

California Arbovirus Surveillance Bulletin #10

Week 23 Friday, June 9, 2017



Weekly Update

Humans

No new cases were reported this week. To date this year, one human case of West Nile Virus (WNV) illness has been reported from Kings County.

Dead Birds

A total of 12 WNV positive dead birds were reported this week from six counties: Los Angeles (2), Nevada (1), Orange (1), Riverside (1), Sacramento (4), and Tulare (3). **This is the first detection of WNV activity in Nevada County this year, and the first positive dead birds reported from Riverside and Tulare Counties.** To date this year, 23 birds from nine counties have tested positive for WNV. At this time last year, 118 WNV positive birds had been reported from eight counties.

Mosquito Pools

A total of 59 WNV positive mosquito pools were reported this week from the following five counties: Kern (4), Riverside (8), San Bernardino (3), San Joaquin (6), and Tulare (38). **This is the first detection of WNV activity in San Joaquin County in 2017.** To date this year, 88 WNV positive mosquito pools have been reported from eight counties. At this time last year, 126 WNV positive mosquito pools had been reported from 15 counties, and 13 SLEV positive mosquitoes pools had been reported from one county.

Sentinel Chickens

No seroconversions have been reported in 2017.

2016 & 2017 YTD West Nile Virus Comparisons		
	2016	2017
Total # Dead Bird Reports	2,725	2,527
# Positive Counties	16	13
# Human Cases	0	1
# Positive Dead Birds / # Tested	118 / 641	23 / 556
# Positive Mosquito Pools / # Tested	126 / 11,158	88 / 11,411
# Seroconversions / # Tested	0 / 1,988	0 / 2,870

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 website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov

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YTD WNV Activity by Element and County, 2017				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Kern		1	6	
Kings	1			
Los Angeles		3	3	
Merced			1	
Nevada		1		
Orange		2		
Riverside		1	11	
Sacramento		10		
San Bernardino			6	
San Diego		1	1	
San Joaquin			6	
San Mateo		1		
Tulare		3	54	
Totals	1	23	88	0

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	124	12
	YTD	556	23

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	443	0	0	0
	YTD	2,870	0	0	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	59 / 1,635	0 / 1,326	0 / 1,069	0 / 72	0 / 72	0 / 72
	YTD	88 / 11,411	0 / 10,336	0 / 9,287	0 / 326	0 / 326	0 / 326

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New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Los Angeles Co Veterinarian	Arcadia	91007	American Crow	5/31/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Arcadia	91007	American Crow	5/31/2017	WNV
Nevada	Nevada Co Env Health - Nevada City	Grass Valley	95945	Western Scrub-Jay	5/30/2017	WNV
Orange	Orange Co VCD	Lake Forest	92630	American Crow	5/29/2017	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	5/24/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Rosemont	95826	Western Scrub-Jay	6/7/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	House Finch	6/6/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	American Crow	6/1/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	Yellow-billed Magpie	6/3/2017	WNV
Tulare	Delta VCD	Visalia	93277	American Crow	5/30/2017	WNV
Tulare	Delta VCD	Visalia	93292	American Crow	6/6/2017	WNV
Tulare	Delta VCD	Visalia	93292	Western Scrub-Jay	6/5/2017	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Kern	KERN2002	252	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/2/2017	WNV
Kern	KERN2015	253	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/2/2017	WNV
Kern	KERN2020	221	Cx. quinquefasciatus	Bakersfield	50	GRVD	5/31/2017	WNV
Kern	KERN2051	254	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/2/2017	WNV
Riverside	COAV17	2287	Cx. tarsalis	Mecca	27	CO2	6/6/2017	WNV
Riverside	COAV17	2359	Cx. tarsalis	Mecca	39	CO2	6/8/2017	WNV
Riverside	COAV17	2361	Cx. tarsalis	Mecca	38	CO2	6/8/2017	WNV
Riverside	COAV34	2351	Cx. tarsalis	Mecca	50	CO2	6/8/2017	WNV
Riverside	COAV35	2294	Cx. tarsalis	Mecca	50	CO2	6/6/2017	WNV
Riverside	COAV35	2297	Cx. tarsalis	Mecca	50	CO2	6/6/2017	WNV
Riverside	COAV35	2357	Cx. quinquefasciatus	Mecca	32	CO2	6/8/2017	WNV
Riverside	COAV35	2376	Cx. tarsalis	Mecca	50	CO2	6/8/2017	WNV
San Bernardino	WVAL5005	980	Cx. quinquefasciatus	Rancho Cucamonga	25	GRVD	6/7/2017	WNV
San Bernardino	WVAL9003	998	Cx. quinquefasciatus	Upland	26	GRVD	6/7/2017	WNV
San Bernardino	WVAL9003	999	Cx. quinquefasciatus	Upland	25	GRVD	6/7/2017	WNV
San Joaquin	SJCM8008	1057	Cx. tarsalis	Manteca	50	CO2	6/8/2017	WNV
San Joaquin	SJCM8008	1058	Cx. tarsalis	Manteca	50	CO2	6/8/2017	WNV
San Joaquin	SJCM8008	1059	Cx. tarsalis	Manteca	50	CO2	6/8/2017	WNV
San Joaquin	SJCM8008	1060	Cx. tarsalis	Manteca	32	CO2	6/8/2017	WNV
San Joaquin	SJCM8010	1062	Cx. tarsalis	Ripon	50	CO2	6/8/2017	WNV
San Joaquin	SJCM8011	1049	Cx. tarsalis	Ripon	50	CO2	6/8/2017	WNV
Tulare	DLTA8425	598	Cx. quinquefasciatus	Visalia	13	GRVD	6/1/2017	WNV
Tulare	DLTA8436	748	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV
Tulare	DLTA8520	785	Cx. quinquefasciatus	Visalia	39	GRVD	6/7/2017	WNV
Tulare	DLTA8521	765	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV
Tulare	DLTA8527	781	Cx. quinquefasciatus	Visalia	38	GRVD	6/7/2017	WNV
Tulare	DLTA8530	690	Cx. quinquefasciatus	Visalia	44	GRVD	6/6/2017	WNV
Tulare	DLTA8530	744	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV

