

California Arbovirus Surveillance Bulletin #18

Week 31 Friday, August 3, 2018



Weekly Update

Humans

No new human cases were reported this week. In 2018, a total of 12 human West Nile virus (WNV) cases have been reported from 8 counties. Of the 12 case patients, 6 (50%) had neuroinvasive illness; no fatalities have been reported. The median age of the individuals is 58 years (range: 14–90 years) and 7 (58%) are male. Dates of symptom onset ranged from May 6 – June 24. In addition to the 12 cases, 3 asymptomatic infections have been reported from Los Angeles (1) and Stanislaus (2) counties. At this time last year, 11 human WNV cases had been reported from 4 counties.

Dead Birds

A total of 65 WNV positive dead birds were reported this week from 10 counties: Alameda (1), Butte (1), Contra Costa (1), Placer (7), Riverside (1), Sacramento (36), San Joaquin (2), Santa Clara (10), Sutter (2), and Yolo (4). **These are the first WNV positive dead birds reported from Butte and Contra Costa counties this year.** In 2018, a total of 232 WNV positive dead birds have been reported from 16 counties. At this time last year, 141 WNV positive dead birds had been reported from 22 counties.

Mosquito Pools

West Nile virus

A total of 194 WNV positive mosquito pools were reported this week from 18 counties: Butte (6), Contra Costa (1), Fresno (10), Kern (4), Kings (2), Madera (3), Merced (2), Placer (71), Riverside (3), Sacramento (19), San Bernardino (1), San Joaquin (49), Shasta (1), Stanislaus (5), Sutter (5), Tulare (4), Yolo (7), and Yuba (1). **This is the first detection of WNV activity in Kings County this year.** In 2018, 674 mosquito pools have tested positive for WNV from 24 counties. At this time last year, 1,470 WNV positive mosquito pools had been reported from 22 counties.

St. Louis encephalitis virus

A total of 35 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 5 counties: Fresno (4), Kern (5), Kings (1), Riverside (6), and Tulare (19). In 2018, 161 SLEV positive mosquito pools have been reported from 5 counties: Fresno (23), Kern (40), Kings (5), Riverside (20), and Tulare (73). At this time last year, 20 SLEV positive mosquito pools had been reported from 6 counties.

Sentinel Chickens

A total of 3 WNV seroconversions were reported this week from 3 counties: Los Angeles (1), Placer (1), and Santa Clara (1). **These are the first WNV positive chickens reported from Los Angeles and Placer counties this year.** In 2018, 14 WNV positive chickens have been reported from 4 counties. At this time last year, 40 WNV positive chickens had been reported from 5 counties.

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2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	4,578	4,762
# Positive Counties	28	28
# Human Cases	11	12
# Positive Dead Birds / # Tested	141 / 1,166	232 / 1,200
# Positive Mosquito Pools / # Tested	1,470 / 25,398	674 / 23,285
# Seroconversions / # Tested	40 / 6,364	14 / 5,517

YTD WNV Activity by Element and County, 2018				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		10	9	
Butte	1	1	18	
Contra Costa		1	3	10
El Dorado		2		
Fresno	2		26	
Humboldt		1		
Kern	2		11	
Kings			2	
Lake			1	
Los Angeles	2	3	3	1
Madera			7	
Merced			4	
Orange			4	
Placer		14	138	1
Riverside	2	3	18	
Sacramento	1	142	182	
San Bernardino	1		4	
San Diego			1	
San Joaquin	1	5	172	
San Mateo		2		
Santa Clara		29	2	2
Santa Cruz		2		
Shasta			3	
Stanislaus		1	17	
Sutter		3	16	
Tulare			9	
Yolo		13	22	
Yuba			2	
Totals	12	232	674	14

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TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	0	0	0
	YTD	12	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	128	65
	YTD	1,200	232

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	402	3	0	0
	YTD	5,517	14	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	194 / 1,954	35 / 1,567	0 / 1,386	0 / 94	0 / 94	0 / 94
		YTD	674 / 23,285	161 / 18,207	0 / 16,570	0 / 661	0 / 661	0 / 661

