

California Arbovirus Surveillance Bulletin #8

Week 23 Friday, June 5, 2020



Weekly Update

Humans

No human infections have been reported in 2020.

Dead Birds

A total of two West Nile virus (WNV) positive dead birds were reported this week from San Joaquin (1) and Santa Clara (1) counties. **This is the first detection of WNV in San Joaquin County this year.** In 2020, a total of eight WNV positive dead birds have been reported from four counties. At this time last year, one WNV positive dead bird had been reported from one county.

Mosquito Pools

West Nile virus

A total of 25 WNV positive mosquito pools were reported this week from 5 counties: Fresno (1), Riverside (15), San Diego (1), Santa Clara (3), and Stanislaus (5). **This is the first detection of WNV activity in Fresno, Riverside, and San Diego counties this year.** In 2020, a total of 29 WNV positive pools have been reported from 7 counties. At this time last year, 84 WNV positive mosquito pools had been reported from 3 counties.

St. Louis encephalitis virus

A total of 18 St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from Riverside County. In 2020, a total of 31 SLEV positive mosquito pools have been reported from Riverside County. At this time last year, two SLEV positive mosquito pools had been reported from one county.

Sentinel Chickens

No seroconversions have been reported in 2020.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	1,905	1,699
# Positive Counties	4	10
# Human Cases	0	0
# Positive Dead Birds / # Tested	1 / 516	8 / 366
# Positive Mosquito Pools / # Tested	84 / 8,130	29 / 7,269
# Seroconversions / # Tested	0 / 1,959	0 / 969

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YTD WNV Activity by Element and County, 2020				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Fresno			1	
Los Angeles			1	
Napa		1		
Riverside			15	
Sacramento		1		
San Diego			1	
San Joaquin		1		
Santa Clara		5	3	
Stanislaus			7	
Tulare			1	
Totals	0	8	29	0

TESTING SUMMARIES

Humans

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

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	53	2
	YTD	366	8

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	150	0	0	0
	YTD	969	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	25 / 1,712	18 / 1,653	0 / 1,567	0 / 69	0 / 69	0 / 69
	YTD	29 / 7,269	31 / 7,185	0 / 6,984	0 / 70	0 / 70	0 / 70

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NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
San Joaquin	San Joaquin Co MVCD	Stockton	95219	European Starling	5/28/2020	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	5/31/2020	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL8154	92	Cx. quinquefasciatus	Fresno	50	GRVD	5/29/20	WNV
Riverside	COAV0000	2191	Cx. quinquefasciatus	Vista Santa Rosa	14	CO2	5/29/20	SLEV
Riverside	COAV0000	2193	Cx. quinquefasciatus	La Quinta	50	CO2	5/29/20	SLEV
Riverside	COAV0000	2269	Cx. quinquefasciatus	La Quinta	50	CO2	5/29/20	SLEV
Riverside	COAV0000	2270	Cx. tarsalis	Vista Santa Rosa	16	CO2	5/29/20	SLEV
Riverside	COAV0000	2272	Cx. tarsalis	Vista Santa Rosa	25	CO2	5/29/20	SLEV
Riverside	COAV0000	2307	Cx. quinquefasciatus	Palm Desert	28	GRVD	6/2/20	WNV
Riverside	COAV0000	2313	Cx. quinquefasciatus	Palm Desert	50	GRVD	6/2/20	WNV
Riverside	COAV0000	2320	Cx. quinquefasciatus	Palm Desert	17	GRVD	6/2/20	WNV
Riverside	COAV0000	2345	Cx. quinquefasciatus	Vista Santa Rosa	17	CO2	6/2/20	SLEV
Riverside	COAV0000	2346	Cx. tarsalis	Vista Santa Rosa	19	CO2	6/2/20	SLEV
Riverside	COAV0000	2489	Cx. quinquefasciatus	Indian Wells	38	GRVD	6/4/20	WNV
Riverside	COAV0000	2492	Cx. quinquefasciatus	Palm Desert	50	GRVD	6/4/20	WNV
Riverside	COAV0000	2493	Cx. quinquefasciatus	Palm Desert	42	GRVD	6/4/20	WNV
Riverside	COAV0000	2494	Cx. quinquefasciatus	Palm Desert	19	CO2	6/4/20	WNV
Riverside	COAV132	2368	Cx. tarsalis		50	CO2	6/2/20	SLEV
Riverside	COAV203	2479	Cx. quinquefasciatus	Palm Desert	50	GRVD	6/4/20	WNV
Riverside	COAV320	2242	Cx. quinquefasciatus	Palm Desert	20	GRVD	5/29/20	SLEV
Riverside	COAV320	2242	Cx. quinquefasciatus	Palm Desert	20	GRVD	5/29/20	WNV
Riverside	COAV320	2268	Cx. quinquefasciatus	Palm Desert	50	GRVD	6/2/20	WNV
Riverside	COAV323	2524	Cx. quinquefasciatus	Cathedral City	38	GRVD	6/4/20	WNV
Riverside	COAV331	2474	Cx. quinquefasciatus	Indian Wells	21	GRVD	6/4/20	WNV
Riverside	COAV413	2498	Cx. quinquefasciatus	Palm Desert	32	GRVD	6/4/20	SLEV
Riverside	COAV414	2253	Cx. quinquefasciatus	Palm Desert	31	CO2	5/29/20	WNV
Riverside	COAV414	2266	Cx. quinquefasciatus	Palm Desert	21	GRVD	6/2/20	WNV
Riverside	COAV414	2473	Cx. quinquefasciatus	Palm Desert	51	GRVD	6/4/20	WNV
Riverside	COAV419	2312	Cx. quinquefasciatus	La Quinta	50	CO2	6/2/20	SLEV
Riverside	COAV419	2515	Cx. quinquefasciatus	La Quinta	50	CO2	6/4/20	SLEV
Riverside	COAV420	2297	Cx. quinquefasciatus	La Quinta	27	GRVD	6/2/20	SLEV
Riverside	COAV427	2536	Cx. quinquefasciatus	Palm Desert	50	BGSENT	6/4/20	SLEV
Riverside	COAV430	2343	Cx. quinquefasciatus	Indio	51	GRVD	6/2/20	SLEV
Riverside	COAV536	2353	Cx. tarsalis	Vista Santa Rosa	50	CO2	6/2/20	SLEV
Riverside	COAV536	2354	Cx. tarsalis	Vista Santa Rosa	50	CO2	6/2/20	SLEV
Riverside	COAV541	2331	Cx. quinquefasciatus		50	CO2	6/2/20	SLEV
San Diego	SAND482	5978	Cx. tarsalis	San Diego	1	CO2	5/29/20	WNV
Santa Clara	STCL32223	497	Cx. tarsalis	San Jose	50	CO2	5/27/20	WNV
Santa Clara	STCL32296	501	Cx. tarsalis	San Jose	40	CO2	5/27/20	WNV
Santa Clara	STCL32296	502	Cx. tarsalis	Milpitas	40	CO2	5/27/20	WNV
Stanislaus	TRLK1604	75	Cx. pipiens	Turlock	50	CO2	6/4/20	WNV
Stanislaus	TRLK1604	76	Cx. pipiens	Turlock	50	CO2	6/4/20	WNV
Stanislaus	TRLK1679	78	Cx. pipiens	Turlock	48	CO2	6/4/20	WNV
Stanislaus	TRLK20107	83	Cx. pipiens	Turlock	50	CO2	6/4/20	WNV
Stanislaus	TRLK806	34	Cx. tarsalis	Grayson	25	CO2	6/2/20	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).

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

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