

California Arbovirus Surveillance Bulletin #27

Week 42 Friday, October 16, 2020



Weekly Update

Humans

West Nile virus

A total of 9 human cases of West Nile virus (WNV) illness were reported this week from 6 counties: Contra Costa (1), Kern (1), Madera (1), Orange (4), Tulare (1), and Yolo (1). In 2020, a total of 123 human WNV cases have been reported from 20 counties. Of the 123 cases, 89 (72%) had neuroinvasive illness and 5 (4.1%) were fatal. The median age of the individuals was 60 years, and 76 (62%) were male. Dates of symptom onset ranged from June 2 to September 30. In addition to the 123 cases, 12 asymptomatic WNV infections have been reported from Fresno (2), Los Angeles (3), Merced (1), Orange (1), Sacramento (2), San Joaquin (1), and Stanislaus (2) counties. At this time last year, 158 human WNV cases had been reported from 20 counties.

St. Louis encephalitis virus

No new cases were reported this week. In 2020, one human SLEV case has been reported from one county (Madera). At this time last year, five human SLEV cases had been reported from three counties.

Dead Birds

A total of 37 WNV positive dead birds were reported this week from 9 counties: Alameda (3) Alpine (1), Butte (1), Contra Costa (2), Los Angeles (23), Orange (1), Sacramento (2), Solano (2), and Tulare (2). **This is the first detection of WNV in Alpine County this year.** In 2020, a total of 314 WNV positive dead birds have been reported from 20 counties. At this time last year, 202 WNV positive dead birds had been reported from 21 counties.

Mosquito Pools

West Nile virus

A total of 59 WNV positive mosquito pools were reported this week from 12 counties: Contra Costa (1), Fresno (1), Kern (1), Los Angeles (17), Merced (1), Orange (28), Riverside (1), Sacramento (1), San Bernardino (1), San Joaquin (4), Tulare (2), and Yolo (1). In 2020, a total of 2,534 WNV positive mosquito pools have been reported from 27 counties. At this time last year, 3,262 WNV positive mosquito pools had been reported from 24 counties.

St. Louis encephalitis virus

A total of 11 SLEV positive mosquito pools were reported this week from 3 counties: Fresno (7), Kern (2), and Tulare (2). In 2020, a total of 504 SLEV positive mosquito pools have been reported from 9 counties: Fresno (227), Imperial (10), Kern (31), Kings (11), Madera (17),

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Riverside (159), San Joaquin (2), Stanislaus (2), and Tulare (45). At this time last year, 350 SLEV positive mosquito pools had been reported from 12 counties.

Sentinel Chickens

A total of 2 WNV positive chickens were reported this week from Sutter County. In 2020, a total of 123 chickens have tested positive for WNV from 15 counties. At this time last year, 130 WNV positive chickens had been reported from 16 counties.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	5,047	5,112
# Positive Counties	33	37
# Human Cases	158	123
# Positive Dead Birds / # Tested	202 / 1,639	314 / 1,431
# Positive Mosquito Pools / # Tested	3,262 / 41,193	2,534 / 37,674
# Seroconversions / # Tested	130 / 8,181	123 / 5,786

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YTD WNV Activity by Element and County, 2020					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			5		
Alpine			1		
Amador		1			
Butte	4	1	4	28	23
Contra Costa	3		19	13	4
El Dorado	1				
Fresno	6		5	317	
Glenn	1	1		3	2
Imperial				3	
Kern	2			83	
Kings	1	1		87	
Lake				12	2
Los Angeles	34		94	384	25
Madera	6			77	
Marin			1		
Merced	9	1	2	42	14
Modoc		1			
Napa			1	2	
Nevada		1			
Orange	10		39	298	
Placer	1		2	58	
Riverside	3	2	2	63	
Sacramento	1		88	115	4
San Benito					1
San Bernardino		1		13	
San Diego	1			2	
San Joaquin		3	4	258	
San Mateo			1		
Santa Clara			6	8	
Shasta				25	3
Solano			3	8	3
Stanislaus	32	3	4	350	
Sutter	1			20	26
Tehama	1				5
Tulare	4		5	186	9
Yolo	2		28	77	1
Yuba				2	1
Totals	123	16	314	2,534	123

