

## California Arbovirus Surveillance Bulletin #26

Week 41 Friday, October 9, 2020



### Weekly Update

#### **Humans**

##### West Nile virus

A total of 21 human cases of West Nile virus (WNV) illness were reported this week from 6 counties: Kern (1), Los Angeles (7), Madera (1), Merced (5), Stanislaus (6), and Tehama (1). **These are the first human WNV cases reported from Kern and Tehama counties this year.** In 2020, a total of 114 human WNV cases have been reported from 20 counties. Of the 114 cases, 81 (71%) had neuroinvasive illness and 5 (4.4%) were fatal. The median age of the individuals was 61 years, and 71 (62%) were male. Dates of symptom onset ranged from June 16 to September 26. In addition to the 114 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, 145 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 4 WNV positive dead birds were reported this week from 2 counties: Sacramento (2), and Yolo (2). In 2020, a total of 277 WNV positive dead birds have been reported from 19 counties. At this time last year, 193 WNV positive dead birds had been reported from 20 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 87 WNV positive mosquito pools were reported this week from 9 counties: Fresno (7), Kings (2), Los Angeles (17), Madera (2), Orange (34), Sacramento (9), San Joaquin (4), Tulare (11), and Yolo (1). In 2020, a total of 2,475 WNV positive mosquito pools have been reported from 27 counties. At this time last year, 3,225 WNV positive mosquito pools had been reported from 24 counties.

##### St. Louis encephalitis virus

A total of 20 SLEV positive mosquito pools were reported this week from 5 counties: Fresno (10), Madera (3), Riverside (1), Stanislaus (1), and Tulare (5). In 2020, a total of 493 SLEV positive mosquito pools have been reported from 9 counties: Fresno (220), Imperial (10), Kern

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(29), Kings (11), Madera (17), Riverside (159), San Joaquin (2), Stanislaus (2), and Tulare (43). At this time last year, 345 SLEV positive mosquito pools had been reported from 12 counties.

### Sentinel Chickens

A total of 6 WNV positive chickens were reported this week from 2 counties: Los Angeles (5), and Solano (1). In 2020, a total of 121 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	4,897	4,961
# Positive Counties	33	35
# Human Cases	145	114
# Positive Dead Birds / # Tested	193 / 1,556	277 / 1,366
# Positive Mosquito Pools / # Tested	3,225 / 40,566	2,475 / 35,284
# Seroconversions / # Tested	130 / 7,920	121 / 5,555

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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			2		
Amador		1			
Butte	4	1	3	28	23
Contra Costa	2		17	12	4
El Dorado	1				
Fresno	6		5	316	
Glenn	1	1		3	2
Imperial				3	
Kern	1			82	
Kings	1	1		87	
Lake				12	2
Los Angeles	34		71	367	25
Madera	5			77	
Marin			1		
Merced	9	1	2	41	14
Napa			1	2	
Nevada		1			
Orange	6		38	270	
Placer	1		2	58	
Riverside	3	2	2	62	
Sacramento	1		86	114	4
San Benito					1
San Bernardino		1		12	
San Diego	1			2	
San Joaquin		3	4	254	
San Mateo			1		
Santa Clara			6	8	
Shasta				25	3
Solano			1	8	3
Stanislaus	32	3	4	350	
Sutter	1			20	24
Tehama	1				5
Tulare	3		3	184	9
Yolo	1		28	76	1
Yuba				2	1
<b>Totals</b>	<b>114</b>	<b>15</b>	<b>277</b>	<b>2,475</b>	<b>121</b>

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### TESTING SUMMARIES

#### Humans

		WNV	SLEV	WEEV
Human Cases	Week	21	0	0
	YTD	114	1	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	12	4
	YTD	1,366	277

#### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	146	6	0	0
	YTD	5,555	121	0	0

#### Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	87 / 1,195	20 / 1,195	0 / 1,076	0 / 36	0 / 36	0 / 36
		YTD	2,475 / 35,284	493 / 36,479	0 / 32,089	0 / 509	0 / 509	0 / 509

### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Sacramento	Sacramento-Yolo MVCD	Sacramento	95838	House Finch	9/30/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	California Scrub-Jay	10/6/2020	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	10/4/2020	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Crow	10/1/2020	WNV

