

California Arbovirus Surveillance Bulletin #30

Week 45 Friday, November 6, 2020



Weekly Update

Humans

West Nile virus

A total of 5 human cases of West Nile virus (WNV) illness were reported this week from 5 counties: Los Angeles (1), Placer (1), Solano (1), Tehama (1), and Yolo (1). **This is the first WNV case reported from Solano County this year.** In 2020, a total of 160 human WNV cases have been reported from 22 counties. Of the 160 cases, 120 (75%) had neuroinvasive illness and 7 (4.4%) were fatal. The median age of the individuals was 61 years, and 104 (65%) were male. Dates of symptom onset ranged from June 2 to October 19. In addition to the 160 cases, 16 asymptomatic WNV infections have been reported from Fresno (2), Los Angeles (4), Merced (2), Orange (1), Sacramento (2), San Joaquin (1), Stanislaus (3), and Yolo (1) counties. At this time last year, 184 human WNV cases had been reported from 21 counties.

St. Louis encephalitis virus

No new cases were reported this week. In 2020, 3 cases of SLEV disease have been reported from 3 counties: Fresno (1), Madera (1) and San Joaquin (1). Of the three cases, two (67%) had neuroinvasive illness and one (33%) was fatal. At this time last year, six human SLEV cases had been reported from four counties.

Dead Birds

A total of two WNV positive dead birds were reported this week from Los Angeles County. In 2020, a total of 338 WNV positive dead birds have been reported from 20 counties. At this time last year, 211 WNV positive dead birds had been reported from 21 counties.

Mosquito Pools

West Nile virus

A total of five WNV positive mosquito pools were reported this week from Los Angeles County. In 2020, a total of 2,622 WNV positive mosquito pools have been reported from 28 counties. At this time last year, 3,283 WNV positive mosquito pools had been reported from 25 counties.

St. Louis encephalitis virus

One SLEV positive mosquito pool was reported this week from Fresno County. In 2020, a total of 510 SLEV positive mosquito pools have been reported from 9 counties: Fresno (233), Imperial (10), Kern (31), Kings (11), Madera (17), Riverside (159), San Joaquin (2), Stanislaus

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(2), and Tulare (45). At this time last year, 355 SLEV positive mosquito pools had been reported from 12 counties.

Sentinel Chickens

One WNV positive chicken was reported this week from Los Angeles County. In 2020, a total of 139 chickens have tested positive for WNV from 16 counties. At this time last year, 136 WNV positive chickens had been reported from 17 counties.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	5,304	5,424
# Positive Counties	33	39
# Human Cases	184	160
# Positive Dead Birds / # Tested	211 / 1,705	338 / 1,523
# Positive Mosquito Pools / # Tested	3,283 / 42,223	2,622 / 39,723
# Seroconversions / # Tested	136 / 8,840	139 / 6,198

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YTD WNV Activity by Element and County, 2020					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			6		
Alpine			1		
Amador		2			
Butte	4	1	4	28	23
Calaveras					2
Contra Costa	3		22	13	7
El Dorado	1				
Fresno	6		5	322	
Glenn	1	1		3	2
Imperial				3	
Kern	3			83	
Kings	1	1		87	
Lake				12	2
Los Angeles	51		102	431	35
Madera	6			77	
Marin			1		
Merced	12	1	2	42	14
Modoc		1			
Napa			1	2	
Nevada		1			
Orange	14		46	326	
Placer	2		2	58	
Riverside	5	2	2	64	
Sacramento	1		91	115	4
San Benito					1
San Bernardino	2	1		13	
San Diego	1			2	
San Joaquin		4	4	260	
San Mateo			1		
Santa Barbara				1	
Santa Clara			7	8	
Shasta				25	3
Solano	1		3	8	4
Stanislaus	35	3	4	351	
Sutter	1			20	26
Tehama	2				5
Tulare	5		5	189	9
Yolo	3		29	77	1
Yuba				2	1
Totals	160	18	338	2,622	139

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TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	5	0	0
	YTD	160	3	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	24	2
	YTD	1,523	338

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	97	1	0	0
	YTD	6,198	139	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	5 / 436	1 / 434	0 / 412	0 / 71	0 / 71	0 / 71
		YTD	2,622 / 39,723	510 / 39,433	0 / 34,694	0 / 667	0 / 667	0 / 667

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90808	American Crow	10/27/2020	WNV
Los Angeles	San Gabriel Valley MVCD	Monterey Park	91754	American Crow	10/28/2020	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1272	1706	Cx. quinquefasciatus	Clovis	16	GRVD	10/29/2020	SLEV
Los Angeles	GRLA2268	809	Cx. quinquefasciatus	Cerritos	28	GRVD	10/30/2020	WNV
Los Angeles	GRLA2512	6077	Cx. quinquefasciatus	Los Angeles	19	GRVD	10/28/2020	WNV
Los Angeles	GRLA3041	808	Cx. quinquefasciatus	Artesia	50	GRVD	10/30/2020	WNV
Los Angeles	GRLA3048	811	Cx. quinquefasciatus	Pico Rivera	50	GRVD	10/30/2020	WNV
Los Angeles	GRLA3057	798	Cx. quinquefasciatus	Huntington Park	49	GRVD	10/28/2020	WNV

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Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Los Angeles	LACW1004	Lawndale	10/27/2020	WNV	2392

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

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.