

## California Arbovirus Surveillance Bulletin #25

Week 41 Friday, October 15, 2021



### Weekly Update

#### **Humans**

##### West Nile virus

A total of 5 human cases of West Nile virus (WNV) illness were reported this week from 4 counties: Contra Costa (1), Kings (2), Riverside (1), and Stanislaus (1). **This is the first WNV case reported from Riverside County this year.** In 2021, a total of 75 WNV human cases have been reported from 21 counties. Of the 75 cases, 57 (76%) had neuroinvasive illness and 6 (8.0%) were fatal. The median age of the cases was 59 years, and 45 (60%) were male. Dates of symptom onset ranged from March 31 to September 27. In addition to the 75 cases, 14 asymptomatic WNV infections have been reported from Butte (1), Fresno (1), Kern (2), Kings (2), Los Angeles (3), Madera (1), Merced (1), San Bernardino (1), San Joaquin (1), and Stanislaus (1) counties. At this time last year, 114 WNV cases had been reported from 20 counties.

##### St. Louis encephalitis virus

No new cases were reported this week. In 2021, one human case of St. Louis encephalitis virus (SLEV) disease has been reported from Fresno County. At this time last year, one SLEV case had been reported from one county.

#### **Dead Birds**

A total of 2 WNV positive dead birds were reported this week from 2 counties: Los Angeles (1), and Yolo (1). In 2021, 207 WNV positive dead birds have been reported from 19 counties. At this time last year, 277 WNV positive dead birds had been reported from 19 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 24 WNV positive mosquito pools were reported this week from 9 counties: Los Angeles (12), Madera (2), Merced (1), Sacramento (2), San Joaquin (1), Solano (1), Sonoma (1), Stanislaus (2), and Tulare (2). In 2021, 2,247 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 2,475 WNV positive mosquito pools had been reported from 27 counties.

##### St. Louis encephalitis virus

One SLEV positive mosquito pool was reported this week from Madera County. In 2021, 44 SLEV positive mosquito pools have been reported from 8 counties: Fresno (7), Imperial (3), Kings (1), Madera (3), Merced (2), Riverside (22), Stanislaus (2), and Tulare (4). At this time last year, 493 SLEV positive mosquito pools had been reported from 9 counties.

#### **Sentinel Chickens**

##### West Nile virus

A total of 4 WNV positive chickens were reported this week from 2 counties: Los Angeles (3) and Sacramento (1). **These are the first WNV positive chickens reported from Los Angeles and Sacramento counties this year.** In 2021, 87 WNV positive chickens have been reported from 12 counties. At this time last year, 121 WNV positive chickens had been reported from 15 counties.

##### St. Louis encephalitis virus

No SLEV positive chickens were reported this week. In 2021, 2 SLEV positive chickens have been reported from Merced County. At this time last year, no SLEV positive chickens had been reported.

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<b>YTD WNV Activity by Element and County, 2021</b>					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			2		
Amador		1			
Butte	13		2	80	26
Colusa					1
Contra Costa	2		2	8	
Fresno	4	2		218	
Glenn	2				
Kern	3			103	
Kings	3	1		34	
Lake				4	4
Los Angeles	11		43	254	3
Madera	3			131	
Merced	5	1	1	10	19
Napa				1	
Nevada			2		
Orange	1		7	48	
Placer	2		5	63	
Riverside	1			107	
Sacramento		2	100	119	1
San Bernardino	1		1	9	
San Diego	2				
San Joaquin	2	3	17	389	
San Luis Obispo	2				
Santa Clara			1	4	
Shasta	3			28	3
Solano	1		2	22	
Sonoma			1	2	
Stanislaus	6	1	2	152	
Sutter			1	18	11
Tehama					5
Tulare	7		7	375	8
Ventura			1		
Yolo	1		10	56	4
Yuba		2		12	2
<b>Totals</b>	<b>75</b>	<b>13</b>	<b>207</b>	<b>2,247</b>	<b>87</b>

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2020 & 2021 YTD West Nile Virus Comparisons		
	2020	2021
Total # Dead Bird Reports	4,961	4,729
# Positive Counties	35	34
# Human Cases	114	75
# Positive Dead Birds / # Tested	277 / 1,366	207 / 1,586
# Positive Mosquito Pools / # Tested	2,475 / 35,284	2,247 / 36,098
# Seroconversions / # Tested	121 / 5,555	87 / 5,216

