California Arbovirus Surveillance Bulletin #7

Week 22 Friday, May 29, 2020



Weekly Update

Humans

No human infections have been reported in 2020.

Dead Birds

One West Nile virus (WNV) positive dead bird was reported this week from Sacramento County. **This is the first detection of WNV in Sacramento County this year.** In 2020, a total of six WNV positive dead birds have been reported from three counties. At this time last year, one WNV positive dead bird had been reported from one county (San Diego).

Mosquito Pools

West Nile virus

Four WNV positive mosquito pools were reported this week from three counties: Los Angeles (1), Stanislaus (2), and Tulare (1). **These are the first WNV positive mosquito pools reported in California this year, and the first detection of WNV activity in Los Angeles, Stanislaus, and Tulare counties this year.** In 2020, a total of four WNV positive pools have been reported from three counties. At this time last year, 41 WNV positive mosquito pools had been reported from three counties.

St. Louis encephalitis virus

Six St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from Riverside County. In 2020, 13 SLEV positive mosquito pools have been reported from one 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.

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/arbonet/maps/ADB_Diseases_Map/index.html

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2019 & 2020 YTD Wes	t Nile Virus Compariso	ns
	2019	2020
Total # Dead Bird Reports	1,728	1,531
# Positive Counties	4	6
# Human Cases	0	0
# Positive Dead Birds / # Tested	1 / 425	6 / 313
# Positive Mosquito Pools / # Tested	41 / 6,665	4 / 5,557
# Seroconversions / # Tested	0 / 1,668	0 / 819

YTD WNV Activity by Element and County, 2020								
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens				
Los Angeles			1					
Napa		1						
Sacramento		1						
Santa Clara		4						
Stanislaus			2					
Tulare			1					
Totals	0	6	4	0				

TESTING SUMMARIES

Humans

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

Dead Birds Chickens

		Number Tested	WNV Positive
Dead	Week	39	1
Birds	YTD	313	6

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	222	0	0	0
	YTD	819	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	4 / 886	6 / 886	0 / 886	0/0	0/0	0/0
	YTD	4 / 5,557	13 / 5,532	0 / 5,417	0/1	0/1	0/1

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NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	California Scrub-Jay	5/21/2020	WNV

Mosquito Pools

County	Site Code	Pool #	Species City		# in Pool	Trap Type	Collected	Virus
Los Angeles	GRLA3042	116	Cx. quinquefasciatus	Hacienda Heights	50	GRVD	5/20/20	WNV
Riverside	COAV0	2042	Cx. quinquefasciatus	Vista Santa Rosa	22	CO2	5/27/20	SLEV
Riverside	COAV0	2125	Cx. quinquefasciatus	Vista Santa Rosa	50	CO2	5/27/20	SLEV
Riverside	COAV426	2081	Cx. quinquefasciatus	La Quinta	50	BGSENT	5/27/20	SLEV
Riverside	COAV426	2083	Cx. quinquefasciatus	La Quinta	31	GRVD	5/27/20	SLEV
Riverside	COAV536	2034	Cx. tarsalis	Vista Santa Rosa	50	CO2	5/27/20	SLEV
Riverside	COAV536	2036	Cx. tarsalis	Vista Santa Rosa	50	CO2	5/27/20	SLEV
Stanislaus	TRLK407	4	Cx. pipiens	Turlock	50	CO2	5/27/20	WNV
Stanislaus	TRLK407	5	Cx. pipiens	Turlock	18	CO2	5/27/20	WNV
Tulare	DLTA6407	136	Cx. quinquefasciatus	Dinuba	50	GRVD	5/15/20	WNV

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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