

California Arbovirus Surveillance Bulletin #23

Week 36 Friday, September 7, 2018



Weekly Update

Humans

A total of 14 new human cases of West Nile virus (WNV) illness were reported this week from 8 counties: Amador (1), Glenn (1), Kern (1), Los Angeles (6), Riverside (1), Stanislaus (1), Yolo (2), and Yuba (1). **These are the first WNV human cases reported from Amador, Yolo, and Yuba counties this year.** In 2018, a total of 56 human WNV cases have been reported from 21 counties. Of the 56 case patients, 38 (68%) had neuroinvasive illness; no fatalities have been reported. The median age of the individuals is 56 years (range: 1–90 years) and 37 (67%) are male. Dates of symptom onset ranged from May 6 – August 23. In addition to the 56 cases, 17 asymptomatic infections have been reported from Butte (4), Fresno (1), Contra Costa (1), Los Angeles (3), Orange (2), Sacramento (1), San Joaquin (1), Stanislaus (3), and Yolo (1) counties. At this time last year, 108 human WNV cases had been reported from 15 counties.

Dead Birds

A total of 25 WNV positive dead birds were reported this week from 9 counties: Alameda (1), Contra Costa (1), Orange (2), Placer (3), Riverside (1), Sacramento (8), San Joaquin (1), Santa Clara (4), and Yolo (4). In 2018, a total of 422 WNV positive dead birds have been reported from 18 counties. At this time last year, 298 WNV positive dead birds had been reported from 33 counties.

Mosquito Pools

West Nile virus

A total of 150 WNV positive mosquito pools were reported this week from 13 counties: Butte (2), Fresno (19), Kings (3), Los Angeles (9), Madera (7), Placer (7), Riverside (3), Sacramento (9), San Joaquin (62), Stanislaus (17), Sutter (1), Tulare (6), and Yolo (5). In 2018, 1,606 mosquito pools have tested positive for WNV from 28 counties. At this time last year, 2,828 WNV positive mosquito pools had been reported from 24 counties.

St. Louis encephalitis virus

A total of 31 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 6 counties: Fresno (2), Kern (1), Kings (6), Madera (1), Riverside (6), and Tulare (15). In 2018, 295 SLEV positive mosquito pools have been reported from 8 counties: Fresno (42), Imperial (3), Kern (57), Kings (20), Los Angeles (1), Madera (2), Riverside (40), and Tulare (130). At this time last year, 109 SLEV positive mosquito pools had been reported from 11 counties.

Sentinel Chickens

West Nile virus

A total of 20 WNV seroconversions were reported this week from 14 flocks located in 7 counties: Butte (1) Colusa (1), Merced (5), Shasta (2), Sutter (8), Yolo (2), and Yuba (1). These are the first WNV positive chickens reported from Yolo County this year. In 2018, 104 WNV positive chickens have been reported from 13 counties. At this time last year, 189 WNV positive chickens had been reported from 12 counties.

St. Louis encephalitis virus

One SLEV seroconversion was reported this week from Merced County. **This is the first detection of SLEV activity in Merced County this year.** In 2018, 1 sentinel chicken has tested positive for SLEV from 1 county. At this time last year, 7 SLEV positive chickens had been reported from 2 counties.

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2017 & 2018 YTD West Nile Virus Comparisons		
	2017	2018
Total # Dead Bird Reports	5,853	6,278
# Positive Counties	40	37
# Human Cases	108	56
# Positive Dead Birds / # Tested	298 / 1,496	422 / 1,664
# Positive Mosquito Pools / # Tested	2,828 / 33,559	1,606 / 31,972
# Seroconversions / # Tested	189 / 8,362	104 / 7,217