New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Union City	94587	American Crow	7/30/2018	WNV
Butte	Butte Co MVCD	Oroville	95966	California Scrub-Jay	7/24/2018	WNV
Contra Costa	Contra Costa MVCD	Brentwood	94513	California Scrub-Jay	7/29/2018	WNV
Placer	Placer MVCD	Auburn	95603	Black-headed Grosbeak	7/31/2018	WNV
Placer	Placer MVCD	Loomis	95650	California Scrub-Jay	7/30/2018	WNV
Placer	Placer MVCD	Rocklin	95765	Unknown - songbird	7/27/2018	WNV
Placer	Placer MVCD	Roseville	95661	American Crow	7/31/2018	WNV
Placer	Placer MVCD	Roseville	95678	American Crow	7/27/2018	WNV
Placer	Placer MVCD	Roseville	95678	California Scrub-Jay	8/2/2018	WNV
Placer	Placer MVCD	Roseville	95747	Unknown	7/31/2018	WNV
Riverside	Northwest Mosquito VCD	Riverside	92503	American Crow	7/20/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	California Scrub-Jay	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	California Scrub-Jay	7/26/2018	WNV

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Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95610	California Scrub-Jay	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	California Scrub-Jay	7/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95757	Northern Mockingbird	7/24/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	California Scrub-Jay	7/23/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Freeport	95832	House Finch	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Isleton	95641	American Crow	7/24/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95670	Yellow-billed Magpie	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95742	House Finch	7/27/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Rio Linda	95673	California Scrub-Jay	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Rio Linda	95673	California Scrub-Jay	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95816	House Finch	7/30/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95817	American Crow	7/27/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95820	American Crow	7/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Yellow-billed Magpie	7/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	American Crow	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	House Finch	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	House Finch	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	Northern Mockingbird	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95824	House Finch	7/30/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95827	American Crow	7/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95827	California Scrub-Jay	7/25/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95828	Hooded Oriole	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	7/24/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	California Scrub-Jay	7/24/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	California Scrub-Jay	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	California Scrub-Jay	7/28/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95832	California Scrub-Jay	7/26/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95834	House Finch	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95835	American Crow	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95835	American Crow	7/30/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95841	Yellow-billed Magpie	7/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Brewer's Blackbird	7/25/2018	WNV
San Joaquin	San Joaquin Co MVCD	Lodi	95240	Sparrow	7/27/2018	WNV
San Joaquin	San Joaquin Co MVCD	Stockton	95204	California Scrub-Jay	7/27/2018	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94040	Finch	7/30/2018	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	Chestnut-Backed Chickadee	7/28/2018	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95116	Lewis's Woodpecker	8/1/2018	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	Unknown - songbird	7/29/2018	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	8/1/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95050	House Finch	8/2/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95050	Unknown - songbird	7/25/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	7/26/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	8/2/2018	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	7/25/2018	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95991	Yellow-billed Magpie	7/30/2018	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95993	American Crow	7/30/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	California Scrub-Jay	7/26/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	California Scrub-Jay	7/29/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	California Scrub-Jay	7/29/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	Northern Mockingbird	7/28/2018	WNV

