

California Arbovirus Surveillance Bulletin #34

Week 47 Friday, November 22, 2019



Weekly Update

Humans

West Nile virus

A total of 2 human cases of West Nile virus (WNV) illness were reported this week from 2 counties: Kings (1) and Los Angeles (1). In 2019, 196 WNV cases have been reported from 23 counties. Of the 196 reported cases, 130 (66%) had neuroinvasive disease and 6 (3.1%) fatalities have been reported. The median age of the individuals is 58 years (range: 10–93 years) and 119 (61%) are male. Dates of symptom onset range from May 12 to October 22. In addition to the 196 cases, 17 asymptomatic infections have also been reported from Butte (1), El Dorado (1), Kern (3), Madera (1), Merced (1), Orange (2), San Bernardino (4), San Joaquin (1), Stanislaus (1), Sutter (1), and Tulare (1) counties. At this time last year, 189 human cases had been reported from 31 counties.

St. Louis encephalitis virus

No new cases were reported this week. In 2019, 6 human cases of St. Louis encephalitis virus (SLEV) disease have been reported from 4 counties: Fresno (2), Kern (1), Imperial (2), and Stanislaus (1). Of the 6 reported cases, 6 (100%) had neuroinvasive disease. The median age of the individuals is 64 years and dates of symptom onset range from July 14 to September 13. No fatalities have been reported. At this time last year, 1 SLEV human case had been reported from 1 county.

Dead Birds

No WNV positive dead birds were reported this week. In 2019, a total of 214 WNV positive dead birds have been reported from 21 counties. At this time last year, 498 WNV positive dead birds had been reported from 21 counties.

Mosquito Pools

West Nile virus

One WNV positive mosquito pool was reported this week from Orange County. In 2019, a total of 3,284 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 1,963 WNV positive mosquito pools had been reported from 29 counties.

St. Louis encephalitis virus

No SLEV positive mosquito pools were reported this week. In 2019, a total of 356 SLEV positive mosquito pools have been reported from 12 counties: Fresno (58), Imperial (5), Kern (56), Kings (4), Los Angeles (2), Madera (5), Merced (2), Orange (3), Riverside (108), San Bernardino (4), Stanislaus (13), and Tulare (96). At this time last year, 387 SLEV positive mosquito pools had been reported from 8 counties.

California Arbovirus Surveillance Bulletin #34

Week 47 Friday, November 22, 2019

Sentinel Chickens

West Nile virus

A total of 3 WNV seroconversions were reported this week from Los Angeles County. In 2019, 139 WNV positive chickens have been reported from 17 counties. At this time last year, 163 WNV positive chickens had been reported from 16 counties.

St. Louis encephalitis virus

No new SLEV seroconversions were reported this week. In 2019, 3 SLEV positive chickens have been reported from 1 county (Merced). At this time last year, 1 SLEV positive chicken had been reported from 1 county.

2018 & 2019 YTD West Nile Virus Comparisons		
	2018	2019
Total # Dead Bird Reports	7,980	5,460
# Positive Counties	41	33
# Human Cases	189	196
# Positive Dead Birds / # Tested	498 / 2,139	214 / 1,739
# Positive Mosquito Pools / # Tested	1,963 / 42,021	3,284 / 42,462
# Seroconversions / # Tested	163 / 10,162	139 / 9,127

California Arbovirus Surveillance Bulletin #34

Week 47 Friday, November 22, 2019

YTD WNV Activity by Element and County, 2019					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Amador	1				
Butte	5		1	44	34
Colusa	1				6
Contral Costa			1	1	2
Fresno	49	2	10	495	
Glenn				1	1
Imperial	3			2	
Kern	23	2	2	128	
Kings	2			63	
Lake				6	
Los Angeles	29		45	94	28
Madera	2	2		85	
Merced	10	1	3	48	16
Orange	5		48	204	
Placer	1		3	53	8
Riverside	10	1	4	524	
Sacramento	2	1	44	74	4
San Benito					1
San Bernardino	5	1	4	52	
San Diego	2		2		
San Joaquin	7	1	5	288	
San Luis Obispo	2				
Santa Clara	1		8		
Shasta			1	3	1
Solano	1			5	4
Stanislaus	16	2	4	203	
Sutter				15	11
Tehama					4
Tulare	17		17	814	10
Tuolumne		1	1		
Ventura	2	1	1	1	3
Yolo			7	59	1
Yuba			3	22	5
Totals	196	15	214	3,284	139

California Arbovirus Surveillance Bulletin #34

Week 47 Friday, November 22, 2019

TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	2	0	0
	YTD	196	6	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	11	0
	YTD	1,739	214

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	169	3	0	0
	YTD	9,127	139	3	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	1 / 146	0 / 95	0 / 95	0 / 7	0 / 7	0 / 7
		YTD	3,284 / 42,462	356 / 38,603	0 / 35,812	0 / 884	0 / 884	0 / 884

POSITIVES

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Orange	ORCO0041	5473	Cx. quinquefasciatus	Anaheim	31	GRVD	11/19/19	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Los Angeles	LACW1003	Redondo Beach	11/14/2019	WNV	1612
Los Angeles	LACW1026	Los Angeles	11/14/2019	WNV	1661
Los Angeles	LACW1073	Los Angeles	11/12/2019	WNV	1674

California Arbovirus Surveillance Bulletin #34

Week 47 Friday, November 22, 2019

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.

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.

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.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and https://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html