YTD WNV Activity by Element and County, 2018					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			14	11	
Amador	1				
Butte	6		3	44	32
Colusa					2
Contra Costa	1		11	15	13
El Dorado			2		
Fresno	3			101	
Glenn	2			4	
Humboldt			1		
Imperial				1	
Kern	3	1		38	
Kings				19	
Lake				4	1
Los Angeles	12		8	32	7
Madera				41	
Merced	1	1		8	14
Orange	1		5	40	
Placer		1	39	223	3
Riverside	6		5	34	
Sacramento	1	2	229	275	
San Benito					1
San Bernardino	1			9	
San Diego				3	
San Joaquin	4		11	418	
San Mateo			5	2	
Santa Clara			43	4	5
Santa Cruz			2		
Shasta	1	1	3	7	3
Solano				2	
Stanislaus	6	1	1	93	
Sutter			4	28	19
Tehama	1				
Tulare	1			57	
Tuolumne	1				
Ventura	1				
Yolo	2		36	85	2
Yuba	1			8	2
Totals	56	7	422	1,606	104

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TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	14	0	0
	YTD	56	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	61	25
	YTD	1,664	422

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	308	20	1	0
	YTD	7,217	104	1	0

Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		150 / 1,300	31 / 1,243	0 / 1,051	0 / 0	0 / 0	0 / 0
		YTD	1,606 / 31,972	295 / 25,356	0 / 21,727	0 / 1,017	0 / 1,017

New Positives

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Livermore	94551	American Crow	9/7/2018	WNV
Contra Costa	Contra Costa MVCD	Discovery Bay	94505	American Crow	8/30/2018	WNV
Orange	Orange Co VCD	Cypress	90630	American Crow	8/26/2018	WNV
Orange	Orange Co VCD	Fullerton	92833	American Crow	8/30/2018	WNV
Placer	Placer MVCD	Granite Bay	95746	American Crow	8/31/2018	WNV
Placer	Placer MVCD	Lincoln	95648	Unknown	9/4/2018	WNV
Placer	Placer MVCD	Rocklin	95677	California Scrub-Jay	9/1/2018	WNV
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	8/21/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	8/30/2018	WNV