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**Mosquito Pools**

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1320	1277	Cx. quinquefasciatus	Clovis	50	GRVD	9/29/2020	WNV
Fresno	CNSL1384	1279	Cx. quinquefasciatus	Fresno	42	GRVD	9/29/2020	WNV
Fresno	CNSL1634	1586	Cx. quinquefasciatus	Clovis	50	GRVD	9/30/2020	SLEV
Fresno	CNSL1720	1314	Cx. quinquefasciatus	Clovis	50	GRVD	10/2/2020	SLEV
Fresno	CNSL1792	1573	Cx. quinquefasciatus	Fresno	50	GRVD	9/29/2020	SLEV
Fresno	CNSL2411	1318	Cx. quinquefasciatus	Sanger	50	BGSENT	10/2/2020	SLEV
Fresno	CNSL5043	1288	Cx. quinquefasciatus	Kingsburg	50	GRVD	9/30/2020	WNV
Fresno	CNSL6115	1275	Cx. tarsalis	Riverdale	23	BGSENT	9/29/2020	WNV
Fresno	CNSL6198	1567	Cx. quinquefasciatus	Riverdale	50	BGSENT	9/29/2020	WNV
Fresno	CNSL8157	1286	Cx. quinquefasciatus	Clovis	26	GRVD	9/29/2020	SLEV
Fresno	CNSL9057	1283	Cx. quinquefasciatus	Clovis	19	GRVD	9/29/2020	WNV
Fresno	CNSL9138	1610	Cx. quinquefasciatus	Clovis	20	GRVD	10/2/2020	SLEV
Fresno	CNSL9176	1589	Cx. quinquefasciatus	Fresno	50	GRVD	9/30/2020	SLEV
Fresno	CNSL9193	1587	Cx. quinquefasciatus	Fresno	29	GRVD	9/30/2020	SLEV
Fresno	FRWS2104	395	Cx. tarsalis	Dos Palos	50	CO2	10/1/2020	WNV
Fresno	FRWS2105	407	Cx. tarsalis	Dos Palos	50	CO2	10/6/2020	SLEV
Fresno	FRWS300031	397	Cx. tarsalis	Firebaugh	50	CO2	10/6/2020	SLEV
Kings	KNGS4501	612	Cx. pipiens	Armona	50	BGSENT	10/2/2020	WNV
Kings	KNGS8033	615	Cx. pipiens	Hanford	50	CO2	10/2/2020	WNV
Los Angeles	GRLA2133	685	Cx. quinquefasciatus	Wilmington	50	GRVD	10/2/2020	WNV
Los Angeles	GRLA2321	687	Cx. quinquefasciatus	Carson	33	GRVD	10/2/2020	WNV
Los Angeles	GRLA2414	5936	Cx. quinquefasciatus	Granada Hills	25	BGSENT	9/30/2020	WNV
Los Angeles	GRLA2478	5969	Cx. quinquefasciatus	Sunland	50	GRVD	10/2/2020	WNV
Los Angeles	GRLA2574	5925	Cx. quinquefasciatus	Sherman Oaks	50	BGSENT	9/30/2020	WNV
Los Angeles	GRLA2650	5929	Cx. quinquefasciatus	Encino	50	GRVD	9/30/2020	WNV
Los Angeles	GRLA2866	5939	Cx. quinquefasciatus	Studio City	26	GRVD	10/1/2020	WNV
Los Angeles	GRLA2866	5940	Cx. quinquefasciatus	Studio City	39	GRVD	10/1/2020	WNV
Los Angeles	GRLA2866	5945	Cx. quinquefasciatus	Studio City	23	GRVD	10/1/2020	WNV
Los Angeles	GRLA2866	5947	Cx. quinquefasciatus	Studio City	16	GRVD	10/1/2020	WNV
Los Angeles	GRLA2936	5924	Cx. quinquefasciatus	Burbank	50	GRVD	9/29/2020	WNV
Los Angeles	GRLA2937	5922	Cx. quinquefasciatus	Burbank	50	GRVD	9/29/2020	WNV
Los Angeles	GRLA3032	691	Cx. quinquefasciatus	Carson	20	CO2	10/2/2020	WNV
Los Angeles	GRLA3067	689	Cx. quinquefasciatus	Gardena	50	GRVD	10/2/2020	WNV
Los Angeles	GRLA3078	5918	Cx. quinquefasciatus	Los Feliz	22	GRVD	9/29/2020	WNV
Los Angeles	SGVA445	1176	Cx. quinquefasciatus	Rosemead	50	GRVD	10/7/2020	WNV
Los Angeles	SGVA688	1173	Cx. quinquefasciatus	Alhambra	50	GRVD	10/7/2020	WNV
Madera	MADR12	464	Cx. quinquefasciatus	Madera	21	CO2	10/2/2020	SLEV
Madera	MADR195	460	Cx. tarsalis	Madera	14	CO2	10/2/2020	SLEV
Madera	MADR299	440	Cx. quinquefasciatus	Chowchilla	50	CO2	9/29/2020	WNV
Madera	MADR299	441	Cx. tarsalis	Chowchilla	40	CO2	9/29/2020	WNV
Madera	MADR889	445	Cx. tarsalis	Firebaugh	50	CO2	9/29/2020	SLEV
Orange	ORCO1005	4418	Cx. quinquefasciatus	Buena Park	32	GRVD	9/23/2020	WNV
Orange	ORCO1008	4295	Cx. quinquefasciatus	Fullerton	22	GRVD	9/22/2020	WNV
Orange	ORCO1008	4297	Cx. quinquefasciatus	Fullerton	26	GRVD	9/22/2020	WNV
Orange	ORCO1008	4303	Cx. quinquefasciatus	Fullerton	7	GRVD	9/22/2020	WNV
Orange	ORCO1008	4321	Cx. quinquefasciatus	Fullerton	37	GRVD	9/22/2020	WNV
Orange	ORCO1009	4283	Cx. quinquefasciatus	Garden Grove	49	GRVD	9/18/2020	WNV
Orange	ORCO1009	4447	Cx. quinquefasciatus	Garden Grove	21	GRVD	9/24/2020	WNV
Orange	ORCO1009	4451	Cx. quinquefasciatus	Garden Grove	27	GRVD	9/24/2020	WNV
Orange	ORCO1009	4459	Cx. quinquefasciatus	Garden Grove	30	GRVD	9/24/2020	WNV