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Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO113	227	Cx. tarsalis	Gridley	50	CO2	7/25/18	WNV
Butte	BUCO113	228	Cx. tarsalis	Gridley	50	CO2	7/25/18	WNV
Butte	BUCO61	233	Cx. tarsalis	Chico	50	CO2	7/25/18	WNV
Butte	BUCO68	240	Cx. tarsalis	Gridley	50	CO2	7/30/18	WNV
Butte	BUCO68	241	Cx. tarsalis	Gridley	50	CO2	7/30/18	WNV
Butte	BUCO84	216	Cx. tarsalis	Nelson	50	CO2	7/23/18	WNV
Contra Costa	CNTR4883	224	Cx. pipiens	Discovery Bay	10	CO2	7/30/18	WNV
Fresno	CNSL115	213	Cx. quinquefasciatus	Clovis	45	GRVD	7/26/18	WNV
Fresno	CNSL1365	203	Cx. quinquefasciatus	Clovis	50	GRVD	7/25/18	SLEV
Fresno	CNSL1365	203	Cx. quinquefasciatus	Clovis	50	GRVD	7/25/18	WNV
Fresno	CNSL1614	211	Cx. quinquefasciatus	Clovis	50	GRVD	7/26/18	WNV
Fresno	CNSL1716	212	Cx. quinquefasciatus	Clovis	50	GRVD	7/26/18	WNV
Fresno	CNSL2081	204	Cx. quinquefasciatus	Clovis	19	GRVD	7/25/18	SLEV
Fresno	CNSL2085	208	Cx. quinquefasciatus	Sanger	13	GRVD	7/25/18	SLEV
Fresno	FRNO15	451	Cx. quinquefasciatus	Fresno	50	BGSENT	8/1/18	WNV
Fresno	FRNO189	439	Cx. quinquefasciatus		50	GRVD	7/31/18	WNV
Fresno	FRNO235	448	Cx. quinquefasciatus	Fresno	21	GRVD	8/1/18	SLEV
Fresno	FRNO8	438	Cx. quinquefasciatus	Fresno	43	GRVD	7/31/18	WNV
Fresno	FRNO8011	441	Cx. quinquefasciatus	Fresno	15	GRVD	7/31/18	WNV
Fresno	FRWS4101	194	Cx. tarsalis	Mendota	50	CO2	7/31/18	WNV
Fresno	FRWS5302	190	Cx. tarsalis	Helm	50	CO2	7/31/18	WNV
Kern	DLNO105	140	Cx. quinquefasciatus	Delano	50	GRVD	7/31/18	WNV
Kern	DLNO43	138	Cx. quinquefasciatus	McFarland	27	GRVD	7/27/18	WNV
Kern	KERN115	351	Cx. tarsalis	Bakersfield	50	CO2	7/24/18	WNV
Kern	KERN2007	368	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/27/18	SLEV
Kern	KERN2014	354	Cx. quinquefasciatus	Bakersfield	38	GRVD	7/25/18	SLEV
Kern	KERN2018	358	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/25/18	SLEV
Kern	KERN2027	353	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/25/18	SLEV
Kern	KERN30	365	Cx. quinquefasciatus	Wasco	50	CO2	7/26/18	WNV
Kern	KERN32	370	Cx. tarsalis	Arvin	50	CO2	7/27/18	SLEV
Kings	KNGS3022	97	Cx. tarsalis	Hanford	47	CO2	7/27/18	WNV
Kings	KNGS5518	93	Cx. pipiens		24	BGSENT	7/27/18	WNV
Kings	KNGS8033	80	Cx. tarsalis	Hanford	51	CO2	7/24/18	SLEV
Madera	MADR12	100	Cx. tarsalis	Madera	38	CO2	7/25/18	WNV
Madera	MADR195	103	Cx. tarsalis	Madera	30	CO2	7/25/18	WNV
Madera	MADR3334	99	Cx. tarsalis	Madera	50	CO2	7/24/18	WNV
Merced	MERC103	233	Cx. pipiens	Atwater	9	CO2	7/31/18	WNV
Merced	MERC404	252	Cx. tarsalis	Hilmar	22	CO2	8/2/18	WNV
Placer	PLCR1023	1142	Cx. tarsalis	Roseville	22	CO2	7/31/18	WNV
Placer	PLCR1113	1226	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1227	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1228	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1229	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1230	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1231	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1233	Cx. tarsalis	Pleasant Grove	50	CO2	7/31/18	WNV
Placer	PLCR1113	1234	Cx. tarsalis	Pleasant Grove	20	CO2	7/31/18	WNV
Placer	PLCR1114	1209	Cx. pipiens	Lincoln	14	CO2	7/31/18	WNV
Placer	PLCR1114	1210	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1211	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV

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Placer	PLCR1114	1212	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1213	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1214	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1215	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1216	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1217	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1218	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1219	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1220	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1223	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1224	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR1114	1225	Cx. tarsalis	Lincoln	14	CO2	7/31/18	WNV
Placer	PLCR139	1153	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1154	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1155	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1156	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1157	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1160	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR139	1161	Cx. tarsalis	Roseville	43	CO2	7/31/18	WNV
Placer	PLCR17	1309	Cx. tarsalis	Sheridan	50	CO2	8/2/18	WNV
Placer	PLCR17	1310	Cx. tarsalis	Sheridan	30	CO2	8/2/18	WNV
Placer	PLCR191218	1235	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191218	1237	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191218	1238	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191218	1239	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191218	1241	Cx. tarsalis		48	CO2	7/31/18	WNV
Placer	PLCR191350	1208	Cx. pipiens		23	CO2	7/31/18	WNV
Placer	PLCR191373	1249	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1250	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1251	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1252	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1253	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1254	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1256	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1257	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR191373	1258	Cx. tarsalis		38	CO2	7/31/18	WNV
Placer	PLCR191998	1194	Cx. tarsalis	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR194232	1199	Cx. tarsalis		50	CO2	7/31/18	WNV
Placer	PLCR194232	1206	Cx. tarsalis		17	CO2	7/31/18	WNV
Placer	PLCR195967	1294	Cx. pipiens		3	CO2	7/27/18	WNV
Placer	PLCR30	1259	Cx. pipiens	Lincoln	50	CO2	7/31/18	WNV
Placer	PLCR411	1173	Cx. pipiens	Roseville	6	CO2	7/31/18	WNV
Placer	PLCR411	1174	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1175	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1176	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1177	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1178	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1179	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1180	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1181	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1182	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1183	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1184	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1185	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV

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Placer	PLCR411	1186	Cx. tarsalis	Roseville	50	CO2	7/31/18	WNV
Placer	PLCR411	1187	Cx. tarsalis	Roseville	8	CO2	7/31/18	WNV
Placer	PLCR525	1247	Cx. pipiens	Lincoln	40	CO2	7/31/18	WNV
Placer	PLCR668	1169	Cx. tarsalis	Elverta	50	CO2	7/31/18	WNV
Placer	PLCR668	1171	Cx. tarsalis	Elverta	50	CO2	7/31/18	WNV
Riverside	COAV121	3159	Cx. tarsalis	Mecca	26	CO2	7/31/18	WNV
Riverside	COAV121	3223	Cx. tarsalis	Mecca	43	CO2	8/2/18	SLEV
Riverside	COAV123	3161	Cx. tarsalis	Mecca	46	CO2	7/31/18	SLEV
Riverside	COAV200	3158	Cx. tarsalis	Mecca	31	CO2	7/31/18	SLEV
Riverside	COAV45	3160	Cx. tarsalis	Mecca	19	CO2	7/31/18	SLEV
Riverside	COAV46	3152	Cx. tarsalis	Mecca	11	CO2	7/31/18	SLEV
Riverside	COAV48	3151	Cx. tarsalis	Mecca	14	CO2	7/31/18	SLEV
Riverside	COAV48	3151	Cx. tarsalis	Mecca	14	CO2	7/31/18	WNV
Riverside	NWST248	75	Cx. quinquefasciatus	Biscayne Ave	32	CO2	7/27/18	WNV
Sacramento	SAYO202006	4003	Cx. tarsalis	Sacramento	50	CO2	7/31/18	WNV
Sacramento	SAYO202006	4006	Cx. tarsalis	Sacramento	50	CO2	7/31/18	WNV
Sacramento	SAYO202018	3991	Cx. tarsalis	Sacramento	18	CO2	7/31/18	WNV
Sacramento	SAYO204009	3916	Cx. pipiens	Citrus Heights	5	GRVD	7/27/18	WNV
Sacramento	SAYO204013	3939	Cx. pipiens	Citrus Heights	12	GRVD	7/27/18	WNV
Sacramento	SAYO204020	4013	Cx. pipiens	Sacramento	21	CO2	7/31/18	WNV
Sacramento	SAYO204051	3910	Cx. pipiens	Citrus Heights	20	GRVD	7/27/18	WNV
Sacramento	SAYO205001	3948	Cx. pipiens	Orangevale	38	GRVD	7/31/18	WNV
Sacramento	SAYO212033	3981	Cx. pipiens	Sacramento	45	GRVD	7/31/18	WNV
Sacramento	SAYO213009	3953	Cx. pipiens	Sacramento	23	GRVD	7/31/18	WNV
Sacramento	SAYO214020	3944	Cx. pipiens	Rancho Cordova	4	GRVD	7/27/18	WNV
Sacramento	SAYO222065	4096	Cx. pipiens	Sacramento	14	GRVD	7/31/18	WNV
Sacramento	SAYO232020	3783	Cx. pipiens	Sacramento	1	GRVD	7/26/18	WNV
Sacramento	SAYO232028	3891	Cx. tarsalis	Sacramento	50	CO2	7/27/18	WNV
Sacramento	SAYO232038	4106	Cx. pipiens	Sacramento	24	CO2	7/31/18	WNV
Sacramento	SAYO233009	3754	Cx. tarsalis	Elk Grove	15	CO2	7/26/18	WNV
Sacramento	SAYO243042	3851	Cx. pipiens	Elk Grove	50	CO2	7/27/18	WNV
Sacramento	SAYO245026	3876	Cx. tarsalis	Wilton	41	CO2	7/27/18	WNV
Sacramento	SAYO271003	3931	Cx. tarsalis	Isleton	50	CO2	7/27/18	WNV
San Bernardino	WVAL7002	1016	Cx. quinquefasciatus	Montclair	52	GRVD	7/24/18	WNV
San Joaquin	SJCM8008	1513	Cx. tarsalis	Manteca	49	CO2	7/30/18	WNV
San Joaquin	SJCM8010	1534	Cx. tarsalis	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8010	1535	Cx. tarsalis	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8010	1537	Cx. pipiens	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8010	1538	Cx. pipiens	Ripon	15	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1454	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1455	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1456	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1457	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1459	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1461	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1462	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1463	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1464	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1465	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8018	1466	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8022	1561	Cx. tarsalis	Holt	50	CO2	7/30/18	WNV
San Joaquin	SJCM8022	1562	Cx. tarsalis	Holt	50	CO2	7/30/18	WNV
San Joaquin	SJCM8027	1540	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8027	1541	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV