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TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	9	0	0
	YTD	123	1	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	70	37
	YTD	1,431	314

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	231	2	0	0
	YTD	5,786	123	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	59 / 1,195	11 / 1,048	0 / 902	0 / 47	0 / 47	0 / 47
		YTD	2,534 / 37,674	504 / 37,527	0 / 32,991	0 / 556	0 / 556	0 / 556

NEW POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Livermore	94551	American Crow	9/23/20	WNV
Alameda	Alameda Co MAD	Livermore	94550	American Crow	10/2/20	WNV
Alameda	Alameda Co MAD	Livermore	94550	American Crow	10/13/20	WNV
Alpine	Alpine Co Health Dept	Bear Valley	95223	California Scrub-Jay	9/24/20	WNV
Butte	Butte Co MVCD	Chico	95928	American Crow	9/30/20	WNV
Contra Costa	Contra Costa MVCD	Brentwood	94513	American Crow	9/28/20	WNV
Contra Costa	Contra Costa MVCD	Brentwood	94513	California Scrub-Jay	10/3/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90808	Common Raven	9/21/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90808	American Crow	9/27/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90808	American Crow	9/29/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Artesia	90701	American Crow	9/29/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	10/1/20	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	10/1/20	WNV

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Los Angeles	Greater Los Angeles Co VCD - SFS	Bell Gardens	90201	American Crow	10/2/20	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91040	House Finch	10/2/20	WNV
Los Angeles	Long Beach Animal Control	Long Beach	90814	American Crow	10/7/20	WNV
Los Angeles	Long Beach Health Dept VCP	Long Beach	90808	American Crow	9/30/20	WNV
Los Angeles	Long Beach Health Dept VCP	Long Beach	90815	American Crow	10/6/20	WNV
Los Angeles	Los Angeles Co West VCD	Long Beach	90808	American Crow	9/15/20	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles	90025	American Crow	9/21/20	WNV
Los Angeles	Los Angeles Co West VCD	Burbank	91506	American Crow	9/21/20	WNV
Los Angeles	Los Angeles Co West VCD	El Segundo	90245	American Crow	9/21/20	WNV
Los Angeles	Los Angeles Co West VCD	Santa Monica	90405	American Crow	9/21/20	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles (Westchester)	90045	American Crow	9/25/20	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles	90048	American Crow	9/28/20	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles	90035	American Crow	9/29/20	WNV
Los Angeles	Los Angeles Co West VCD	Los Angeles	90019	American Crow	10/1/20	WNV
Los Angeles	Los Angeles Co West VCD	Lawndale	90260	American Crow	10/5/20	WNV
Los Angeles	San Gabriel Valley MVCD	West Covina	91790	Common Raven	9/28/20	WNV
Los Angeles	Los Angeles Co West VCD	Culver City	90230	American Crow	10/6/20	WNV
Orange	Orange Co VCD	Anaheim	92804	American Crow	9/24/20	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	California Scrub-Jay	10/7/20	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Yellow-billed Magpie	10/7/20	WNV
Solano	Solano Co MAD	Vacaville	95687	American Crow	10/5/20	WNV
Solano	Solano Co MAD	Fairfield	94533	American Crow	10/13/20	WNV
Tulare	Tulare MAD	Tulare	93274	California Scrub-Jay	10/4/20	WNV
Tulare	Delta VCD	Woodlake	93286	California Scrub-Jay	10/14/20	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Contra Costa	CNTR2302	425	Cx. tarsalis	Martinez	50	CO2	10/12/2020	WNV
Fresno	CNSL1446	1631	Cx. quinquefasciatus	Clovis	29	GRVD	10/7/2020	SLEV
Fresno	CNSL1523	1341	Cx. quinquefasciatus	Fresno	41	GRVD	10/8/2020	SLEV
Fresno	CNSL3126	1328	Cx. quinquefasciatus	Reedley	26	GRVD	10/7/2020	SLEV
Fresno	CNSL3349	1628	Cx. quinquefasciatus	Reedley	23	GRVD	10/7/2020	SLEV
Fresno	CNSL6291	1335	Cx. quinquefasciatus	Caruthers	50	GRVD	10/7/2020	WNV
Fresno	CNSL8097	1636	Cx. quinquefasciatus	Fresno	50	GRVD	10/8/2020	SLEV
Fresno	CNSL9127	1332	Cx. quinquefasciatus	Clovis	14	GRVD	10/7/2020	SLEV
Fresno	FRWS3210	426	Cx. tarsalis	Firebaugh	50	CO2	10/8/2020	SLEV
Kern	DLNO111	323	Cx. quinquefasciatus	Delano	50	BGSENT	10/1/2020	WNV
Kern	DLNO93	320	Cx. quinquefasciatus	Delano	50	CO2	9/30/2020	SLEV
Kern	WEST6304	35	Cx. quinquefasciatus	Taft	50	GRVD	10/14/2020	SLEV
Los Angeles	GRLA2145	695	Cx. quinquefasciatus	Long Beach	41	GRVD	10/6/2020	WNV
Los Angeles	GRLA2194	702	Cx. quinquefasciatus	South El Monte	50	GRVD	10/8/2020	WNV
Los Angeles	GRLA2323	711	Cx. quinquefasciatus	Los Angeles	29	GRVD	10/9/2020	WNV
Los Angeles	GRLA2866	5988	Cx. quinquefasciatus	Studio City	33	GRVD	10/6/2020	WNV
Los Angeles	GRLA2866	5990	Cx. quinquefasciatus	Studio City	28	GRVD	10/6/2020	WNV
Los Angeles	GRLA2866	5991	Cx. quinquefasciatus	Studio City	22	GRVD	10/6/2020	WNV
Los Angeles	GRLA2957	694	Cx. quinquefasciatus	Hawaiian Gardens	30	GRVD	10/6/2020	WNV