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Orange	ORCO1009	4460	Cx. quinquefasciatus	Garden Grove	29	GRVD	9/24/2020	WNV
Orange	ORCO1009	4488	Cx. quinquefasciatus	Garden Grove	48	GRVD	9/24/2020	WNV
Orange	ORCO1011	4395	Cx. quinquefasciatus	La Habra	18	GRVD	9/23/2020	WNV
Orange	ORCO1011	4405	Cx. quinquefasciatus	La Habra	31	GRVD	9/23/2020	WNV
Orange	ORCO1033	4315	Cx. quinquefasciatus	Tustin	40	GRVD	9/22/2020	WNV
Orange	ORCO1037	4351	Cx. quinquefasciatus	La Habra	23	GRVD	9/22/2020	WNV
Orange	ORCO168	4343	Cx. quinquefasciatus	Santa Ana	25	GRVD	9/22/2020	WNV
Orange	ORCO17	4334	Cx. quinquefasciatus	Orange	20	GRVD	9/22/2020	WNV
Orange	ORCO170	4331	Cx. quinquefasciatus	Anaheim	28	GRVD	9/22/2020	WNV
Orange	ORCO2	4341	Cx. quinquefasciatus	Fullerton	38	BGSENT	9/22/2020	WNV
Orange	ORCO215	4427	Cx. quinquefasciatus	La Habra	11	CO2	9/23/2020	WNV
Orange	ORCO216	4438	Cx. quinquefasciatus	Orange	27	CO2	9/23/2020	WNV
Orange	ORCO218	4285	Cx. quinquefasciatus	Anaheim	30	GRVD	9/18/2020	WNV
Orange	ORCO218	4380	Cx. quinquefasciatus	Anaheim	33	GRVD	9/23/2020	WNV
Orange	ORCO218	4398	Cx. quinquefasciatus	Anaheim	45	GRVD	9/23/2020	WNV
Orange	ORCO218	4402	Cx. quinquefasciatus	Anaheim	49	GRVD	9/23/2020	WNV
Orange	ORCO218	4419	Cx. quinquefasciatus	Anaheim	36	GRVD	9/23/2020	WNV
Orange	ORCO218	4440	Cx. quinquefasciatus	Anaheim	50	GRVD	9/24/2020	WNV
Orange	ORCO218	4441	Cx. quinquefasciatus	Anaheim	50	GRVD	9/24/2020	WNV
Orange	ORCO218	4450	Cx. quinquefasciatus	Anaheim	25	GRVD	9/24/2020	WNV
Orange	ORCO218	4457	Cx. quinquefasciatus	Anaheim	18	GRVD	9/24/2020	WNV
Orange	ORCO244	4329	Cx. quinquefasciatus	Garden Grove	29	GRVD	9/22/2020	WNV
Orange	ORCO302	4339	Cx. quinquefasciatus	Anaheim	48	GRVD	9/22/2020	WNV
Orange	ORCO319	4354	Cx. quinquefasciatus	Buena Park	34	GRVD	9/22/2020	WNV
Orange	ORCO323	4336	Cx. quinquefasciatus	Buena Park	36	GRVD	9/22/2020	WNV
Riverside	COAV58	4316	Cx. tarsalis	North Shore	50	CO2	10/6/2020	SLEV
Sacramento	SAYO224012	6232	Cx. pipiens	Rancho Cordova	8	CO2	9/25/2020	WNV
Sacramento	SAYO224012	6233	Cx. pipiens	Rancho Cordova	21	GRVD	9/25/2020	WNV
Sacramento	SAYO232012	6651	Cx. tarsalis	Elk Grove	2	CO2	10/6/2020	WNV
Sacramento	SAYO232012	6653	Cx. pipiens	Elk Grove	13	GRVD	10/6/2020	WNV
Sacramento	SAYO233001	6628	Cx. pipiens	Elk Grove	9	GRVD	10/6/2020	WNV
Sacramento	SAYO233009	6658	Cx. tarsalis	Elk Grove	14	CO2	10/6/2020	WNV
Sacramento	SAYO242004	6295	Cx. pipiens	Elk Grove	50	CO2	9/25/2020	WNV