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San Joaquin	SJCM8027	1542	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8027	1543	Cx. tarsalis	Stockton	32	CO2	7/30/18	WNV
San Joaquin	SJCM8027	1544	Cx. pipiens	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8094	1555	Cx. tarsalis	Manteca	50	CO2	7/30/18	WNV
San Joaquin	SJCM8111	1571	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8111	1574	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8160	1480	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8161	1578	Cx. tarsalis	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8161	1580	Cx. pipiens	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8161	1581	Cx. pipiens	Ripon	50	CO2	7/30/18	WNV
San Joaquin	SJCM8199	1522	Cx. tarsalis	Manteca	50	CO2	7/30/18	WNV
San Joaquin	SJCM8199	1523	Cx. tarsalis	Manteca	50	CO2	7/30/18	WNV
San Joaquin	SJCM8199	1527	Cx. pipiens	Manteca	42	CO2	7/30/18	WNV
San Joaquin	SJCM8204	1476	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8204	1477	Cx. tarsalis	Stockton	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1486	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1487	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1488	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1489	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1490	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8206	1491	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8208	1597	Cx. pipiens	Lodi	18	CO2	8/2/18	WNV
San Joaquin	SJCM8209	1600	Cx. tarsalis	Lodi	11	CO2	8/2/18	WNV
San Joaquin	SJCM8209	1601	Cx. pipiens	Lodi	12	CO2	8/2/18	WNV
San Joaquin	SJCM8213	1496	Cx. tarsalis	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8213	1500	Cx. tarsalis	Lodi	20	CO2	7/30/18	WNV
San Joaquin	SJCM8213	1506	Cx. pipiens	Lodi	50	CO2	7/30/18	WNV
San Joaquin	SJCM8216	1560	Cx. tarsalis	Tracy	15	CO2	7/30/18	WNV
San Joaquin	SJCM8219	1551	Cx. tarsalis	Stockton	21	CO2	7/30/18	WNV
Shasta	SHAS110	428	Cx. tarsalis	Redding	40	CO2	7/31/18	WNV
Stanislaus	TRLK1214	839	Cx. pipiens	Turlock	50	CO2	7/31/18	WNV
Stanislaus	TRLK1673	886	Cx. tarsalis	Patterson	33	CO2	7/31/18	WNV
Stanislaus	TRLK432	848	Cx. pipiens	Turlock	50	CO2	7/31/18	WNV
Stanislaus	TRLK516	871	Cx. tarsalis	Denair	50	CO2	7/31/18	WNV
Stanislaus	TRLK516	872	Cx. pipiens	Denair	13	CO2	7/31/18	WNV
Sutter	SUYA15	251	Cx. tarsalis	Robbins	48	CO2	7/31/18	WNV
Sutter	SUYA15	252	Cx. tarsalis	Robbins	48	CO2	7/31/18	WNV
Sutter	SUYA20	266	Cx. tarsalis	Meridian	26	CO2	8/1/18	WNV
Sutter	SUYA63	239	Cx. tarsalis	Live Oak	50	REST	7/30/18	WNV
Sutter	SUYA63	240	Cx. tarsalis	Live Oak	50	REST	7/30/18	WNV
Tulare	DLTA6236	2430	Cx. quinquefasciatus	Kingsburg	50	CO2	7/26/18	WNV
Tulare	DLTA7520	2298	Cx. quinquefasciatus		50	CO2	7/24/18	SLEV
Tulare	DLTA8419	2632	Cx. quinquefasciatus	Goshen	26	GRVD	8/2/18	SLEV
Tulare	DLTA8422	2341	Cx. quinquefasciatus	Goshen	13	GRVD	7/24/18	SLEV
Tulare	DLTA8422	2623	Cx. quinquefasciatus	Goshen	29	GRVD	8/2/18	SLEV
Tulare	DLTA8424	2401	Cx. quinquefasciatus	Visalia	16	GRVD	7/25/18	SLEV
Tulare	DLTA8424	2631	Cx. quinquefasciatus	Visalia	27	GRVD	8/2/18	SLEV
Tulare	DLTA8519	2238	Cx. quinquefasciatus	Visalia	40	GRVD	7/20/18	SLEV
Tulare	DLTA8519	2602	Cx. quinquefasciatus	Visalia	24	GRVD	8/1/18	SLEV
Tulare	DLTA8528	2512	Cx. quinquefasciatus	Visalia	20	GRVD	7/31/18	SLEV
Tulare	DLTA8533	2443	Cx. quinquefasciatus	Visalia	19	GRVD	7/26/18	SLEV
Tulare	DLTA8534	2445	Cx. quinquefasciatus	Visalia	43	GRVD	7/26/18	SLEV
Tulare	DLTA9401	2383	Cx. quinquefasciatus	Visalia	14	GRVD	7/25/18	SLEV
Tulare	DLTA9401	2568	Cx. quinquefasciatus	Visalia	10	GRVD	8/1/18	SLEV

