

## California Arbovirus Surveillance Bulletin #20

Week 33 Friday, August 18, 2017



### Weekly Update

#### **Humans**

Nineteen new human cases of West Nile virus (WNV) illness were reported this week from eight counties: Butte (1), Kern (3), Los Angeles (9), Riverside (1), San Bernardino (1), San Joaquin (1), Stanislaus (2), and Tulare (1). To date this year, a total of 41 human cases of WNV illness have been reported from nine counties. Of the 41 case-patients, 31 (76%) had neuroinvasive disease; no fatalities have been reported. The median age of the individuals is 60 years (range: 4–80 years) and 25 (61%) are male. Dates of symptom onset ranged from March 16 to August 7. In addition to the 19 cases, six asymptomatic WNV-positive blood donors have been reported from Los Angeles (2) Orange (1), and San Bernardino (3) counties. As of this date in 2016, 46 human WNV cases had been reported from 13 counties.

#### **Dead Birds**

A total of 32 WNV positive dead birds were reported this week from the following 12 counties: Los Angeles (5), Monterey (1), Orange (4), Riverside (1), Sacramento (3), San Bernardino (5), San Diego (5), Santa Clara (3), Stanislaus (1), Sutter (1), Yolo (1), and Yuba (2). **This is the first detection of WNV activity in Monterey County this year.** To date this year, 203 birds from 29 counties have tested positive for WNV. As of this date in 2016, 1,007 WNV positive birds had been reported from 31 counties.

#### **Mosquito Pools**

##### West Nile Virus

A total of 235 WNV positive mosquito pools were reported this week from the following 21 counties: Butte (11), Contra Costa (1), Fresno (12), Inyo (1), Kern (11), Kings (19), Lake (3), Los Angeles (49), Madera (4), Merced (4), Orange (22), Placer (5), Riverside (7), Sacramento (4), San Bernardino (16), San Joaquin (10), Stanislaus (12), Sutter (2), Tulare (31), Yolo (8), and Yuba (3). To date this year, 2,049 WNV positive mosquito pools have been reported from 24 counties. As of this date in 2016, 2,562 WNV positive mosquito pools had been reported from 30 counties.

##### St. Louis Encephalitis Virus

A total of nine mosquito pools tested positive for St. Louis encephalitis virus (SLEV) this week from three counties: Fresno (3), Kings (5), and Tulare (1). To date this year, 39 SLEV positive mosquito pools have been reported from Fresno (16), Kern (6), Kings (9), Placer (1), Riverside (1), Stanislaus (3), Tulare (2), and Yuba (1) counties. As of this date in 2016, 92 SLEV positive mosquito pools had been reported from five counties.

#### **Sentinel Chickens**

##### West Nile virus

A total of 34 WNV seroconversions were reported this week from eight counties: Butte (7), Contra Costa (4), Lake (1), Los Angeles (5), Merced (8), Solano (1), Sutter (7), and Yuba (1). **These are the first WNV seroconversions in Contra Costa, Lake, Solano, and Sutter Counties this year.** To date this year, 92 WNV seroconversions have been reported from nine counties. As of this date in 2016, 161 WNV seroconversions had been detected from 18 counties.

##### St. Louis Encephalitis Virus

A total of five SLEV seroconversions were reported this week from two counties: Merced (1), and San Bernardino (4). **These are the first SLEV seroconversions in California in 2017, and the first detection of SLEV activity in Merced County in more than 40 years.** As of this date in 2016, two SLEV seroconversions had been detected in one flock located in San Bernardino County.

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2016 & 2017 YTD West Nile Virus Comparisons		
	2016	2017
Total # Dead Bird Reports	7,060	5,120
# Positive Counties	35	32
# Human Cases	46	41
# Positive Dead Birds / # Tested	1,007 / 2,111	203 / 1,309
# Positive Mosquito Pools / # Tested	2,562 / 30,297	2,049 / 28,747
# Seroconversions / # Tested	161 / 6,748	92 / 7,303

