

## California Arbovirus Surveillance Bulletin #12

Week 27 Friday, July 3, 2020



### Weekly Update

#### **Humans**

No new cases were reported this week. In 2020, one human case of West Nile virus (WNV) illness has been reported from one county (Stanislaus). In addition, one asymptomatic WNV-positive blood donor has also been reported from Stanislaus County. At this time last year, no human WNV infections had been reported.

#### **Dead Birds**

A total of 4 WNV positive dead birds were reported this week from 3 counties: Fresno (2), Merced (1), and Stanislaus (1). **This is the first WNV positive dead bird from Merced County this year.** In 2020, a total of 23 WNV positive dead birds have been reported from 8 counties. At this last year, 18 WNV positive dead birds had been reported from 6 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 43 WNV positive mosquito pools were reported this week from 9 counties: Fresno (11), Imperial (1), Kern (1), Kings (1), Madera (1), Riverside (4), San Joaquin (1), Santa Clara (1), and Stanislaus (22). **This is the first detection of WNV activity in Imperial, Kern, Kings, and Madera counties this year.** In 2020, a total of 135 WNV positive mosquito pools have been reported from 14 counties. At this time last year, 471 WNV positive mosquito pools had been reported from 10 counties.

##### St. Louis encephalitis virus

A total of 12 St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from 4 counties: Fresno (4), Imperial (3), Kern (1), and Riverside (4). In 2020, a total of 52 SLEV positive mosquito pools have been reported from Fresno (7), Imperial (7), Kern (2), and Riverside (36) counties. At this time last year, 27 SLEV positive mosquito pools had been reported from 4 counties.

#### **Sentinel Chickens**

No seroconversions have been reported in 2020.

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2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	2,648	2,348
# Positive Counties	12	16
# Human Cases	0	1
# Positive Dead Birds / # Tested	18 / 784	23 / 531
# Positive Mosquito Pools / # Tested	471 / 14,741	135 / 13,315
# Seroconversions / # Tested	0 / 3,284	0 / 2,193

YTD WNV Activity by Element and County, 2020					
County	Humans*	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Amador		1			
Fresno			3	19	
Imperial				1	
Kern				1	
Kings				1	
Los Angeles			1	11	
Madera				1	
Merced			1	1	
Napa			1		
Riverside				21	
Sacramento			7	2	
San Diego				1	
San Joaquin			1	3	
Santa Clara			5	7	
Stanislaus	1		4	59	
Tulare				7	
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>23</b>	<b>135</b>	<b>0</b>

*\*Does not include asymptomatic infections*

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## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	0	0	0
	YTD	1	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	58	4
	YTD	531	23

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	287	0	0	0
	YTD	2,193	0	0	0

### Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	43 / 1,774	12 / 1,771	0 / 1,551	0 / 0	0 / 0	0 / 0
	YTD	135 / 13,315	52 / 13,228	0 / 12,441	0 / 84	0 / 84	0 / 84

## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Fresno	Fresno MVCD	Fresno	93711	American Crow	6/8/2020	WNV
Fresno	Fresno MVCD	Fresno	93711	American Crow	6/9/2020	WNV
Merced	Merced Co MAD	Merced	95340	American Crow	6/18/2020	WNV
Stanislaus	Turlock MAD	Turlock	95382	American Crow	6/24/2020	WNV

### Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1068	646	Cx. quinquefasciatus	Fresno	50	GRVD	6/24/2020	SLEV
Fresno	CNSL1068	647	Cx. tarsalis	Fresno	50	CO2	6/24/2020	SLEV
Fresno	CNSL1068	647	Cx. tarsalis	Fresno	50	CO2	6/24/2020	WNV
Fresno	CNSL1177	255	Cx. quinquefasciatus	Clovis	50	GRVD	6/23/2020	WNV
Fresno	CNSL1317	280	Cx. quinquefasciatus	Fresno	50	GRVD	6/24/2020	SLEV
Fresno	CNSL1563	308	Cx. quinquefasciatus	Clovis	44	GRVD	6/26/2020	WNV
Fresno	CNSL9188	313	Cx. quinquefasciatus	Fresno	50	GRVD	6/26/2020	SLEV
Fresno	CNSL9205	310	Cx. quinquefasciatus	Fresno	38	GRVD	6/26/2020	WNV
Fresno	FRNO106	216	Cx. quinquefasciatus	Fresno	18	GRVD	6/25/2020	WNV