### TESTING SUMMARIES

#### Humans

		WNV	SLEV	WEEV
Human Cases	Week	5	0	0
	YTD	75	1	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	44	2
	YTD	1,586	207

#### Sentinel Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	150	4	0	0
	YTD	5,216	87	2	0

#### Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	24 / 959	1 / 882	0 / 845	0 / 0	0 / 0	0 / 0
	YTD	2,247 / 36,098	44 / 33,305	0 / 30,624	0 / 665	0 / 665	0 / 665

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### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	San Gabriel Valley MVCD	Pasadena	Pasadena	Finch	10/14/2021	WNV
Yolo	Sacramento-Yolo MVCD	Davis	Davis	American Crow	10/7/2021	WNV

#### Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Los Angeles	GRLA2194	704	Cx. quinquefasciatus	South El Monte	46	GRVD	10/5/2021	WNV
Los Angeles	GRLA2228	706	Cx. quinquefasciatus	Diamond Bar	32	GRVD	10/5/2021	WNV
Los Angeles	GRLA2650	5749	Cx. quinquefasciatus	Sepulveda Basin	31	GRVD	10/5/2021	WNV
Los Angeles	GRLA3042	705	Cx. quinquefasciatus	Hacienda Heights	37	GRVD	10/5/2021	WNV
Los Angeles	GRLA3086	5756	Cx. quinquefasciatus	Highland Park	50	GRVD	10/7/2021	WNV
Los Angeles	SGVA1106	1111	Cx. quinquefasciatus	Walnut	50	GRVD	10/12/2021	WNV
Los Angeles	SGVA445	1119	Cx. quinquefasciatus	Rosemead	50	GRVD	10/13/2021	WNV
Los Angeles	SGVA473	1117	Cx. quinquefasciatus	San Gabriel	37	GRVD	10/13/2021	WNV
Los Angeles	SGVA491	1126	Cx. quinquefasciatus	El Monte	50	GRVD	10/13/2021	WNV
Los Angeles	SGVA688	1120	Cx. quinquefasciatus	Alhambra	27	GRVD	10/13/2021	WNV
Los Angeles	SGVA898	1135	Cx. quinquefasciatus	San Gabriel	50	GRVD	10/15/2021	WNV
Los Angeles	SGVA967	1118	Cx. quinquefasciatus	Temple City	33	GRVD	10/13/2021	WNV
Madera	MADR208	545	Cx. tarsalis	Madera	43	CO2	10/7/2021	SLEV
Madera	MADR299	538	Cx. quinquefasciatus	Chowchilla	50	CO2	10/6/2021	WNV
Madera	MADR896	533	Cx. tarsalis	Mendota	50	CO2	10/5/2021	WNV
Merced	MERC201720	644	Cx. pipiens	Hilmar	38	CO2	10/8/2021	WNV
Sacramento	SAYO204051	7105	Cx. pipiens	Citrus Heights	4	CO2	10/8/2021	WNV
Sacramento	SAYO393388	7082	Cx. pipiens	Elk Grove	31	BGSENT	10/8/2021	WNV
San Joaquin	SJCM8056	2524	Cx. tarsalis	Manteca	50	CO2	10/12/2021	WNV
Solano	SOLA100030	398	Cx. tarsalis	Fairfield	50	CO2	10/8/2021	WNV
Sonoma	MARN551	487	Cx. pipiens	Santa Rosa	8	BGSENT	10/14/2021	WNV
Stanislaus	EAST1077	21333	Cx. pipiens	Modesto	10	GRVD	9/22/2021	WNV
Stanislaus	EAST2014	21327	Cx. pipiens	Modesto	46	CO2	9/21/2021	WNV
Tulare	DLTA6408	2942	Cx. quinquefasciatus	Dinuba	34	GRVD	10/7/2021	WNV
Tulare	DLTA8413	2917	Cx. quinquefasciatus	Visalia	42	BGSENT	10/6/2021	WNV

#### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03
Los Angeles	LACW1026	Los Angeles	10/06/2021	WNV	1262	1263	1264
Sacramento	SAYO261013	Isleton	9/29/2021	WNV	1365		

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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, [www.westnile.ca.gov](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.maps.calsurv.org](http://www.maps.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC websites: [www.cdc.gov](http://www.cdc.gov) and [www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

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