YTD WNV Activity by Element and County, 2017				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		1		
Butte	1	2	26	9
Colusa		1		
Contra Costa		5	3	4
El Dorado		1		
Fresno		2	74	
Glenn			11	
Inyo			6	
Kern	6	3	129	
Kings	1	1	57	
Lake		1	8	1
Los Angeles	23	32	268	43
Madera			25	
Monterey		1		
Merced		1	24	13
Nevada		1		
Orange		15	94	
Placer		1	24	
Riverside	1	23	144	
Sacramento		40	67	
San Bernardino	5	27	201	12
San Diego		14	3	
San Joaquin	1	6	154	
San Mateo		1		
Santa Clara		5		
Santa Cruz		1		
Solano		1	3	1
Stanislaus	2	3	110	
Sutter		1	15	7
Tulare	1	8	555	
Yolo		1	33	
Yuba		4	15	2
<b>Totals</b>	<b>41</b>	<b>203</b>	<b>2,049</b>	<b>92</b>

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Website Information: For updated information on WNV in California, please visit the California WNV website, [www.westnile.ca.gov](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.calsurv.org](http://www.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC website, [www.cdc.gov](http://www.cdc.gov), and the USGS website, [www.westnilemaps.usgs.gov](http://www.westnilemaps.usgs.gov)

### TESTING SUMMARIES

#### Humans

		WNV	SLE	WEE
	Week	19	0	0
	YTD	41	0	0

#### Dead Birds

		Number Tested	WNV Positive
	Week	75	32
	YTD	1,309	203

#### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
	Week	498	34	5	0
	YTD	7,303	92	5	0

#### Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		235 / 1,481	9 / 1,136	0 / 1,136	0 / 56	0 / 56	0 / 56
		YTD	2,049 / 28,747	39 / 23,933	0 / 22,141	0 / 894	0 / 894

### New Positives

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Granada Hills	91344	American Crow	8/11/2017	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Woodland Hills	91367	American Crow	8/9/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	San Gabriel	91776	American Crow	8/14/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Tarzana	91356	American Crow	8/7/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Woodland Hills	91367	American Crow	8/8/2017	WNV
Monterey	Northern Salinas Valley MAD	Salinas	93908	American Crow	8/8/2017	WNV
Orange	Orange Co VCD	Anaheim	92802	House Finch	8/9/2017	WNV
Orange	Orange Co VCD	Tustin	92780	American Crow	8/7/2017	WNV
Orange	Orange Co VCD	Yorba Linda	92886	American Crow	8/9/2017	WNV
Orange	Orange Co VCD	Yorba Linda	92886	American Crow	8/9/2017	WNV

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Riverside	Northwest Mosquito VCD	Norco	92860	House Sparrow	8/9/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95757	Northern Mockingbird	8/15/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	8/14/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Barn Owl	8/17/2017	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	8/13/2017	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	8/14/2017	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	8/14/2017	WNV
San Bernardino	West Valley MVCD	Ontario	91764	American Crow	8/15/2017	WNV
San Bernardino	West Valley MVCD	Rancho Cucamonga	91737	American Crow	8/17/2017	WNV
San Diego	San Diego Co VCP	Campo	91906	American Crow	8/14/2017	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	8/15/2017	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	8/15/2017	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	8/15/2017	WNV
San Diego	San Diego Co VCP	Santee	92071	American Crow	8/14/2017	WNV
Santa Clara	Santa Clara Co VCD	Cupertino	95014	American Crow	8/16/2017	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	8/14/2017	WNV
Santa Clara	Santa Clara Co VCD	San Martin	95046	Sparrow	8/14/2017	WNV
Stanislaus	Turlock MAD	Turlock	95380	Western Scrub-Jay	8/9/2017	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95991	American Crow	8/14/2017	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	8/13/2017	WNV
Yuba	Sutter-Yuba MVCD	Marysville	95901	American Robin	8/13/2017	WNV
Yuba	Sutter-Yuba MVCD	Marysville	95901	House Finch	8/14/2017	WNV

### Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO11	267	Cx. tarsalis	Oroville	50	CO2	8/8/17	WNV
Butte	BUCO118	280	Cx. tarsalis	Chico	50	CO2	8/9/17	WNV
Butte	BUCO118	281	Cx. tarsalis	Chico	50	CO2	8/9/17	WNV
Butte	BUCO118	283	Cx. tarsalis	Chico	50	CO2	8/9/17	WNV
Butte	BUCO29	268	Cx. tarsalis	Dayton	50	CO2	8/8/17	WNV
Butte	BUCO29	269	Cx. tarsalis	Dayton	50	CO2	8/8/17	WNV
Butte	BUCO29	270	Cx. tarsalis	Dayton	50	CO2	8/8/17	WNV
Butte	BUCO35	290	Cx. tarsalis	Gridley	50	CO2	8/14/17	WNV
Butte	BUCO35	292	Cx. tarsalis	Gridley	50	CO2	8/14/17	WNV
Butte	BUCO37	286	Cx. tarsalis	Honcut	35	CO2	8/14/17	WNV
Butte	BUCO84	277	Cx. tarsalis	Nelson	50	CO2	8/9/17	WNV
Contra Costa	CNTR7203	324	Cx. tarsalis	Antioch	31	CO2	8/16/17	WNV
Fresno	FRNO81	255	Cx. quinquefasciatus		23	GRVD	8/10/17	SLEV
Fresno	FRWS100006	370	Cx. tarsalis	Dos Palos	42	CO2	8/15/17	WNV
Fresno	FRWS1202	372	Cx. tarsalis	Dos Palos	50	CO2	8/15/17	SLEV
Fresno	FRWS1202	372	Cx. tarsalis	Dos Palos	50	CO2	8/15/17	WNV
Fresno	FRWS300084	355	Cx. quinquefasciatus		41	BGSENT	8/11/17	WNV
Fresno	FRWS3201	362	Cx. quinquefasciatus	Firebaugh	30	GRVD	8/15/17	WNV
Fresno	FRWS3205	358	Cx. quinquefasciatus	Firebaugh	50	GRVD	8/11/17	WNV
Fresno	FRWS400017	366	Cx. tarsalis	Mendota	50	CO2	8/15/17	WNV
Fresno	FRWS400017	367	Cx. tarsalis	Mendota	22	CO2	8/15/17	WNV
Fresno	FRWS400017	368	Cx. quinquefasciatus	Mendota	50	CO2	8/15/17	WNV
Fresno	FRWS400047	347	Cx. tarsalis		50	CO2	8/10/17	WNV
Fresno	FRWS400047	350	Cx. tarsalis		50	CO2	8/10/17	WNV
Fresno	FRWS500003	352	Cx. tarsalis	Mendota	50	CO2	8/10/17	WNV
Fresno	FRWS500003	353	Cx. tarsalis	Mendota	50	CO2	8/10/17	SLEV