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Fresno	FRNO156	236	Cx. quinquefasciatus	Fresno	17	GRVD	6/30/2020	WNV
Fresno	FRNO257	213	Cx. quinquefasciatus	Fresno	50	GRVD	6/23/2020	WNV
Fresno	FRNO59	217	Cx. quinquefasciatus	Fresno	42	GRVD	6/25/2020	WNV
Fresno	FRNO8007	225	Cx. tarsalis	Fresno	14	BGSENT	6/25/2020	WNV
Fresno	FRNO8007	226	Cx. quinquefasciatus	Fresno	49	BGSENT	6/25/2020	WNV
Fresno	FRWS5110	91	Cx. tarsalis	Tranquillity	50	CO2	6/30/2020	WNV
Imperial	IMPR24	32	Cx. quinquefasciatus	Brawley	18	BGSENT	6/26/2020	SLEV
Imperial	IMPR24	32	Cx. quinquefasciatus	Brawley	18	BGSENT	6/26/2020	WNV
Imperial	IMPR40	33	Cx. quinquefasciatus	Imperial	34	BGSENT	6/26/2020	SLEV
Imperial	IMPR59	44	Cx. quinquefasciatus	El Centro	23	BGSENT	6/27/2020	SLEV
Kern	KERN111	266	Cx. quinquefasciatus	Arvin	50	CO2	6/23/2020	WNV
Kern	KERN2015	287	Cx. quinquefasciatus	Bakersfield	32	GRVD	6/26/2020	SLEV
Kings	KNGS3111	158	Cx. tarsalis	Lemoore	30	CO2	6/26/2020	WNV
Madera	MADR309	87	Cx. tarsalis	Madera	50	CO2	6/26/2020	WNV
Riverside	COAV0	2861	Cx. quinquefasciatus	Indio	23	CO2	7/2/2020	SLEV
Riverside	COAV30	2807	Cx. tarsalis	Mecca	17	CO2	6/30/2020	SLEV
Riverside	COAV30	2854	Cx. quinquefasciatus	Mecca	50	CO2	6/30/2020	SLEV
Riverside	COAV320	2890	Cx. quinquefasciatus	Palm Desert	32	GRVD	7/2/2020	WNV
Riverside	COAV413	2889	Cx. quinquefasciatus	Palm Desert	51	GRVD	7/2/2020	WNV
Riverside	COAV414	2895	Cx. quinquefasciatus	Palm Desert	36	GRVD	7/2/2020	WNV
Riverside	COAV415	2893	Cx. quinquefasciatus	Indian Wells	21	GRVD	7/2/2020	WNV
Riverside	COAV426	2698	Cx. quinquefasciatus	South La Quinta	16	BGSENT	6/30/2020	SLEV
San Joaquin	SJCM8010	711	Cx. pipiens	Ripon	50	CO2	6/30/2020	WNV
Santa Clara	STCL31771	1035	Cx. pipiens	Santa Clara	1	CO2	6/25/2020	WNV
Stanislaus	EAST1025	20185	Cx. pipiens	Modesto	42	CO2	6/24/2020	WNV
Stanislaus	EAST1046	20200	Cx. pipiens	Modesto	24	GRVD	6/25/2020	WNV
Stanislaus	EAST1046	20201	Cx. pipiens	Modesto	47	CO2	6/25/2020	WNV
Stanislaus	EAST1077	20195	Cx. pipiens	Modesto	32	GRVD	6/25/2020	WNV
Stanislaus	EAST1088	20192	Cx. pipiens	Modesto	50	GRVD	6/25/2020	WNV
Stanislaus	EAST1088	20193	Cx. pipiens	Modesto	50	GRVD	6/25/2020	WNV
Stanislaus	EAST1088	20194	Cx. pipiens	Modesto	23	GRVD	6/25/2020	WNV
Stanislaus	EAST1088	20202	Cx. pipiens	Modesto	44	CO2	6/25/2020	WNV
Stanislaus	EAST1088	20203	Cx. tarsalis	Modesto	21	CO2	6/25/2020	WNV
Stanislaus	EAST2002	20197	Cx. pipiens	Modesto	48	GRVD	6/25/2020	WNV
Stanislaus	EAST2021	20198	Cx. pipiens	Modesto	18	GRVD	6/25/2020	WNV
Stanislaus	EAST2022	20196	Cx. pipiens	Modesto	40	GRVD	6/25/2020	WNV
Stanislaus	EAST2023	20199	Cx. pipiens	Modesto	28	GRVD	6/25/2020	WNV
Stanislaus	TRLK1619	262	Cx. pipiens	Turlock	8	CO2	6/25/2020	WNV
Stanislaus	TRLK18280	258	Cx. pipiens	Turlock	50	CO2	6/25/2020	WNV
Stanislaus	TRLK18280	259	Cx. tarsalis	Turlock	42	CO2	6/25/2020	WNV
Stanislaus	TRLK19383	267	Cx. tarsalis	Patterson	3	CO2	6/30/2020	WNV
Stanislaus	TRLK20186	263	Cx. pipiens	Turlock	50	CO2	6/25/2020	WNV
Stanislaus	TRLK305	271	Cx. tarsalis	Grayson	50	CO2	6/30/2020	WNV
Stanislaus	TRLK307	280	Cx. tarsalis	Grayson	16	CO2	6/30/2020	WNV
Stanislaus	TRLK424	293	Cx. tarsalis	Patterson	50	CO2	6/30/2020	WNV
Stanislaus	TRLK9742	301	Cx. pipiens	Crows Landing	50	CO2	6/30/2020	WNV

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### 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).

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#### **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.

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#### **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.

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#### **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/arbonet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html)

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