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Sacramento	Sacramento-Yolo MVCD	Folsom	95630	American Crow	9/3/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95670	Cooper's Hawk	8/30/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95820	Mourning Dove	9/1/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Yellow-billed Magpie	9/1/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95833	American Crow	8/29/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95835	Mourning Dove	9/3/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	American Crow	8/28/2018	WNV
San Joaquin	San Joaquin Co MVCD	Tracy	95377	California Scrub-Jay	8/31/2018	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	9/3/2018	WNV
Santa Clara	Santa Clara Co VCD	san Martin	95046	American Crow	9/6/2018	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	9/4/2018	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	American Crow	8/28/2018	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	8/29/2018	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	8/30/2018	WNV
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	California Scrub-Jay	8/30/2018	WNV
Yolo	Sacramento-Yolo MVCD	Woodland	95776	American Crow	9/1/2018	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO127	344	Cx. tarsalis	Oroville	50	CO2	9/3/18	WNV
Butte	BUCO127	345	Cx. tarsalis	Oroville	50	CO2	9/3/18	WNV
Fresno	CNSL1117	330	Cx. quinquefasciatus	Fresno	40	GRVD	8/31/18	WNV
Fresno	CNSL1773	321	Cx. quinquefasciatus	Clovis	50	GRVD	8/30/18	WNV
Fresno	CNSL1895	323	Cx. quinquefasciatus	Clovis	16	GRVD	8/30/18	WNV
Fresno	CNSL8087	320	Cx. quinquefasciatus	Clovis	16	GRVD	8/29/18	WNV
Fresno	FRWS100006	295	Cx. tarsalis	Dos Palos	50	CO2	9/5/18	WNV
Fresno	FRWS100007	292	Cx. quinquefasciatus	Firebaugh	34	OTHER	9/5/18	SLEV
Fresno	FRWS200003	286	Cx. tarsalis	Dos Palos	31	CO2	9/5/18	WNV
Fresno	FRWS300031	297	Cx. tarsalis		50	CO2	9/5/18	WNV
Fresno	FRWS300031	299	Cx. tarsalis		34	CO2	9/5/18	WNV
Fresno	FRWS3104	289	Cx. tarsalis	Firebaugh	50	CO2	9/5/18	WNV
Fresno	FRWS3201	290	Cx. quinquefasciatus	Firebaugh	32	CO2	9/5/18	WNV
Fresno	FRWS3201	291	Cx. tarsalis	Firebaugh	46	CO2	9/5/18	WNV
Fresno	FRWS400017	309	Cx. tarsalis	Mendota	50	CO2	9/5/18	WNV
Fresno	FRWS400017	310	Cx. tarsalis	Mendota	50	CO2	9/5/18	WNV
Fresno	FRWS400017	311	Cx. tarsalis	Mendota	50	CO2	9/5/18	WNV
Fresno	FRWS4102	304	Cx. tarsalis	Kerman	50	CO2	9/5/18	WNV
Fresno	FRWS4102	305	Cx. tarsalis	Kerman	50	CO2	9/5/18	WNV
Fresno	FRWS4102	306	Cx. quinquefasciatus	Kerman	50	CO2	9/5/18	WNV
Fresno	FRWS4104	302	Cx. quinquefasciatus	Kerman	30	GRVD	9/5/18	WNV
Fresno	FRWS4110	308	Cx. tarsalis	Mendota	50	CO2	9/5/18	SLEV
Fresno	FRWS5110	301	Cx. quinquefasciatus	Tranquillity	35	GRVD	9/5/18	WNV
Kern	WEST6290	72	Cx. tarsalis	Lost Hills	50	CO2	9/5/18	SLEV
Kings	KNGS3022	210	Cx. tarsalis	Hanford	50	CO2	8/28/18	SLEV
Kings	KNGS4444	197	Cx. pipiens		30	BGSENT	8/27/18	SLEV
Kings	KNGS4445	198	Cx. pipiens		18	BGSENT	8/27/18	SLEV
Kings	KNGS4445	200	Cx. pipiens		19	BGSENT	8/27/18	SLEV
Kings	KNGS4447	201	Cx. pipiens		47	BGSENT	8/27/18	WNV
Kings	KNGS4447	203	Cx. pipiens		32	BGSENT	8/27/18	SLEV
Kings	KNGS55011	222	Cx. tarsalis	Hanford	14	BGSENT	8/30/18	SLEV