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Fresno	FRWS5101	369	Cx. tarsalis	Mendota	29	CO2	8/15/17	WNV
Inyo	INYO1035	45	Cx. tarsalis	Bishop	46	CO2	8/15/17	WNV
Kern	DLNO28	200	Cx. quinquefasciatus	McFarland	50	GRVD	8/11/17	WNV
Kern	DLNO33	198	Cx. tarsalis	McFarland	45	CO2	8/10/17	WNV
Kern	DLNO88	199	Cx. quinquefasciatus	McFarland	33	GRVD	8/11/17	WNV
Kern	KERN11	448	Cx. quinquefasciatus	Bakersfield	28	GRVD	8/4/17	WNV
Kern	KERN12	449	Cx. quinquefasciatus	Bakersfield	50	GRVD	8/4/17	WNV
Kern	KERN156	445	Cx. tarsalis	Butttonwillow	35	CO2	8/1/17	WNV
Kern	KERN2022	459	Cx. quinquefasciatus	Shafter	50	GRVD	8/10/17	WNV
Kern	KERN2024	458	Cx. quinquefasciatus	Bakersfield	20	GRVD	8/10/17	WNV
Kern	KERN2027	457	Cx. quinquefasciatus	Bakersfield	29	GRVD	8/9/17	WNV
Kern	KERN2039	447	Cx. quinquefasciatus	Bakersfield	27	GRVD	8/3/17	WNV
Kern	KERN8	460	Cx. quinquefasciatus	Bakersfield	50	CO2	8/10/17	WNV
Kings	KNGS3004	317	Cx. tarsalis	Lemoore	50	CO2	8/10/17	SLEV
Kings	KNGS3004	317	Cx. tarsalis	Lemoore	50	CO2	8/10/17	WNV
Kings	KNGS3004	318	Cx. tarsalis	Lemoore	50	CO2	8/10/17	WNV
Kings	KNGS3005	286	Cx. tarsalis	Lemoore NAS	50	CO2	8/8/17	WNV
Kings	KNGS3005	287	Cx. tarsalis	Lemoore NAS	50	CO2	8/8/17	WNV
Kings	KNGS3018	306	Cx. tarsalis	Lemoore	50	CO2	8/9/17	WNV
Kings	KNGS3018	307	Cx. tarsalis	Lemoore	50	CO2	8/9/17	SLEV
Kings	KNGS3018	307	Cx. tarsalis	Lemoore	50	CO2	8/9/17	WNV
Kings	KNGS3018	308	Cx. tarsalis	Lemoore	50	CO2	8/9/17	WNV
Kings	KNGS3018	309	Cx. tarsalis	Lemoore	35	CO2	8/9/17	WNV
Kings	KNGS3026	314	Cx. tarsalis	Hanford	38	BGSENT	8/10/17	WNV
Kings	KNGS3030	283	Cx. tarsalis	Lemoore	50	CO2	8/8/17	WNV
Kings	KNGS3030	284	Cx. tarsalis	Lemoore	50	CO2	8/8/17	SLEV
Kings	KNGS3030	284	Cx. tarsalis	Lemoore	50	CO2	8/8/17	WNV
Kings	KNGS3056	291	Cx. tarsalis	Hardwick	26	CO2	8/8/17	WNV
Kings	KNGS3060	316	Cx. tarsalis	Lemoore	25	CO2	8/10/17	WNV
Kings	KNGS3083	294	Cx. tarsalis	Lemoore	50	CO2	8/8/17	WNV
Kings	KNGS3083	295	Cx. tarsalis	Lemoore	50	CO2	8/8/17	SLEV
Kings	KNGS3083	295	Cx. tarsalis	Lemoore	50	CO2	8/8/17	WNV
Kings	KNGS3083	297	Cx. tarsalis	Lemoore	50	CO2	8/8/17	WNV
Kings	KNGS3112	304	Cx. tarsalis		19	CO2	8/9/17	WNV
Kings	KNGS4402	299	Cx. tarsalis	Lemoore	18	BGSENT	8/9/17	SLEV
Kings	KNGS4410	302	Cx. pipiens	Lemoore	25	BGSENT	8/9/17	WNV
Kings	KNGS5504	313	Cx. pipiens	Hanford	17	BGSENT	8/10/17	WNV
Lake	LAKE1130	453	Cx. tarsalis	Lower Lake	50	CO2	8/15/17	WNV
Lake	LAKE1422	452	Cx. tarsalis	Lower Lake	37	CO2	8/15/17	WNV
Lake	LAKE410	457	Cx. tarsalis	Clearlake	25	CO2	8/15/17	WNV
Los Angeles	GRLA2114	618	Cx. quinquefasciatus	Boyle Heights	33	GRVD	8/10/17	WNV
Los Angeles	GRLA2194	601	Cx. quinquefasciatus	South El Monte	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2222	608	Cx. quinquefasciatus	Rowland Heights	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2228	606	Cx. quinquefasciatus	Diamond Bar	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2230	607	Cx. quinquefasciatus	Diamond Bar	26	GRVD	8/9/17	WNV
Los Angeles	GRLA2295	628	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/11/17	WNV
Los Angeles	GRLA2323	613	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/10/17	WNV
Los Angeles	GRLA2359	603	Cx. quinquefasciatus	Pico Rivera	18	GRVD	8/9/17	WNV
Los Angeles	GRLA2383	612	Cx. quinquefasciatus	Whittier	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2414	5600	Cx. quinquefasciatus	Granada Hills	33	GRVD	8/9/17	WNV
Los Angeles	GRLA2416	5595	Cx. quinquefasciatus	Panorama City	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2419	5596	Cx. quinquefasciatus	Panorama City	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2500	5601	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/10/17	WNV
Los Angeles	GRLA2503	5602	Cx. quinquefasciatus	Los Angeles	26	GRVD	8/10/17	WNV

