

California Arbovirus Surveillance Bulletin #24

Week 40 Friday, October 8, 2021



Weekly Update

Humans

West Nile virus

A total of 8 human cases of West Nile virus (WNV) illness were reported this week from 7 counties: Contra Costa (1), Kern (1), Los Angeles (2), Orange (1), San Bernardino (1), Shasta (1), and Tulare (1). **These are the first WNV cases reported from Orange and San Bernardino counties this year.** In 2021, a total of 70 WNV human cases have been reported from 20 counties. Of the 70 cases, 52 (74%) had neuroinvasive illness and 5 (7.1%) were fatal. The median age of the cases was 59 years, and 43 (61%) were male. Dates of symptom onset ranged from March 31 to September 22. In addition to the 70 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, 93 WNV cases had been reported from 18 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 7 WNV positive dead birds were reported this week from 5 counties: Alameda (1), Los Angeles (1), Nevada (1), Orange (3), and Placer (1). In 2021, 205 WNV positive dead birds have been reported from 19 counties. At this time last year, 273 WNV positive dead birds had been reported from 19 counties.

Mosquito Pools

West Nile virus

A total of 33 WNV positive mosquito pools were reported this week from 11 counties: Fresno (3), Kings (2), Los Angeles (12), Madera (1), Merced (2), Orange (2), San Joaquin (3), Santa Clara (1), Stanislaus (2), Tulare (3), and Yolo (2). In 2021, 2,224 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 2,388 WNV positive mosquito pools had been reported from 27 counties.

St. Louis encephalitis virus

A total of 7 SLEV positive mosquito pools were reported this week from 4 counties: Fresno (1), Madera (1), Merced (1), and Riverside (4). In 2021, 43 SLEV positive mosquito pools have been reported from 8 counties: Fresno (7), Imperial (3), Kings (1), Madera (2), Merced (2), Riverside (22), Stanislaus (2), and Tulare (4). At this time last year, 473 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 3 counties: Colusa (1), Shasta (2), and Yuba (1). **This is the first detection of WNV activity in Colusa County this year.** In 2021, 83 WNV positive chickens have been reported from 10 counties. At this time last year, 115 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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YTD WNV Activity by Element and County, 2021					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			2		
Amador		1			
Butte	13		2	80	26
Colusa					1
Contra Costa	1		2	8	
Fresno	4	2		218	
Glenn	2				
Kern	3			103	
Kings	1	1		34	
Lake				4	4
Los Angeles	11		42	242	
Madera	3			129	
Merced	5	1	1	9	19
Napa				1	
Nevada			2		
Orange	1		7	48	
Placer	2		5	63	
Riverside				107	
Sacramento		2	100	117	
San Bernardino	1		1	9	
San Diego	2				
San Joaquin	2	3	17	388	
San Luis Obispo	2				
Santa Clara			1	5	
Shasta	3			28	3
Solano	1		2	21	
Sonoma			1	1	
Stanislaus	5	1	2	150	
Sutter			1	18	11
Tehama					5
Tulare	7		7	373	8
Ventura			1		
Yolo	1		9	56	4
Yuba		2		12	2
Totals	70	13	205	2,224	83

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2020 & 2021 YTD West Nile Virus Comparisons		
	2020	2021
Total # Dead Bird Reports	4,808	4,629
# Positive Counties	35	34
# Human Cases	93	70
# Positive Dead Birds / # Tested	273 / 1,349	205 / 1,542
# Positive Mosquito Pools / # Tested	2,388 / 35,284	2,224 / 35,139
# Seroconversions / # Tested	115 / 5,409	83 / 5,066

TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	8	0	0
	YTD	70	1	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	122	7
	YTD	1,542	205

Sentinel Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	142	4	0	0
	YTD	5,066	83	2	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	33 / 1,413	7 / 1,254	0 / 1,148	0 / 28	0 / 28	0 / 28
	YTD	2,224 / 35,139	43 / 32,423	0 / 29,779	0 / 665	0 / 665	0 / 665