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Kings	KNGS55122	215	Cx. pipiens	Hanford	23	BGSENT	8/29/18	WNV
Kings	KNGS8022	206	Cx. tarsalis	Lemoore	49	CO2	8/27/18	WNV
Los Angeles	GRLA2023	5761	Cx. quinquefasciatus	Reseda	16	GRVD	8/28/18	WNV
Los Angeles	GRLA2032	5762	Cx. quinquefasciatus	Northridge	39	GRVD	8/28/18	WNV
Los Angeles	GRLA2346	770	Cx. quinquefasciatus	Montebello	50	GRVD	8/28/18	WNV
Los Angeles	GRLA2555	5759	Cx. quinquefasciatus	Encino	35	GRVD	8/28/18	WNV
Los Angeles	GRLA2574	5775	Cx. quinquefasciatus	Sherman Oaks	50	GRVD	8/30/18	WNV
Los Angeles	GRLA2650	5778	Cx. quinquefasciatus	Encino	50	GRVD	8/30/18	WNV
Los Angeles	GRLA3034	5782	Cx. quinquefasciatus	North Hills	42	GRVD	8/30/18	WNV
Los Angeles	GRLA3066	5771	Cx. quinquefasciatus	North Hollywood	50	BGSENT	8/29/18	WNV
Los Angeles	GRLA3102	5767	Cx. quinquefasciatus	Studio City	27	GRVD	8/29/18	WNV
Madera	MADR12	226	Cx. quinquefasciatus	Madera	50	CO2	8/29/18	WNV
Madera	MADR192	222	Cx. quinquefasciatus	Madera	30	CO2	8/29/18	WNV
Madera	MADR195	223	Cx. quinquefasciatus	Madera	47	CO2	8/29/18	WNV
Madera	MADR198	225	Cx. tarsalis	Madera	25	CO2	8/29/18	WNV
Madera	MADR265	239	Cx. quinquefasciatus	Madera	37	CO2	8/31/18	SLEV
Madera	MADR307	244	Cx. tarsalis	Madera	36	CO2	8/31/18	WNV
Madera	MADR894	220	Cx. tarsalis	Mendota	50	CO2	8/28/18	WNV
Madera	MADR904	218	Cx. quinquefasciatus	Madera	50	CO2	8/28/18	WNV
Placer	PLCR1023	2014	Cx. tarsalis	Roseville	10	CO2	9/4/18	WNV
Placer	PLCR110	1957	Cx. stigmatosoma	Roseville	28	CO2	8/29/18	WNV
Placer	PLCR516	2018	Cx. tarsalis	Roseville	16	CO2	9/4/18	WNV
Placer	PLCR525	2040	Cx. tarsalis	Lincoln	50	CO2	9/5/18	WNV
Placer	PLCR525	2041	Cx. tarsalis	Lincoln	23	CO2	9/5/18	WNV
Placer	PLCR86	2002	Cx. pipiens	Rocklin	49	CO2	9/4/18	WNV
Placer	PLCR86	2004	Cx. stigmatosoma	Rocklin	24	CO2	9/4/18	WNV
Riverside	COAV17	3702	Cx. tarsalis	Mecca	35	CO2	9/5/18	SLEV
Riverside	COAV34	3697	Cx. tarsalis	Mecca	34	CO2	9/5/18	SLEV
Riverside	COAV35	3689	Cx. tarsalis	Mecca	50	CO2	9/5/18	SLEV
Riverside	COAV35	3690	Cx. tarsalis	Mecca	50	CO2	9/5/18	SLEV
Riverside	COAV35	3690	Cx. tarsalis	Mecca	50	CO2	9/5/18	WNV
Riverside	COAV35	3692	Cx. tarsalis	Mecca	35	CO2	9/5/18	SLEV
Riverside	COAV540	3701	Cx. tarsalis	Mecca	50	CO2	9/5/18	SLEV
Riverside	NWST261	141	Cx. quinquefasciatus	Riverside	50	CO2	8/30/18	WNV
Riverside	NWST58	139	Cx. quinquefasciatus	Riverside	35	CO2	8/29/18	WNV
Sacramento	SAYO201006	5636	Cx. tarsalis	Sacramento	50	CO2	9/5/18	WNV
Sacramento	SAYO213017	5614	Cx. pipiens	Sacramento	46	GRVD	9/5/18	WNV
Sacramento	SAYO213048	5616	Cx. pipiens	Sacramento	5	CO2	9/5/18	WNV
Sacramento	SAYO214020	5512	Cx. pipiens	Rancho Cordova	11	GRVD	8/31/18	WNV
Sacramento	SAYO222032	5525	Cx. pipiens	Sacramento	9	GRVD	9/5/18	WNV
Sacramento	SAYO243001	5413	Cx. pipiens	Elk Grove	50	CO2	8/30/18	WNV
Sacramento	SAYO243009	5563	Cx. tarsalis	Elk Grove	32	CO2	9/5/18	WNV
Sacramento	SAYO243009	5565	Cx. pipiens	Elk Grove	50	CO2	9/5/18	WNV
Sacramento	SAYO243009	5567	Cx. pipiens	Elk Grove	13	GRVD	9/5/18	WNV
San Joaquin	SJCM8004	2169	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8004	2170	Cx. tarsalis	Lodi	39	CO2	9/5/18	WNV
San Joaquin	SJCM8004	2171	Cx. pipiens	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8005	2082	Cx. tarsalis	Stockton	48	CO2	9/5/18	WNV
San Joaquin	SJCM8009	2084	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2153	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2154	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2155	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2156	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2157	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV