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Los Angeles	GRLA2521	5604	Cx. quinquefasciatus	Los Feliz	39	GRVD	8/10/17	WNV
Los Angeles	GRLA2574	5590	Cx. quinquefasciatus	Sherman Oaks	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2650	5593	Cx. quinquefasciatus	Encino	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2651	5591	Cx. quinquefasciatus	Encino	34	GRVD	8/9/17	WNV
Los Angeles	GRLA2655	5592	Cx. quinquefasciatus	Encino	50	GRVD	8/9/17	WNV
Los Angeles	GRLA2936	5607	Cx. quinquefasciatus	Burbank	50	GRVD	8/10/17	WNV
Los Angeles	GRLA2937	5606	Cx. quinquefasciatus	Burbank	50	GRVD	8/10/17	WNV
Los Angeles	GRLA3034	5599	Cx. quinquefasciatus	North Hills	50	GRVD	8/9/17	WNV
Los Angeles	GRLA3035	5598	Cx. quinquefasciatus	North Hills	50	GRVD	8/9/17	WNV
Los Angeles	GRLA3042	605	Cx. quinquefasciatus	Hacienda Heights	50	GRVD	8/9/17	WNV
Los Angeles	GRLA3044	602	Cx. quinquefasciatus	South El Monte	41	GRVD	8/9/17	WNV
Los Angeles	GRLA3045	611	Cx. quinquefasciatus	Whittier	27	GRVD	8/9/17	WNV
Los Angeles	GRLA3052	610	Cx. quinquefasciatus	La Habra Heights	50	GRVD	8/9/17	WNV
Los Angeles	GRLA3053	609	Cx. quinquefasciatus	Hacienda Heights	18	GRVD	8/9/17	WNV
Los Angeles	GRLA3063	630	Cx. quinquefasciatus	Watts	50	GRVD	8/11/17	WNV
Los Angeles	GRLA3065	633	Cx. quinquefasciatus	Willowbrook	50	GRVD	8/11/17	WNV
Los Angeles	GRLA3071	616	Cx. quinquefasciatus	East Los Angeles	37	GRVD	8/10/17	WNV
Los Angeles	GRLA3073	621	Cx. quinquefasciatus	Lincoln Heights	50	GRVD	8/10/17	WNV
Los Angeles	GRLA3074	622	Cx. quinquefasciatus	Lincoln Heights	50	GRVD	8/10/17	WNV
Los Angeles	GRLA3078	5603	Cx. quinquefasciatus	Los Feliz	36	GRVD	8/10/17	WNV
Los Angeles	GRLA3084	615	Cx. quinquefasciatus	Commerce	50	GRVD	8/10/17	WNV
Los Angeles	LACW1012	291	Cx. quinquefasciatus	Venice	41	GRVD	8/8/17	WNV
Los Angeles	LACW1054	296	Cx. quinquefasciatus	Inglewood	50	CO2	8/10/17	WNV
Los Angeles	SGVA884	1968	Cx. quinquefasciatus	glendora	10	GRVD	8/10/17	WNV
Los Angeles	SGVA954	1991	Cx. quinquefasciatus	Azusa	6	GRVD	8/9/17	WNV
