

California Arbovirus Surveillance Bulletin #13

Week 26 Friday, June 30, 2017



Weekly Update

Humans

One human case of West Nile virus (WNV) illness was reported this week from Kern County. To date this year, three cases of WNV illness have been reported from three counties: Kern (1), Kings (1) and Los Angeles (1). Of the three case-patients, all had non-neuroinvasive illness (West Nile fever) and dates of symptom onset ranged from March 16 to June 4. No WNV-related fatalities or asymptomatic WNV-positive blood donors have been reported this year. As of this date in 2016, no human WNV cases had been reported.

Dead Birds

A total of 12 WNV positive dead birds were reported this week from seven counties: Lake (1), Los Angeles (2), Riverside (2), Sacramento (1), San Bernardino (4), San Diego (1), and Tulare (1). **This is the first detection of WNV in Lake County this year.** To date this year, 39 birds from 12 counties have tested positive for WNV. As of this date in 2016, 372 WNV positive birds had been reported from 19 counties.

Mosquito Pools

West Nile Virus

A total of 111 WNV positive mosquito pools were reported this week from the following seven counties: Kern (7), Los Angeles (12), Orange (2), Riverside (16), San Bernardino (30), San Joaquin (1), and Tulare (43). To date this year, 412 WNV positive mosquito pools have been reported from 14 counties. As of this date in 2016, 433 WNV positive mosquito pools had been reported from 16 counties.

St. Louis Encephalitis Virus

Three mosquito pools tested positive for St. Louis encephalitis virus (SLEV) this week from Fresno (1) and Kern (2) counties. **This is the first detection of SLEV activity in Kern County in 2017.** To date this year, four mosquito pools from Fresno (2) and Kern (2) counties have tested positive for SLEV. As of this date in 2016, 22 SLEV positive mosquito pools had been reported from two counties.

Sentinel Chickens

One WNV seroconversion was reported this week from Los Angeles County; this is the first WNV positive chicken detected this year. As of this date in 2016, seven WNV seroconversions had been reported from three counties.

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2016 & 2017 YTD West Nile Virus Comparisons		
	2016	2017
Total # Dead Bird Reports	4,132	3,426
# Positive Counties	23	17
# Human Cases	0	3
# Positive Dead Birds / # Tested	372 / 1,115	39 / 815
# Positive Mosquito Pools / # Tested	433 / 16,680	412 / 16,451
# Seroconversions / # Tested	7 / 3,442	1 / 4,158

YTD WNV Activity by Element and County, 2017				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Fresno			2	
Kern	1	1	26	
Kings	1		1	
Lake		1		
Los Angeles	1	5	32	1
Merced			1	
Nevada		1		
Orange		2	2	
Riverside		3	63	
Sacramento		11	1	
San Bernardino		5	42	
San Diego		3	1	
San Joaquin		1	35	
San Mateo		1		
Stanislaus			6	
Tulare		5	199	
Yolo			1	
Totals	3	39	412	1

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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TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	1	0	0
	YTD	3	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	113	12
	YTD	815	39

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	419	1	0	0
	YTD	4,158	1	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	111 / 1,675	3 / 1,339	0 / 1,264	0 / 53	0 / 53	0 / 53
		YTD	412 / 16,451	4 / 14,317	0 / 12,849	0 / 486	0 / 486	0 / 486

New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Lake	Lake Co VCD	Clearlake	95422	Black-headed Grosbeak	6/23/2017	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91307	American Crow	6/23/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Whittier	90603	American Crow	6/19/2017	WNV
Riverside	Northwest Mosquito VCD	Corona	92883	American Crow	6/19/2017	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	6/17/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	American Crow	6/27/2017	WNV
San Bernardino	San Bernardino Vector Control Program	San Bernardino	92404	American Crow	6/21/2017	WNV