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San Joaquin	SJCM8018	2158	Cx. tarsalis	Stockton	44	CO2	9/5/18	WNV
San Joaquin	SJCM8018	2159	Cx. pipiens	Stockton	23	CO2	9/5/18	WNV
San Joaquin	SJCM8022	2100	Cx. pipiens	Holt	17	CO2	9/5/18	WNV
San Joaquin	SJCM8029	2211	Cx. tarsalis	Farmington	49	CO2	9/7/18	WNV
San Joaquin	SJCM8029	2212	Cx. pipiens	Farmington	50	CO2	9/7/18	WNV
San Joaquin	SJCM8037	2180	Cx. tarsalis	Lathrop	20	CO2	9/5/18	WNV
San Joaquin	SJCM8037	2181	Cx. pipiens	Lathrop	29	CO2	9/5/18	WNV
San Joaquin	SJCM8041	2136	Cx. pipiens	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8041	2137	Cx. pipiens	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8041	2138	Cx. pipiens	Lodi	47	CO2	9/5/18	WNV
San Joaquin	SJCM8045	2133	Cx. tarsalis	Thornton	28	CO2	9/5/18	WNV
San Joaquin	SJCM8049	2122	Cx. pipiens	Stockton	12	CO2	9/5/18	WNV
San Joaquin	SJCM8056	2174	Cx. tarsalis	Manteca	44	CO2	9/5/18	WNV
San Joaquin	SJCM8078	2160	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8079	2191	Cx. pipiens	Manteca	51	CO2	9/5/18	WNV
San Joaquin	SJCM8097	2148	Cx. tarsalis	Banta	30	CO2	9/5/18	WNV
San Joaquin	SJCM8100	2131	Cx. tarsalis	Tracy	11	CO2	9/5/18	WNV
San Joaquin	SJCM8143	2151	Cx. tarsalis	Stockton	50	CO2	9/5/18	WNV
San Joaquin	SJCM8160	2112	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8160	2113	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8160	2114	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8160	2115	Cx. tarsalis	Lodi	10	CO2	9/5/18	WNV
San Joaquin	SJCM8161	2183	Cx. pipiens	Ripon	42	CO2	9/5/18	WNV
San Joaquin	SJCM8199	2163	Cx. tarsalis	Manteca	50	CO2	9/5/18	WNV
San Joaquin	SJCM8199	2164	Cx. tarsalis	Manteca	50	CO2	9/5/18	WNV
San Joaquin	SJCM8199	2166	Cx. pipiens	Manteca	50	CO2	9/5/18	WNV
San Joaquin	SJCM8199	2167	Cx. pipiens	Manteca	50	CO2	9/5/18	WNV
San Joaquin	SJCM8199	2168	Cx. pipiens	Manteca	41	CO2	9/5/18	WNV
San Joaquin	SJCM8200	2218	Cx. tarsalis	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8200	2219	Cx. tarsalis	Lodi	7	CO2	9/7/18	WNV
San Joaquin	SJCM8203	2105	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8203	2106	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8203	2110	Cx. pipiens	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8206	2139	Cx. tarsalis	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8206	2146	Cx. pipiens	Lodi	50	CO2	9/5/18	WNV
San Joaquin	SJCM8208	2214	Cx. tarsalis	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8208	2215	Cx. tarsalis	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8208	2216	Cx. tarsalis	Lodi	44	CO2	9/7/18	WNV
San Joaquin	SJCM8208	2217	Cx. pipiens	Lodi	24	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2232	Cx. pipiens	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2234	Cx. pipiens	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2235	Cx. pipiens	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2236	Cx. pipiens	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2237	Cx. pipiens	Lodi	50	CO2	9/7/18	WNV
San Joaquin	SJCM8209	2238	Cx. pipiens	Lodi	46	CO2	9/7/18	WNV
San Joaquin	SJCM8210	2227	Cx. pipiens	Escalon	50	CO2	9/7/18	WNV
San Joaquin	SJCM8210	2228	Cx. pipiens	Escalon	39	CO2	9/7/18	WNV
San Joaquin	SJCM8218	2203	Cx. tarsalis	Escalon	19	CO2	9/7/18	WNV
San Joaquin	SJCM8218	2204	Cx. pipiens	Escalon	50	CO2	9/7/18	WNV
San Joaquin	SJCM8218	2205	Cx. pipiens	Escalon	50	CO2	9/7/18	WNV
San Joaquin	SJCM8219	2130	Cx. pipiens	Stockton	26	CO2	9/5/18	WNV
San Joaquin	SJCM8226	2120	Cx. pipiens	Stockton	29	CO2	9/5/18	WNV
Stanislaus	TRLK1304	1320	Cx. tarsalis	Patterson	3	CO2	9/5/18	WNV
Stanislaus	TRLK1615	1272	Cx. tarsalis	Modesto	50	CO2	9/5/18	WNV