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NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Livermore	94551	Unknown - Crow or Raven	9/30/2021	WNV
Los Angeles	San Gabriel Valley MVCD	South Pasadena	91030	American Crow	10/5/2021	WNV
Nevada	Nevada Co Env Health - Nevada City	Grass Valley	95949	Steller's Jay	9/22/2021	WNV
Orange	Orange Co VCD	Anaheim	92806	American Crow	9/22/2021	WNV
Orange	Orange Co VCD	Rancho Santa Margarita	92688	Cooper's Hawk	9/25/2021	WNV
Orange	Orange Co VCD	San Clemente	92672	Orange-Crowned Warbler	9/26/2021	WNV
Placer	Placer MVCD	Roseville	95747	California Scrub-Jay	9/30/2021	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1616	326	Cx. quinquefasciatus	Fresno	50	GRVD	9/28/2021	WNV
Fresno	CNSL6339	328	Cx. quinquefasciatus	Riverdale	50	GRVD	9/29/2021	WNV
Fresno	FRNO263	594	Cx. quinquefasciatus	Fresno	21	GRVD	10/6/2021	WNV
Fresno	FRWS3104	349	Cx. tarsalis	Firebaugh	18	CO2	10/5/2021	SLEV
Kings	KNGS3020	202	Cx. tarsalis	Corcoran	50	CO2	9/29/2021	WNV
Kings	KNGS4406	212	Cx. tarsalis	Lemoore	14	CO2	10/1/2021	WNV
Los Angeles	GRLA2097	685	Cx. quinquefasciatus	La Mirada	19	GRVD	9/30/2021	WNV
Los Angeles	GRLA2278	682	Cx. quinquefasciatus	Long Beach	41	GRVD	9/29/2021	WNV
Los Angeles	GRLA2955	694	Cx. quinquefasciatus	Cerritos	46	BGSENT	9/30/2021	WNV
Los Angeles	GRLA2957	678	Cx. quinquefasciatus	Hawaiian Gardens	25	GRVD	9/29/2021	WNV
Los Angeles	GRLA3060	687	Cx. quinquefasciatus	Norwalk	38	GRVD	9/30/2021	WNV
Los Angeles	SGVA1022	1095	Cx. quinquefasciatus	Azusa	50	GRVD	10/6/2021	WNV
Los Angeles	SGVA25	1059	Cx. quinquefasciatus	Baldwin Park	50	GRVD	10/5/2021	WNV
Los Angeles	SGVA34	1063	Cx. quinquefasciatus	Arcadia	25	GRVD	10/5/2021	WNV
Los Angeles	SGVA4	1065	Cx. quinquefasciatus	Arcadia	38	GRVD	10/5/2021	WNV
Los Angeles	SGVA445	1082	Cx. quinquefasciatus	Rosemead	36	GRVD	10/5/2021	WNV
Los Angeles	SGVA448	1091	Cx. quinquefasciatus	La Verne	31	GRVD	10/6/2021	WNV
Los Angeles	SGVA956	1061	Cx. quinquefasciatus	Walnut	32	GRVD	10/5/2021	WNV
Madera	MADR189	515	Cx. tarsalis	Firebaugh	50	CO2	9/30/2021	SLEV
Madera	MADR299	501	Cx. tarsalis	Chowchilla	50	CO2	9/28/2021	WNV
Merced	MERC179615	593	Cx. tarsalis	Los Banos	45	CO2	10/1/2021	WNV
Merced	MERC383434	603	Cx. pipiens	Atwater	8	BGSENT	10/5/2021	WNV
Merced	MERC666518	615	Cx. pipiens	Atwater	50	CO2	10/6/2021	SLEV
Orange	ORCO1008	4404	Cx. quinquefasciatus	Fullerton	42	GRVD	10/5/2021	WNV
Orange	ORCO319	4486	Cx. quinquefasciatus	Buena Park	10	BGSENT	10/5/2021	WNV
Riverside	COAV115	4832	Cx. tarsalis	North Shore	48	CO2	10/5/2021	SLEV
Riverside	COAV46	4834	Cx. tarsalis	Mecca	50	CO2	10/5/2021	SLEV
Riverside	COAV58	4846	Cx. tarsalis	North Shore	50	CO2	10/5/2021	SLEV
Riverside	COAV608	4666	Cx. tarsalis	Mecca	35	CO2	10/5/2021	SLEV
San Joaquin	SJCM8094	2450	Cx. tarsalis	Manteca	17	CO2	10/5/2021	WNV
San Joaquin	SJCM8094	2451	Cx. pipiens	Manteca	50	CO2	10/5/2021	WNV

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San Joaquin	SJCM8235	2502	Cx. pipiens	Escalon	42	CO2	10/7/2021	WNV
Santa Clara	STCL3413	4725	Cx. tarsalis	San Jose	4	CO2	8/8/2021	WNV
Stanislaus	TRLK1904	1207	Cx. pipiens	Turlock	24	CO2	10/7/2021	WNV
Stanislaus	TRLK21252	1167	Cx. pipiens	Denair	50	CO2	9/30/2021	WNV
Tulare	DLNO60	181	Cx. tarsalis	Delano	50	CO2	9/30/2021	WNV
Tulare	DLTA841543	2856	Cx. quinquefasciatus	Visalia	50	CO2	10/6/2021	WNV
Tulare	TLRE202413	303	Cx. quinquefasciatus	Tulare	50	GRVD	9/22/2021	WNV
Yolo	SAYO115008	6951	Cx. tarsalis	Woodland	50	CO2	10/5/2021	WNV
Yolo	SAYO146002	6965	Cx. tarsalis	Davis	50	CO2	10/5/2021	WNV

Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02
Colusa	CLSA0001	Colusa	9/28/2021	WNV	1032	
Shasta	SHAS9702	Millville	10/1/2021	WNV	1173	1175
Yuba	SUYA0010	Olivehurst	9/30/2021	WNV	1610	

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, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.maps.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and www.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html

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