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Los Angeles	GRLA3071	714	Cx. quinquefasciatus	East Los Angeles	30	GRVD	10/9/2020	WNV
Los Angeles	GRLA3089	5995	Cx. quinquefasciatus	Glendale	38	GRVD	10/8/2020	WNV
Los Angeles	LACW1009	586	Cx. quinquefasciatus	Los Angeles	38	GRVD	10/6/2020	WNV
Los Angeles	LACW1048	596	Cx. quinquefasciatus	Inglewood	23	CO2	10/8/2020	WNV
Los Angeles	LACW1054	597	Cx. quinquefasciatus	Inglewood	40	CO2	10/8/2020	WNV
Los Angeles	SGVA4	1214	Cx. quinquefasciatus	Arcadia	50	GRVD	10/13/2020	WNV
Los Angeles	SGVA445	1227	Cx. quinquefasciatus	Rosemead	50	GRVD	10/13/2020	WNV
Los Angeles	SGVA450	1208	Cx. quinquefasciatus	La Puente	50	GRVD	10/13/2020	WNV
Los Angeles	SGVA695	1221	Cx. quinquefasciatus	Rosemead	50	GRVD	10/13/2020	WNV
Los Angeles	SGVA967	1223	Cx. quinquefasciatus	Temple City	50	GRVD	10/13/2020	WNV
Merced	MERC252751	620	Cx. pipiens	Atwater	50	BGSENT	9/25/2020	WNV
Orange	ORCO1009	4613	Cx. quinquefasciatus	Garden Grove	40	GRVD	10/1/2020	WNV
Orange	ORCO1009	4614	Cx. quinquefasciatus	Garden Grove	29	GRVD	10/1/2020	WNV
Orange	ORCO1009	4615	Cx. quinquefasciatus	Garden Grove	30	GRVD	10/1/2020	WNV
Orange	ORCO1009	4618	Cx. quinquefasciatus	Garden Grove	39	GRVD	10/1/2020	WNV
Orange	ORCO1009	4628	Cx. quinquefasciatus	Garden Grove	34	GRVD	10/1/2020	WNV
Orange	ORCO1011	4590	Cx. quinquefasciatus	La Habra	15	GRVD	9/30/2020	WNV
Orange	ORCO1011	4592	Cx. quinquefasciatus	La Habra	8	BGSENT	9/30/2020	WNV
Orange	ORCO1038	4783	Cx. quinquefasciatus	La Palma	38	GRVD	10/13/2020	WNV
Orange	ORCO1039	4828	Cx. quinquefasciatus	Orange	29	GRVD	10/13/2020	WNV
Orange	ORCO170	4840	Cx. quinquefasciatus	Anaheim	29	GRVD	10/13/2020	WNV
Orange	ORCO209	4601	Cx. quinquefasciatus	Santa Ana	19	CO2	9/30/2020	WNV
Orange	ORCO218	4567	Cx. quinquefasciatus	Anaheim	47	GRVD	9/30/2020	WNV
Orange	ORCO218	4584	Cx. quinquefasciatus	Anaheim	31	GRVD	9/30/2020	WNV
Orange	ORCO218	4606	Cx. quinquefasciatus	Anaheim	35	GRVD	10/1/2020	WNV
Orange	ORCO218	4616	Cx. quinquefasciatus	Anaheim	4	GRVD	10/1/2020	WNV
Orange	ORCO218	4795	Cx. quinquefasciatus	Anaheim	45	GRVD	10/13/2020	WNV
