

California Arbovirus Surveillance Bulletin #9

Week 22 Friday, May 31, 2019



Weekly Update

Humans

No human infections have been reported in 2019.

Dead Birds

No positive dead birds were reported this week. In 2019, one West Nile virus (WNV) positive dead bird has been reported from San Diego County. At this time last year, 9 WNV positive dead birds had been reported from 5 counties.

Mosquito Pools

West Nile virus

A total of 18 WNV positive mosquito pools were reported this week from Riverside (16) and Tulare (2) counties. In 2019, 41 WNV positive mosquito pools have been reported from 3 counties. At this time last year, 3 WNV positive mosquito pools had been reported from 3 counties.

St. Louis encephalitis virus

This week, a total of 2 mosquito pools from Tulare County were reported positive for St. Louis encephalitis virus (SLEV); this is the first detection of SLEV activity in California this year.

Sentinel Chickens

No seroconversions have been reported in 2019.

YTD WNV Activity by Element and County, 2019				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Orange			1	
Riverside			37	
San Diego		1		
Tulare			3	
Totals	0	1	41	0

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.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and https://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html

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2018 & 2019 YTD West Nile Virus Comparisons		
	2018	2019
Total # Dead Bird Reports	1,762	1,728
# Positive Counties	6	4
# Human Cases	0	0
# Positive Dead Birds / # Tested	9 / 338	1 / 425
# Positive Mosquito Pools / # Tested	3 / 6,150	41 / 6,665
# Seroconversions / # Tested	0 / 2,172	0 / 1,668

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	27	0
	YTD	425	1

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	381	0	0	0
	YTD	1,668	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	18 / 1,117	2 / 1,006	0 / 924	0 / 70	0 / 70	0 / 70
	YTD	41 / 6,665	2 / 6,138	0 / 6,056	0 / 82	0 / 82	0 / 82

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POSITIVES

Mosquito pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Riverside	COAV0000	2282	Cx. quinquefasciatus		50	GRVD	5/25/19	WNV
Riverside	COAV0000	2290	Cx. quinquefasciatus		49	GRVD	5/25/19	WNV
Riverside	COAV0000	2299	Cx. quinquefasciatus		49	GRVD	5/29/19	WNV
Riverside	COAV0000	2307	Cx. tarsalis		23	CO2	5/25/19	WNV
Riverside	COAV0000	2341	Cx. quinquefasciatus		50	GRVD	5/29/19	WNV
Riverside	COAV0000	2344	Cx. quinquefasciatus		33	CO2	5/29/19	WNV
Riverside	COAV0123	2456	Cx. tarsalis	Mecca	50	CO2	5/29/19	WNV
Riverside	COAV0208	2279	Cx. quinquefasciatus	Palm Springs	50	GRVD	5/25/19	WNV
Riverside	COAV0208	2280	Cx. quinquefasciatus	Palm Springs	45	GRVD	5/25/19	WNV
Riverside	COAV0040	2362	Cx. tarsalis	Mecca	50	CO2	5/29/19	WNV
Riverside	COAV0423	2340	Cx. quinquefasciatus	Indio	33	GRVD	5/29/19	WNV
Riverside	COAV0050	2432	Cx. tarsalis	Mecca	50	CO2	5/29/19	WNV
Riverside	COAV0532	2428	Cx. tarsalis	Mecca	50	CO2	5/29/19	WNV
Riverside	COAV0533	2490	Cx. tarsalis	Mecca	50	CO2	5/29/19	WNV
Riverside	COAV0536	2267	Cx. tarsalis	Thermal	37	CO2	5/25/19	WNV
Riverside	COAV0058	2494	Cx. tarsalis	Mecca	34	CO2	5/29/19	WNV
Tulare	DLTA9401	392	Cx. quinquefasciatus	Visalia	18	GRVD	5/24/19	WNV
Tulare	DLTA9401	469	Cx. tarsalis	Visalia	37	BGSENT	5/30/19	SLEV
Tulare	DLTA9402	395	Cx. quinquefasciatus	Visalia	48	GRVD	5/24/19	WNV
Tulare	DLTA9403	393	Cx. quinquefasciatus	Visalia	39	GRVD	5/24/19	SLEV

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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