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San Bernardino	West Valley MVCD	Chino	91710	American Crow	6/23/2017	WNV
San Bernardino	West Valley MVCD	Chino	91710	Common Raven	6/22/2017	WNV
San Bernardino	West Valley MVCD	Ontario	91761	American Crow	6/26/2017	WNV
San Diego	San Diego Co VCP	Oceanside	92056	American Crow	6/23/2017	WNV
Tulare	Delta VCD	Visalia	93277	American Crow	6/25/2017	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1999	136	Cx. quinquefasciatus	Clovis	33	GRVD	6/27/2017	SLEV
Kern	DLNO79	124	Cx. quinquefasciatus	McFarland	27	GRVD	6/23/2017	WNV
Kern	KERN1002	343	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/20/2017	SLEV
Kern	KERN1144	358	Cx. tarsalis	Bakersfield	50	CO2	6/21/2017	WNV
Kern	KERN2014	355	Cx. quinquefasciatus	Bakersfield	21	GRVD	6/21/2017	WNV
Kern	KERN2016	353	Cx. quinquefasciatus	Bakersfield	33	GRVD	6/21/2017	WNV
Kern	KERN2018	351	Cx. quinquefasciatus	Bakersfield	46	GRVD	6/21/2017	SLEV
Kern	KERN2027	354	Cx. quinquefasciatus	Bakersfield	50	GRVD	6/21/2017	WNV
Kern	KERN45	350	Cx. quinquefasciatus	Buttonwillow	50	CO2	6/20/2017	WNV
Kern	KERN8	359	Cx. tarsalis	Bakersfield	50	CO2	6/22/2017	WNV
Los Angeles	GRLA2017	5406	Cx. quinquefasciatus	Toluca Lake	50	GRVD	6/22/2017	WNV
Los Angeles	GRLA2097	358	Cx. quinquefasciatus	La Mirada	50	GRVD	6/22/2017	WNV
Los Angeles	GRLA2724	5396	Cx. quinquefasciatus	Canoga Park	50	GRVD	6/21/2017	WNV
Los Angeles	GRLA3041	363	Cx. quinquefasciatus	Artesia	50	GRVD	6/22/2017	WNV
Los Angeles	LACW1002	237	Cx. tarsalis	Torrance	25	CO2	6/20/2017	WNV
Los Angeles	LACW1082	248	Cx. tarsalis	Torrance	49	CO2	6/22/2017	WNV
Los Angeles	SGVA7	1439	Cx. tarsalis	Claremont	5	GRVD	6/21/2017	WNV
Los Angeles	SGVA7	1457	Cx. quinquefasciatus	Claremont	5	GRVD	6/21/2017	WNV
Los Angeles	SGVA7	1467	Cx. quinquefasciatus	Claremont	5	GRVD	6/21/2017	WNV
Los Angeles	SGVA8	1495	Cx. quinquefasciatus	Pomona	5	GRVD	6/22/2017	WNV
Los Angeles	SGVA875	1302	Cx. quinquefasciatus	walnut	5	GRVD	6/21/2017	WNV
Los Angeles	SGVA915	1393	Cx. quinquefasciatus	San Dimas	5	GRVD	6/21/2017	WNV
Orange	ORCO1037	1879	Cx. quinquefasciatus	La Habra	22	GRVD	6/15/2017	WNV
Riverside	COAV0000	2705	Cx. tarsalis		3	CO2	6/28/2017	WNV
Riverside	COAV0000	2706	Cx. tarsalis		3	CO2	6/28/2017	WNV
Riverside	COAV0000	2707	Cx. tarsalis		50	CO2	6/28/2017	WNV
Riverside	COAV0000	2708	Cx. tarsalis		50	CO2	6/28/2017	WNV
Riverside	COAV0000	2709	Cx. tarsalis		37	CO2	6/28/2017	WNV
Riverside	COAV0000	2712	Cx. quinquefasciatus		6	BGSENT	6/28/2017	WNV
Riverside	COAV121	2701	Cx. tarsalis	Mecca	50	CO2	6/27/2017	WNV
Riverside	COAV200	2695	Cx. tarsalis	Mecca	50	CO2	6/27/2017	WNV
Riverside	COAV200	2696	Cx. tarsalis	Mecca	47	CO2	6/27/2017	WNV
Riverside	COAV35	2699	Cx. tarsalis	Mecca	48	CO2	6/27/2017	WNV
Riverside	COAV45	2700	Cx. tarsalis	Mecca	50	CO2	6/27/2017	WNV
Riverside	NWST224	123	Cx. quinquefasciatus	Corona	50	CO2	6/27/2017	WNV
Riverside	NWST26	115	Cx. tarsalis	Corona	50	CO2	6/21/2017	WNV
Riverside	NWST26	116	Cx. tarsalis	Corona	39	CO2	6/21/2017	WNV
Riverside	NWST26	117	Cx. stigmatosoma	Corona	23	CO2	6/21/2017	WNV
Riverside	RIVR32	88	Cx. tarsalis	Nuevo	48	CO2	6/21/2017	WNV
San Bernardino	WVAL2003	1331	Cx. tarsalis	Chino	6	CO2	6/28/2017	WNV
San Bernardino	WVAL2005	1203	Cx. quinquefasciatus	Chino	46	CO2	6/21/2017	WNV