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Tulare	DLTA9403	2209	Cx. quinquefasciatus	Visalia	17	GRVD	7/20/18	SLEV
Tulare	DLTA9501	2485	Cx. quinquefasciatus	Farmersville	40	GRVD	7/27/18	SLEV
Tulare	DLTA9504	2210	Cx. quinquefasciatus	Visalia	12	GRVD	7/20/18	SLEV
Tulare	DLTA9505	2387	Cx. quinquefasciatus	Visalia	10	GRVD	7/25/18	SLEV
Tulare	DLTA9511	2236	Cx. quinquefasciatus	Famersville	37	GRVD	7/20/18	SLEV
Tulare	DLTA9511	2488	Cx. quinquefasciatus	Famersville	37	GRVD	7/27/18	WNV
Tulare	DLTA9512	2399	Cx. quinquefasciatus	Farmersville	29	GRVD	7/25/18	SLEV
Tulare	DLTA9512	2595	Cx. quinquefasciatus	Farmersville	25	GRVD	8/1/18	WNV
Tulare	DLTA9606	2338	Cx. quinquefasciatus	Farmersville	50	GRVD	7/24/18	WNV
Yolo	SAYO103007	4062	Cx. pipiens	Dunnigan	18	CO2	7/31/18	WNV
Yolo	SAYO115008	4033	Cx. tarsalis	Woodland	50	CO2	7/31/18	WNV
Yolo	SAYO115008	4035	Cx. tarsalis	Woodland	50	CO2	7/31/18	WNV
Yolo	SAYO135005	3803	Cx. pipiens	Woodland	7	GRVD	7/27/18	WNV
Yolo	SAYO146002	3985	Cx. tarsalis	Davis	50	CO2	7/31/18	WNV
Yolo	SAYO146002	3988	Cx. tarsalis	Davis	50	CO2	7/31/18	WNV
Yolo	SAYO146002	3989	Cx. tarsalis	Davis	50	CO2	7/31/18	WNV
Yuba	SUYA40	262	Cx. tarsalis	Linda	22	CO2	8/1/18	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Los Angeles	LACW1006	Playa Del Rey	7/27/2018	WNV	1632
Placer	PLCR757	Auburn	7/27/2018	WNV	1869
Santa Clara	STCL28	Palo Alto	7/30/2018	WNV	2005

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.

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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 and SLEV 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://wwwn.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.