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Stanislaus	TRLK1616	1265	Cx. tarsalis	Modesto	50	CO2	9/5/18	WNV
Stanislaus	TRLK1712	1288	Cx. tarsalis	Newman	36	CO2	9/5/18	WNV
Stanislaus	TRLK18179	1344	Cx. tarsalis	Modesto	15	CO2	9/5/18	WNV
Stanislaus	TRLK18255	1315	Cx. pipiens	Hickman	30	CO2	9/5/18	WNV
Stanislaus	TRLK2	1330	Cx. tarsalis	Vernalis	50	CO2	9/5/18	WNV
Stanislaus	TRLK312	1303	Cx. tarsalis	Newman	50	CO2	9/5/18	WNV
Stanislaus	TRLK312	1304	Cx. tarsalis	Newman	50	CO2	9/5/18	WNV
Stanislaus	TRLK312	1307	Cx. tarsalis	Newman	50	CO2	9/5/18	WNV
Stanislaus	TRLK319	1287	Cx. pipiens	Newman	26	CO2	9/5/18	WNV
Stanislaus	TRLK322	1333	Cx. tarsalis	Vernalis	50	CO2	9/5/18	WNV
Stanislaus	TRLK322	1336	Cx. tarsalis	Vernalis	50	CO2	9/5/18	WNV
Stanislaus	TRLK437	1341	Cx. tarsalis	Patterson	46	CO2	9/5/18	WNV
Stanislaus	TRLK549	1310	Cx. tarsalis	Newman	50	CO2	9/5/18	WNV
Stanislaus	TRLK9712	1318	Cx. tarsalis	Crows Landing	50	CO2	9/5/18	WNV
Stanislaus	TRLK9712	1319	Cx. tarsalis	Crows Landing	47	CO2	9/5/18	WNV
Sutter	SUYA44	346	Cx. tarsalis	Pleasant Grove	41	CO2	9/5/18	WNV
Tulare	DLTA6404	3139	Cx. quinquefasciatus	Dinuba	16	CO2	9/5/18	SLEV
Tulare	DLTA6404	3140	Cx. tarsalis	Dinuba	26	CO2	9/5/18	WNV
Tulare	DLTA6404	3144	Cx. tarsalis	Dinuba	40	CO2	9/5/18	SLEV
Tulare	DLTA6404	3149	Cx. tarsalis	Dinuba	50	CO2	9/5/18	SLEV
Tulare	DLTA6404	3150	Cx. tarsalis	Dinuba	37	CO2	9/5/18	SLEV
Tulare	DLTA6405	3136	Cx. quinquefasciatus	Dinuba	15	CO2	9/5/18	WNV
Tulare	DLTA6405	3137	Cx. tarsalis	Dinuba	23	CO2	9/5/18	SLEV
Tulare	DLTA6407	3191	Cx. quinquefasciatus	Dinuba	43	GRVD	9/5/18	SLEV
Tulare	DLTA6407	3191	Cx. quinquefasciatus	Dinuba	43	GRVD	9/5/18	WNV
Tulare	DLTA6408	3120	Cx. quinquefasciatus	Dinuba	32	GRVD	8/30/18	WNV
Tulare	DLTA6417	3186	Cx. quinquefasciatus	Dinuba	30	GRVD	9/5/18	WNV
Tulare	DLTA8419	3183	Cx. quinquefasciatus	Goshen	50	GRVD	9/5/18	SLEV
Tulare	DLTA8425	3164	Cx. quinquefasciatus	Visalia	50	BGSENT	9/5/18	SLEV
Tulare	DLTA8427	3187	Cx. quinquefasciatus	Visalia	41	GRVD	9/5/18	SLEV
Tulare	DLTA8434	3171	Cx. quinquefasciatus	Visalia	50	BGSENT	9/5/18	SLEV
Tulare	DLTA8435	3167	Cx. quinquefasciatus	Visalia	18	BGSENT	9/5/18	SLEV
Tulare	DLTA9402	3162	Cx. quinquefasciatus	Visalia	34	BGSENT	9/5/18	SLEV
Tulare	DLTA9411	3169	Cx. quinquefasciatus	Visalia	23	BGSENT	9/5/18	SLEV
Tulare	DLTA9501	3128	Cx. quinquefasciatus	Farmersville	34	CO2	8/31/18	SLEV
Tulare	DLTA9506	3117	Cx. quinquefasciatus	Visalia	10	BGSENT	8/30/18	SLEV
Tulare	DLTA9512	3179	Cx. quinquefasciatus	Farmersville	25	GRVD	9/5/18	WNV
Yolo	SAYO103007	5650	Cx. pipiens	Dunnigan	50	CO2	9/5/18	WNV
Yolo	SAYO115008	5627	Cx. tarsalis	Woodland	50	CO2	9/5/18	WNV
Yolo	SAYO116002	5630	Cx. tarsalis	Knights Landing	29	CO2	9/5/18	WNV
Yolo	SAYO136008	5454	Cx. tarsalis	Davis	50	CO2	8/31/18	WNV
Yolo	SAYO136010	5467	Cx. tarsalis	Woodland	50	CO2	8/31/18	WNV

