
Sutter				32	20
Tehama	1	1			6
Tulare	1			236	10
Yolo	8		6	66	3
Yuba	4	1	2	32	7
<b>Totals</b>	<b>98</b>	<b>7</b>	<b>507</b>	<b>1,996</b>	<b>157</b>

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**TESTING SUMMARIES**

		WNV	SLEV	WEEV
<b>Human Cases</b>	Week	9	0	0
	YTD	98	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

<b>Dead Birds</b>	Week	2 / 15
	YTD	507 / 1,731

<b>Chicken Sera</b>	Week	2 / 109	0 / 109	0 / 109
	YTD	157 / 4,513	0 / 4,513	0 / 4,513

<b>Mosquito Pools</b>	Week	6 / 536	0 / 536	0 / 536	0 / 80	0 / 80	0 / 80
	YTD	1,996 / 46,340	34 / 42,963	0 / 42,986	0 / 1,229	0 / 1,229	0 / 1,229

**POSITIVES**

**Dead Birds**

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
San Diego	San Diego Co VCP	San Diego	92111	American Crow	10/23/2024	WNV
San Mateo	San Mateo Co MVCD	Atherton	94027	Unknown - Crow or Raven	10/21/2024	WNV

**Mosquito Pools**

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Los Angeles	GRLA 2383	852	Cx quinquefasciatus	Whittier	50	GRVD	10/17/2024	WNV
Los Angeles	GRLA 3045	851	Cx quinquefasciatus	Whittier	33	GRVD	10/17/2024	WNV
Los Angeles	GRLA 3069	6026	Cx quinquefasciatus	Valley Village	31	GRVD	10/16/2024	WNV
Los Angeles	GRLA 3086	6034	Cx quinquefasciatus	Highland Park	50	GRVD	10/17/2024	WNV
Los Angeles	GRLA 3102	6024	Cx quinquefasciatus	Studio City	50	GRVD	10/16/2024	WNV
Los Angeles	LACW 1054	1012	Cx quinquefasciatus	Inglewood	43	CO2	10/10/2024	WNV

**Sentinel Chickens**

Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02
SOLA 148	Fairfield	10/21/2024	WNV	3258	3264

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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).

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#### **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.

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#### **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.

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#### **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.

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*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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