

California Arbovirus Surveillance Bulletin #32

Week 47 Friday, November 20, 2020



Weekly Update

Humans

West Nile virus

Two human cases of West Nile virus (WNV) illness were reported this week from Kern (1) and Stanislaus (1) counties. In 2020, a total of 172 human WNV cases have been reported from 22 counties. Of the 172 cases, 130 (76%) had neuroinvasive illness and 7 (4.1%) were fatal. The median age of the individuals was 61 years, and 111 (65%) were male. Dates of symptom onset ranged from June 2 to November 5. In addition to the 172 cases, 20 asymptomatic WNV infections have been reported from Fresno (2), Kern (2), Los Angeles (4), Merced (2), Orange (2), Riverside (1), Sacramento (2), San Joaquin (1), Stanislaus (3), and Yolo (1) counties. At this time last year, 196 human WNV cases had been reported from 23 counties.

St. Louis encephalitis virus

No new cases were reported this week. In 2020, three cases of SLEV disease have been reported from Fresno (1), Madera (1) and San Joaquin (1) counties. 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

One WNV positive dead bird was reported this week from Alameda County. In 2020, a total of 339 WNV positive dead birds have been reported from 20 counties. At this time last year, 214 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 Los Angeles County. In 2020, a total of 2,628 WNV positive mosquito pools have been reported from 28 counties. At this time last year, 3,284 WNV positive mosquito pools had been reported from 25 counties.

St. Louis encephalitis virus

No new SLEV positive mosquito pools were reported this week. 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 (2), and Tulare (45). At this time last year, 356 SLEV positive mosquito pools had been reported from 12 counties.

California Arbovirus Surveillance Bulletin #32

Week 47 Friday, November 20, 2020

Sentinel Chickens

Three WNV positive chickens were reported this week from Los Angeles County. In 2020, a total of 142 chickens have tested positive for WNV from 16 counties. At this time last year, 139 WNV positive chickens had been reported from 17 counties.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	5,460	5,552
# Positive Counties	33	39
# Human Cases	196	172
# Positive Dead Birds / # Tested	214 / 1,739	339 / 1,535
# Positive Mosquito Pools / # Tested	3,284 / 42,462	2,628 / 40,037
# Seroconversions / # Tested	139 / 9,127	142 / 6,325

California Arbovirus Surveillance Bulletin #32

Week 47 Friday, November 20, 2020

YTD WNV Activity by Element and County, 2020					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			7		
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	4			83	
Kings	1	1		87	
Lake				12	2
Los Angeles	60		102	437	38
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	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	1	3	8	4
Stanislaus	37	3	4	351	
Sutter	1			20	26
Tehama	2				5
Tulare	5		5	189	9
Yolo	3		29	77	1
Yuba				2	1
Totals	172	20	339	2,628	142

California Arbovirus Surveillance Bulletin #32

Week 47 Friday, November 20, 2020

TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	2	0	0
	YTD	172	3	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	11	1
	YTD	1,535	339

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	68	3	0	0
	YTD	6,325	142	0	0

Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		1 / 192	0 / 192	0 / 192	0 / 0	0 / 0	0 / 0
		YTD	2,628 / 40,037	510 / 39,747	0 / 35,008	0 / 678	0 / 678

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Oakland	94607	California Towhee	11/10/2020	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Los Angeles	GRLA3057	849	Cx. quinquefasciatus	Huntington Park	50	GRVD	11/13/2020	WNV

Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02
Los Angeles	LACW1009	Los Angeles	11/12/2020	WNV	2337	2340
Los Angeles	LACW1073	Los Angeles	11/10/2020	WNV	2374	

California Arbovirus Surveillance Bulletin #32

Week 47 Friday, November 20, 2020

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.