California Arbovirus Surveillance Bulletin #23

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Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Butte	BUCO0006	Chico	8/28/2018	WNV	1531		
Colusa	CLSA0001	Colusa	8/27/2018	WNV	1570		
Merced	MERC0001	Merced	8/17/2018	SLEV	1801		
Merced	MERC0002	Dos Palos	8/31/2018	WNV	1812		
Merced	MERC0003	Gustine	8/31/2018	WNV	1816	1817	
Merced	MERC0501	El Nido	8/31/2018	WNV	1830		
Merced	MERC0006	Merced	8/31/2018	WNV	1823		
Shasta	SHAS9702	Millville	8/31/2018	WNV	1753	1758	
Sutter	SUYA0014	Sutter	8/30/2018	WNV	1363	1364	
Sutter	SUYA0015	Robbins	8/30/2018	WNV	1350	1351	
Sutter	SUYA0030	Live Oak	8/30/2018	WNV	1374		
Sutter	SUYA0084	Yuba City	8/30/2018	WNV	1327	1329	1331
Yolo	SAYO103013	Dunnigan	9/4/2018	WNV	1919		
Yolo	SAYO116006	Knights Landing	9/4/2018	WNV	1923		
Yuba	SUYA0010	Olivehurst	8/30/2018	WNV	1344		

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.

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

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