Sacramento	SAYO255007	6225	Cx. tarsalis	Herald	50	CO2	9/25/2020	WNV
Sacramento	SAYO271003	6287	Cx. tarsalis	Isleton	10	CO2	9/25/2020	WNV
San Joaquin	SJCM8004	2423	Cx. pipiens	Lodi	50	CO2	10/6/2020	WNV
San Joaquin	SJCM8111	2354	Cx. pipiens	Stockton	50	CO2	10/6/2020	WNV
San Joaquin	SJCM8206	2389	Cx. tarsalis	Lodi	100	CO2	10/6/2020	WNV
San Joaquin	SJCM8230	2363	Cx. tarsalis	Thornton	100	CO2	10/6/2020	WNV
Stanislaus	TRLK17274	1551	Cx. tarsalis	Newman	50	CO2	10/6/2020	SLEV
Tulare	DLTA6407	2517	Cx. quinquefasciatus	Dinuba	50	GRVD	10/2/2020	SLEV
Tulare	DLTA6407	2518	Cx. quinquefasciatus	Dinuba	50	GRVD	10/2/2020	SLEV
Tulare	DLTA8414	2546	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	SLEV
Tulare	DLTA8414	2594	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	SLEV
Tulare	DLTA8415	2578	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	SLEV
Tulare	DLTA8415	2578	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	WNV
Tulare	DLTA8415	2580	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	WNV
Tulare	DLTA8415	2584	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	WNV
Tulare	DLTA8415	2586	Cx. quinquefasciatus	Visalia	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2567	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2568	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2569	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2570	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2571	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV

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Tulare	DLTA8416	2572	Cx. quinquefasciatus	Goshen	50	CO2	10/2/2020	WNV
Tulare	DLTA8416	2573	Cx. quinquefasciatus	Goshen	39	CO2	10/2/2020	WNV
Yolo	SAYO104006	6674	Cx. tarsalis	Dunnigan	10	CO2	10/6/2020	WNV

### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01
Los Angeles	LACW1009	Los Angeles	9/30/2020	WNV	2339
Los Angeles	LACW1010	Los Angeles	9/30/2020	WNV	2343
Los Angeles	LONG0002	Long Beach	9/30/2020	WNV	1125
Los Angeles	LONG0003	Long Beach	9/30/2020	WNV	1135
Los Angeles	LONG0004	Long Beach	9/30/2020	WNV	1141
Solano	SOLA0148	Fairfield	9/21/2020	WNV	1744

## 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](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/arbonet/maps/ADB\\_Diseases\\_Map/index.html](http://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](mailto:tina.feiszli@cdph.ca.gov).