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Tulare	DLTA8530	783	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV
Tulare	DLTA8531	614	Cx. quinquefasciatus	Visalia	42	GRVD	6/2/2017	WNV
Tulare	DLTA8531	677	Cx. quinquefasciatus	Visalia	50	GRVD	6/6/2017	WNV
Tulare	DLTA8531	678	Cx. quinquefasciatus	Visalia	36	GRVD	6/6/2017	WNV
Tulare	DLTA8531	683	Cx. quinquefasciatus	Visalia	29	GRVD	6/6/2017	WNV
Tulare	DLTA8531	738	Cx. quinquefasciatus	Visalia	49	GRVD	6/7/2017	WNV
Tulare	DLTA8532	675	Cx. quinquefasciatus	Visalia	50	GRVD	6/6/2017	WNV
Tulare	DLTA8533	529	Cx. quinquefasciatus	Visalia	21	GRVD	5/31/2017	WNV
Tulare	DLTA8533	613	Cx. quinquefasciatus	Visalia	41	GRVD	6/2/2017	WNV
Tulare	DLTA8533	680	Cx. quinquefasciatus	Visalia	15	GRVD	6/6/2017	WNV
Tulare	DLTA8533	735	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV
Tulare	DLTA8533	736	Cx. quinquefasciatus	Visalia	25	GRVD	6/7/2017	WNV
Tulare	DLTA8534	619	Cx. quinquefasciatus	Visalia	17	GRVD	6/2/2017	WNV
Tulare	DLTA8534	740	Cx. quinquefasciatus	Visalia	40	GRVD	6/7/2017	WNV
Tulare	DLTA9401	615	Cx. quinquefasciatus	Visalia	50	GRVD	6/2/2017	WNV
Tulare	DLTA9401	750	Cx. quinquefasciatus	Visalia	50	GRVD	6/7/2017	WNV
Tulare	DLTA9401	753	Cx. quinquefasciatus	Visalia	14	GRVD	6/7/2017	WNV
Tulare	DLTA9402	618	Cx. quinquefasciatus	Visalia	43	GRVD	6/2/2017	WNV
Tulare	DLTA9503	743	Cx. quinquefasciatus	Visalia	18	GRVD	6/7/2017	WNV
Tulare	DLTA9504	681	Cx. quinquefasciatus	Visalia	47	GRVD	6/6/2017	WNV
Tulare	DLTA9505	526	Cx. quinquefasciatus	Visalia	40	GRVD	5/31/2017	WNV
Tulare	DLTA9505	527	Cx. quinquefasciatus	Visalia	33	GRVD	5/31/2017	WNV
Tulare	DLTA9505	741	Cx. quinquefasciatus	Visalia	30	GRVD	6/7/2017	WNV
Tulare	DLTA9506	596	Cx. quinquefasciatus	Visalia	36	GRVD	6/1/2017	WNV
Tulare	DLTA9506	625	Cx. quinquefasciatus	Visalia	18	GRVD	6/2/2017	WNV
Tulare	DLTA9506	682	Cx. quinquefasciatus	Visalia	20	GRVD	6/6/2017	WNV
Tulare	DLTA9506	737	Cx. quinquefasciatus	Visalia	29	GRVD	6/7/2017	WNV
Tulare	DLTA9606	633	Cx. quinquefasciatus	Farmersville	31	GRVD	6/2/2017	WNV
Tulare	DLTA9606	706	Cx. quinquefasciatus	Farmersville	50	GRVD	6/6/2017	WNV
Tulare	TLRE192507	52	Cx. quinquefasciatus	Visalia	14	GRVD	6/6/2017	WNV
Tulare	TLRE192507	53	Cx. quinquefasciatus	Visalia	35	GRVD	6/6/2017	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 or confirmation.

Dead Birds

Oral swab samples from corvids are collected onto RNA preservation cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, western equine encephalomyelitis, and St. Louis encephalitis viruses by EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

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Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

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