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San Bernardino	WVAL2005	1339	Cx. tarsalis	Chino	50	CO2	6/28/2017	WNV
San Bernardino	WVAL2005	1341	Cx. tarsalis	Chino	50	CO2	6/28/2017	WNV
San Bernardino	WVAL2024	1245	Cx. stigmatosoma	Chino Hills	8	GRVD	6/21/2017	WNV
San Bernardino	WVAL2024	1246	Cx. quinquefasciatus	Chino Hills	23	GRVD	6/21/2017	WNV
San Bernardino	WVAL3111	1265	Cs. incidens	Upland	50	BGSENT	6/21/2017	WNV
San Bernardino	WVAL3111	1266	Cx. quinquefasciatus	Upland	55	BGSENT	6/21/2017	WNV
San Bernardino	WVAL3111	1267	Cx. quinquefasciatus	Upland	50	BGSENT	6/21/2017	WNV
San Bernardino	WVAL3124	1301	Cx. quinquefasciatus	Chino Hills	47	BGSENT	6/27/2017	WNV
San Bernardino	WVAL3128	1313	Cx. quinquefasciatus	Montclair	18	BGSENT	6/28/2017	WNV
San Bernardino	WVAL5005	1250	Cx. quinquefasciatus	Rancho Cucamonga	30	GRVD	6/21/2017	WNV
San Bernardino	WVAL5006	1069	Cx. quinquefasciatus	Rancho Cucamonga	25	GRVD	6/14/2017	WNV
San Bernardino	WVAL5006	1357	Cx. quinquefasciatus	Rancho Cucamonga	20	GRVD	6/28/2017	WNV
San Bernardino	WVAL6005	1297	Cx. quinquefasciatus	Ontario	18	GRVD	6/27/2017	WNV
San Bernardino	WVAL6005	1298	Cx. quinquefasciatus	Ontario	30	GRVD	6/27/2017	WNV
San Bernardino	WVAL6011	1231	Cx. quinquefasciatus	Ontario	25	GRVD	6/21/2017	WNV
San Bernardino	WVAL6012	1294	Cx. quinquefasciatus	Ontario	25	GRVD	6/27/2017	WNV
San Bernardino	WVAL6012	1295	Cx. quinquefasciatus	Ontario	25	GRVD	6/27/2017	WNV
San Bernardino	WVAL6015	1196	Cx. quinquefasciatus	Ontario	25	GRVD	6/21/2017	WNV
San Bernardino	WVAL7002	1277	Cx. quinquefasciatus	Montclair	26	GRVD	6/27/2017	WNV
San Bernardino	WVAL7004	1161	Cx. stigmatosoma	Montclair	50	CO2	6/21/2017	WNV
San Bernardino	WVAL9001	1291	Cx. quinquefasciatus	Upland	14	GRVD	6/27/2017	WNV
San Bernardino	WVAL9003	1148	Cx. quinquefasciatus	Upland	25	GRVD	6/21/2017	WNV
San Bernardino	WVAL9003	1155	Cx. quinquefasciatus	Upland	25	GRVD	6/21/2017	WNV
San Bernardino	WVAL9003	1283	Cx. quinquefasciatus	Upland	25	GRVD	6/27/2017	WNV
San Bernardino	WVAL9003	1285	Cx. quinquefasciatus	Upland	25	GRVD	6/27/2017	WNV
San Bernardino	WVAL9003	1288	Cx. quinquefasciatus	Upland	25	GRVD	6/27/2017	WNV
San Bernardino	WVAL9006	1171	Cx. quinquefasciatus	Upland	13	GRVD	6/21/2017	WNV
San Bernardino	WVAL9007	1158	Cx. quinquefasciatus	Upland	15	GRVD	6/21/2017	WNV
San Joaquin	SJCM8213	1503	Cx. pipiens	Lodi	11	CO2	6/27/2017	WNV
Tulare	DLNO10	133	Cx. quinquefasciatus	Earlimart	15	GRVD	6/27/2017	WNV
Tulare	DLTA8424	1316	Cx. quinquefasciatus	Visalia	28	GRVD	6/28/2017	WNV
Tulare	DLTA8425	1206	Cx. quinquefasciatus	Visalia	14	GRVD	6/22/2017	WNV
Tulare	DLTA8427	1240	Cx. quinquefasciatus	Visalia	24	GRVD	6/22/2017	WNV
Tulare	DLTA8434	1203	Cx. quinquefasciatus	Visalia	14	GRVD	6/22/2017	WNV
Tulare	DLTA8435	1254	Cx. quinquefasciatus	Visalia	19	GRVD	6/23/2017	WNV
Tulare	DLTA8519	1267	Cx. quinquefasciatus	Visalia	25	GRVD	6/23/2017	WNV
Tulare	DLTA8520	1325	Cx. quinquefasciatus	Visalia	13	GRVD	6/28/2017	WNV
Tulare	DLTA8527	1315	Cx. quinquefasciatus	Visalia	41	GRVD	6/28/2017	WNV
Tulare	DLTA8528	1242	Cx. quinquefasciatus	Visalia	12	GRVD	6/22/2017	WNV
Tulare	DLTA8528	1321	Cx. quinquefasciatus	Visalia	20	GRVD	6/28/2017	WNV
Tulare	DLTA8529	1233	Cx. quinquefasciatus	Visalia	50	GRVD	6/22/2017	WNV
Tulare	DLTA8529	1234	Cx. quinquefasciatus	Visalia	38	GRVD	6/22/2017	WNV
Tulare	DLTA8530	1312	Cx. quinquefasciatus	Visalia	50	GRVD	6/28/2017	WNV
Tulare	DLTA8530	1313	Cx. quinquefasciatus	Visalia	35	GRVD	6/28/2017	WNV
Tulare	DLTA8531	1249	Cx. quinquefasciatus	Visalia	30	GRVD	6/23/2017	WNV
Tulare	DLTA8532	1199	Cx. quinquefasciatus	Visalia	42	GRVD	6/22/2017	WNV
Tulare	DLTA8533	1247	Cx. quinquefasciatus	Visalia	44	GRVD	6/23/2017	WNV
Tulare	DLTA8533	1248	Cx. quinquefasciatus	Visalia	10	GRVD	6/23/2017	WNV
Tulare	DLTA9401	1296	Cx. quinquefasciatus	Visalia	10	GRVD	6/23/2017	WNV
Tulare	DLTA9401	1298	Cx. quinquefasciatus	Visalia	16	GRVD	6/27/2017	WNV
Tulare	DLTA9402	1205	Cx. quinquefasciatus	Visalia	10	GRVD	6/22/2017	WNV
Tulare	DLTA9402	1255	Cx. quinquefasciatus	Visalia	33	GRVD	6/23/2017	WNV
Tulare	DLTA9403	1253	Cx. quinquefasciatus	Visalia	25	GRVD	6/23/2017	WNV
Tulare	DLTA9501	1225	Cx. quinquefasciatus	Farmersville	30	GRVD	6/22/2017	WNV