Los Angeles	SGVA954	1992	Cx. quinquefasciatus	Azusa	23	GRVD	8/9/17	WNV
Los Angeles	SGVA967	1966	Cx. quinquefasciatus	Temple City	10	GRVD	8/10/17	WNV
Los Angeles	SGVA968	1954	Cx. quinquefasciatus		25	GRVD	8/10/17	WNV
Los Angeles	SGVA968	1955	Cx. quinquefasciatus		25	GRVD	8/10/17	WNV
Los Angeles	SGVA969	1978	Cx. quinquefasciatus		25	GRVD	8/11/17	WNV
Los Angeles	SGVA969	1979	Cx. quinquefasciatus		25	GRVD	8/11/17	WNV
Los Angeles	SGVA969	1982	Cx. quinquefasciatus		25	GRVD	8/11/17	WNV
Los Angeles	SGVA970	1987	Cx. quinquefasciatus	Azusa	25	GRVD	8/8/17	WNV
Los Angeles	SGVA970	1989	Cx. quinquefasciatus	Azusa	25	GRVD	8/8/17	WNV
Los Angeles	SGVA970	1990	Cx. tarsalis	Azusa	25	GRVD	8/8/17	WNV
Madera	MADR1117	211	Cx. tarsalis	Firebaugh	50	CO2	8/8/17	WNV
Madera	MADR178	233	Cx. quinquefasciatus	Madera	24	CO2	8/11/17	WNV
Madera	MADR195	227	Cx. tarsalis	Madera	39	CO2	8/9/17	WNV
Madera	MADR298	232	Cx. tarsalis	Chowchilla	18	CO2	8/10/17	WNV
Merced	MERC1308	245	Cx. pipiens	Merced	7	CO2	8/15/17	WNV
Merced	MERC201501	247	Cx. pipiens	Le Grand	6	CO2	8/16/17	WNV
Merced	MERC201755	240	Cx. tarsalis	merced	33	CO2	8/15/17	WNV
Merced	MERC505	219	Cx. pipiens	Livingston	50	CO2	8/8/17	WNV
Orange	ORCO1011	3181	Cx. quinquefasciatus	La Habra	50	GRVD	8/8/17	WNV
Orange	ORCO1011	3183	Cx. quinquefasciatus	La Habra	24	GRVD	8/8/17	WNV
Orange	ORCO1011	3295	Cx. quinquefasciatus	La Habra	31	GRVD	8/10/17	WNV
Orange	ORCO1011	3296	Cx. quinquefasciatus	La Habra	29	GRVD	8/10/17	WNV
Orange	ORCO1011	3297	Cx. quinquefasciatus	La Habra	24	GRVD	8/10/17	WNV
Orange	ORCO1011	3300	Cx. quinquefasciatus	La Habra	23	GRVD	8/10/17	WNV
Orange	ORCO1011	3301	Cx. quinquefasciatus	La Habra	14	GRVD	8/10/17	WNV
Orange	ORCO1011	3303	Cx. quinquefasciatus	La Habra	25	GRVD	8/10/17	WNV
Orange	ORCO1011	3304	Cx. quinquefasciatus	La Habra	50	GRVD	8/10/17	WNV
Orange	ORCO1011	3306	Cx. quinquefasciatus	La Habra	4	GRVD	8/10/17	WNV
Orange	ORCO1011	3309	Cx. quinquefasciatus	La Habra	8	GRVD	8/10/17	WNV

