

## California Arbovirus Surveillance Bulletin #29

Week 44 Friday, October 30, 2020



### Weekly Update

#### **Humans**

##### West Nile virus

A total of 20 human cases of West Nile virus (WNV) illness were reported this week from 6 counties: Kern (1), Los Angeles (13), Merced (2), Orange (1), Riverside (2), and San Bernardino (1). In 2020, a total of 155 human WNV cases have been reported from 21 counties. Of the 155 cases, 116 (75%) had neuroinvasive illness and 7 (4.5%) were fatal. The median age of the individuals was 61 years, and 100 (65%) were male. Dates of symptom onset ranged from June 2 to October 9. In addition to the 155 cases, 14 asymptomatic WNV infections have been reported from Fresno (2), Los Angeles (3), Merced (2), Orange (1), Sacramento (2), San Joaquin (1), and Stanislaus (3) counties. At this time last year, 178 human WNV cases had been reported from 20 counties.

##### St. Louis encephalitis virus

**One human case of St. Louis encephalitis virus (SLEV) disease was reported this week from Fresno County. This is the first case of SLEV disease reported from Fresno County this year.** In 2020, three cases of SLEV disease have been reported from three 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, five human SLEV cases had been reported from three counties.

#### **Dead Birds**

A total of 3 WNV positive dead birds were reported this week from Orange County. In 2020, a total of 336 WNV positive dead birds have been reported from 20 counties. At this time last year, 210 WNV positive dead birds had been reported from 21 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 19 WNV positive mosquito pools were reported this week from 2 counties: Fresno (1) and Los Angeles (18). In 2020, a total of 2,617 WNV positive mosquito pools have been reported from 28 counties. At this time last year, 3,269 WNV positive mosquito pools had been reported from 25 counties.

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### St. Louis encephalitis virus

No new positives were reported this week. In 2020, a total of 509 SLEV positive mosquito pools have been reported from 9 counties: Fresno (232), Imperial (10), Kern (31), Kings (11), Madera (17), Riverside (159), San Joaquin (2), Stanislaus (2), and Tulare (45). At this time last year, 355 SLEV positive mosquito pools had been reported from 12 counties.

### **Sentinel Chickens**

A total of 9 WNV positive chickens were reported this week from 4 counties: Calaveras (2), Contra Costa (3), Los Angeles (3), and Solano (1). **This is the first detection of WNV activity in Calaveras County this year.** In 2020, a total of 138 chickens have tested positive for WNV from 16 counties. At this time last year, 135 WNV positive chickens had been reported from 17 counties.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	5,200	5,343
# Positive Counties	33	39
# Human Cases	178	155
# Positive Dead Birds / # Tested	210 / 1,693	336 / 1,499
# Positive Mosquito Pools / # Tested	3,269 / 41,991	2,617 / 39,287
# Seroconversions / # Tested	135 / 8,642	138 / 6,101

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<b>YTD WNV Activity by Element and County, 2020</b>					
<b>County</b>	<b>Humans</b>	<b>Horses</b>	<b>Dead Birds</b>	<b>Mosquito Pools</b>	<b>Sentinel Chickens</b>
Alameda			6		
Alpine			1		
Amador		1			
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	50		100	426	34
Madera	6			77	
Marin			1		
Merced	12	1	2	42	14
Modoc		1			
Napa			1	2	
Nevada		1			
Orange	14		46	326	
Placer	1		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			3	8	4
Stanislaus	35	3	4	351	
Sutter	1			20	26
Tehama	1				5
Tulare	5		5	189	9
Yolo	2		29	77	1
Yuba				2	1
<b>Totals</b>	<b>155</b>	<b>17</b>	<b>336</b>	<b>2,617</b>	<b>138</b>

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## TESTING SUMMARIES

### Humans

		WNV	SLEV	WEEV
Human Cases	Week	20	1	0
	YTD	155	3	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	27	3
	YTD	1,499	336

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	162	9	0	0
	YTD	6,101	138	0	0

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### Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		19 / 517	0 / 517	0 / 470	0 / 0	0 / 0	0 / 0
		YTD	2,617 / 39,287	509 / 38,999	0 / 34,282	0 / 596	0 / 596

## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Orange	Orange Co VCD	Anaheim	92804	American Crow	10/26/2020	WNV
Orange	Orange Co VCD	Buena Park	90620	American Crow	10/26/2020	WNV
Orange	Orange Co VCD	Cypress	90630	American Crow	10/22/2020	WNV

### Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	FRWS400022	501	Cx. tarsalis	Firebaugh	50	CO2	10/22/2020	WNV
Los Angeles	GRLA2123	773	C.x quinquefasciatus	Harbor City	50	GRVD	10/22/2020	WNV
Los Angeles	GRLA2194	752	C.x quinquefasciatus	South El Monte	37	GRVD	10/19/2020	WNV
Los Angeles	GRLA2222	757	C.x quinquefasciatus	Rowland Heights	15	GRVD	10/20/2020	WNV
Los Angeles	GRLA2278	766	C.x quinquefasciatus	Long Beach	50	GRVD	10/21/2020	WNV
Los Angeles	GRLA2323	782	C.x quinquefasciatus	Los Angeles	43	GRVD	10/23/2020	WNV
Los Angeles	GRLA2866	6048	C.x quinquefasciatus	Studio City	20	GRVD	10/20/2020	WNV
Los Angeles	GRLA2889	764	C.x quinquefasciatus	Lakewood	50	GRVD	10/21/2020	WNV

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Los Angeles	GRLA2890	765	C.x quinquefasciatus	Lakewood	15	GRVD	10/21/2020	WNV
Los Angeles	GRLA2920	780	C.x quinquefasciatus	Carson	26	CO2	10/22/2020	WNV
Los Angeles	GRLA3067	777	C.x quinquefasciatus	Gardena	50	GRVD	10/22/2020	WNV
Los Angeles	LACW1002	616	C.x quinquefasciatus	Torrance	21	GRVD	10/20/2020	WNV
Los Angeles	LACW1004	615	C.x quinquefasciatus	Lawndale	16	GRVD	10/20/2020	WNV
Los Angeles	SGVA25	1302	C.x quinquefasciatus	Baldwin Park	50	GRVD	10/28/2020	WNV
Los Angeles	SGVA445	1313	C.x quinquefasciatus	Rosemead	50	GRVD	10/28/2020	WNV
Los Angeles	SGVA450	1300	C.x quinquefasciatus	La Puente	50	GRVD	10/28/2020	WNV
Los Angeles	SGVA62	1295	C.x quinquefasciatus	Covina	50	GRVD	10/28/2020	WNV
Los Angeles	SGVA64	1285	C.x quinquefasciatus	West Covina	28	GRVD	10/27/2020	WNV
Los Angeles	SGVA688	1314	C.x quinquefasciatus	Alhambra	50	GRVD	10/28/2020	WNV

### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02
Calaveras	SCSD9901	Copperopolis	10/20/2020	WNV	2195	2197
Contra Costa	CNTR2302	Martinez	10/19/2020	WNV	1779	1782
Contra Costa	CNTR7402	Oakley	10/19/2020	WNV	1770	
Los Angeles	LACW1007	Baldwin Hills	10/14/2020	WNV	2331	2397
Los Angeles	LACW1049	Inglewood	10/14/2020	WNV	2393	
Solano	SOLA0148	Fairfield	10/19/2020	WNV	1740	

## 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.

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*Website Information:* For updated information on WNV in California, please visit the California WNV website, [www.westnile.ca.gov](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.maps.calsurv.org](http://www.maps.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC websites: [www.cdc.gov](http://www.cdc.gov) and [www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

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