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Tulare	DLTA9504	1197	Cx. quinquefasciatus	Visalia	17	GRVD	6/22/2017	WNV
Tulare	DLTA9505	1198	Cx. quinquefasciatus	Visalia	12	GRVD	6/22/2017	WNV
Tulare	DLTA9505	1251	Cx. quinquefasciatus	Visalia	15	GRVD	6/23/2017	WNV
Tulare	DLTA9505	1309	Cx. quinquefasciatus	Visalia	10	GRVD	6/28/2017	WNV
Tulare	DLTA9506	1202	Cx. quinquefasciatus	Visalia	12	GRVD	6/22/2017	WNV
Tulare	DLTA9506	1250	Cx. quinquefasciatus	Visalia	10	GRVD	6/23/2017	WNV
Tulare	DLTA9512	1323	Cx. quinquefasciatus	Farmersville	17	GRVD	6/28/2017	WNV
Tulare	DLTA9604	1326	Cx. quinquefasciatus	Exeter	10	GRVD	6/28/2017	WNV
Tulare	DLTA9606	1256	Cx. quinquefasciatus	Farmersville	50	GRVD	6/23/2017	WNV
Tulare	DLTA9607	1239	Cx. quinquefasciatus	Farmersville	22	GRVD	6/22/2017	WNV
Tulare	DLTA9610	1289	Cx. quinquefasciatus	Exeter	29	GRVD	6/23/2017	WNV
Tulare	TLRE192425	111	Cx. quinquefasciatus	Trulare	29	GRVD	6/27/2017	WNV
Tulare	TLRE192436	110	Cx. quinquefasciatus	Tulare	50	GRVD	6/27/2017	WNV
Tulare	TLRE192507	113	Cx. quinquefasciatus	Visalia	50	GRVD	6/28/2017	WNV
Tulare	TLRE192508	114	Cx. quinquefasciatus	Visalia	23	GRVD	6/28/2017	WNV
Tulare	TLRE192518	112	Cx. quinquefasciatus	Visalia	18	GRVD	6/27/2017	WNV
Tulare	TLRE202518	109	Cx. quinquefasciatus	Tulare	12	GRVD	6/27/2017	WNV
Tulare	TLRE232319	116	Cx. quinquefasciatus	Alpaugh	50	GRVD	6/29/2017	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Los Angeles	LACW1007	Baldwin Hills	6/15/2017	WNV	2542

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.

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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