Orange	ORCO218	4820	Cx. quinquefasciatus	Anaheim	36	GRVD	10/13/2020	WNV
Orange	ORCO236	4855	Cx. quinquefasciatus	Garden Grove	50	GRVD	10/13/2020	WNV
Orange	ORCO29	4605	Cx. quinquefasciatus	Santa Ana	16	CO2	9/30/2020	WNV
Orange	ORCO302	4859	Cx. quinquefasciatus	Anaheim	50	GRVD	10/13/2020	WNV
Orange	ORCO303	4852	Cx. quinquefasciatus	Garden Grove	46	GRVD	10/13/2020	WNV
Orange	ORCO304	4798	Cx. quinquefasciatus	Placentia	36	GRVD	10/13/2020	WNV
Orange	ORCO321	4810	Cx. quinquefasciatus	Anaheim	46	GRVD	10/13/2020	WNV
Orange	ORCO324	4789	Cx. quinquefasciatus	Los Alamitos	31	GRVD	10/13/2020	WNV
Orange	ORCO52	4802	Cx. quinquefasciatus	Anaheim	37	GRVD	10/13/2020	WNV
Orange	ORCO68	4602	Cx. quinquefasciatus	San Juan Capistrano	18	CO2	9/30/2020	WNV
Orange	ORCO8	4908	Cx. erythrothorax	Huntington Beach	50	CO2	10/15/2020	WNV
Orange	ORCO82	4830	Cx. quinquefasciatus	Cypress	31	BGSENT	10/13/2020	WNV
Riverside	COAV17	4486	Cx. tarsalis	Mecca	50	CO2	10/14/2020	WNV
Sacramento	SAYO233015	6540	Cx. pipiens	Sacramento	16	GRVD	10/2/2020	WNV
San Bernardino	WVAL4705	2157	Cx. quinquefasciatus	Chino	37	BGSENT	10/15/2020	WNV
San Joaquin	SJCM8029	2564	Cx. pipiens	Farmington	22	CO2	10/15/2020	WNV
San Joaquin	SJCM8100	2572	Cx. tarsalis	Tracy	10	CO2	10/15/2020	WNV
San Joaquin	SJCM8160	2480	Cx. tarsalis	Lodi	50	CO2	10/13/2020	WNV
San Joaquin	SJCM8230	2537	Cx. tarsalis	Thornton	50	CO2	10/13/2020	WNV
Tulare	DLNO19	328	Cx. quinquefasciatus	Ducor	49	GRVD	10/6/2020	WNV
Tulare	TLRE192434	235	Cx. quinquefasciatus	Tulare	50	GRVD	9/29/2020	SLEV
Tulare	TLRE202413	232	Cx. quinquefasciatus	Tulare	39	GRVD	9/29/2020	WNV
Tulare	TLRE202415	228	Cx. quinquefasciatus	Tulare	39	GRVD	9/24/2020	SLEV
Yolo	SAYO137013	6491	Cx. pipiens	West Sacramento	36	GRVD	10/1/2020	WNV

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Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Sutter	SUYA0015	Robbins	10/8/2020	WNV	2480
Sutter	SUYA0020	Meridan	10/8/2020	WNV	2485

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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