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Orange	ORCO1011	3314	Cx. quinquefasciatus	La Habra	29	GRVD	8/10/17	WNV
Orange	ORCO1011	3317	Cx. quinquefasciatus	La Habra	42	GRVD	8/10/17	WNV
Orange	ORCO1018	3313	Cx. stigmatosoma	San Juan Capistrano	7	GRVD	8/10/17	WNV
Orange	ORCO2	3281	Cx. quinquefasciatus	Fullerton	43	GRVD	8/10/17	WNV
Orange	ORCO218	3316	Cx. quinquefasciatus	Anaheim	11	GRVD	8/10/17	WNV
Orange	ORCO218	3318	Cx. quinquefasciatus	Anaheim	28	GRVD	8/10/17	WNV
Orange	ORCO227	3273	Cx. quinquefasciatus	Brea	37	GRVD	8/9/17	WNV
Orange	ORCO238	3267	Cx. quinquefasciatus	Anaheim	50	GRVD	8/9/17	WNV
Orange	ORCO29	3308	Cx. quinquefasciatus	Santa Ana	27	CO2	8/10/17	WNV
Orange	ORCO33	3291	Cx. quinquefasciatus	Westminster	16	GRVD	8/10/17	WNV
Orange	ORCO41	3232	Cx. quinquefasciatus	Anaheim	11	GRVD	8/9/17	WNV
Placer	PLCR1113	1395	Cx. tarsalis	Pleasant Grove	50	CO2	8/15/17	WNV
Placer	PLCR1113	1396	Cx. tarsalis	Pleasant Grove	50	CO2	8/15/17	WNV
Placer	PLCR183971	1419	Cx. thriambus		1	CO2	8/16/17	WNV
Placer	PLCR191998	1348	Cx. tarsalis	Lincoln	28	CO2	8/15/17	WNV
Placer	PLCR197114	1333	Cx. tarsalis		50	CO2	8/10/17	WNV
Riverside	COAV37	3234	Cx. tarsalis	Mecca	9	CO2	8/15/17	WNV
Riverside	NWST150	216	Cx. quinquefasciatus	Lake Elsinore	18	CO2	8/10/17	WNV
Riverside	NWST152	220	Cx. quinquefasciatus	Riverside	15	GRVD	8/11/17	WNV
Riverside	NWST155	215	Cx. tarsalis	Corona	23	CO2	8/10/17	WNV
Riverside	NWST176	217	Cx. quinquefasciatus	Norco	16	CO2	8/11/17	WNV
Riverside	NWST66	209	Cx. quinquefasciatus	Riverside	38	CO2	8/9/17	WNV
Riverside	NWST71	218	Cx. quinquefasciatus	Riverside	17	GRVD	8/11/17	WNV
Sacramento	SAYO202016	4719	Cx. pipiens	Sacramento	41	CO2	8/18/17	WNV
Sacramento	SAYO223013	4622	Cx. pipiens	Sacramento	10	GRVD	8/15/17	WNV
Sacramento	SAYO245026	4795	Cx. tarsalis	Wilton	50	CO2	8/18/17	WNV
Sacramento	SAYO245026	4796	Cx. tarsalis	Wilton	20	CO2	8/18/17	WNV
San Bernardino	SANB137	850	Cx. stigmatosoma	Fontana	22	CO2	8/8/17	WNV
San Bernardino	SANB147	917	Cx. quinquefasciatus		6	CO2	8/17/17	WNV
San Bernardino	SANB147	918	Culiseta inornata		8	CO2	8/17/17	WNV
San Bernardino	SANB154	888	Cx. tarsalis	Colton	1	CO2	8/10/17	WNV
San Bernardino	SANB2	855	Cx. stigmatosoma	Redlands	50	CO2	8/8/17	WNV
San Bernardino	WVAL20	1753	Cx. quinquefasciatus	Rancho Cucamonga	8	CO2	8/15/17	WNV
San Bernardino	WVAL2018	1773	Cx. quinquefasciatus	Chino	13	GRVD	8/16/17	WNV
San Bernardino	WVAL2022	1769	Cx. quinquefasciatus	Fwy CA 60	10	GRVD	8/16/17	WNV
San Bernardino	WVAL3241	1765	Cx. quinquefasciatus	Upland	3	BGSENT	8/15/17	WNV
San Bernardino	WVAL5004	1775	Cx. quinquefasciatus	Rancho Cucamonga	26	GRVD	8/16/17	WNV
San Bernardino	WVAL6005	1757	Cx. quinquefasciatus	Ontario	6	GRVD	8/15/17	WNV
San Bernardino	WVAL6015	1755	Cx. quinquefasciatus	Ontario	15	GRVD	8/15/17	WNV
San Bernardino	WVAL7002	1762	Cx. quinquefasciatus	Montclair	16	GRVD	8/15/17	WNV
San Bernardino	WVAL8001	1779	Cx. quinquefasciatus	Corona	33	CO2	8/16/17	WNV
San Bernardino	WVAL9003	1754	Cx. quinquefasciatus	Upland	25	GRVD	8/15/17	WNV
San Bernardino	WVAL9007	1758	Cx. quinquefasciatus	Upland	7	GRVD	8/15/17	WNV
San Joaquin	SJCM8018	2096	Cx. tarsalis	Stockton	31	CO2	8/14/17	WNV
San Joaquin	SJCM8079	2085	Cx. pipiens	Manteca	5	CO2	8/14/17	WNV
San Joaquin	SJCM8083	2077	Cx. pipiens	Escalon	18	CO2	8/14/17	WNV
San Joaquin	SJCM8106	2131	Cx. pipiens	Escalon	32	CO2	8/16/17	WNV
San Joaquin	SJCM8161	2078	Cx. tarsalis	Ripon	10	CO2	8/14/17	WNV
San Joaquin	SJCM8161	2079	Cx. pipiens	Ripon	11	CO2	8/14/17	WNV
San Joaquin	SJCM8198	2098	Cx. tarsalis	Stockton	11	CO2	8/14/17	WNV
San Joaquin	SJCM8208	2125	Cx. tarsalis	Lodi	40	CO2	8/16/17	WNV
San Joaquin	SJCM8208	2126	Cx. pipiens	Lodi	21	CO2	8/16/17	WNV
San Joaquin	SJCM8209	2129	Cx. pipiens	Lodi	32	CO2	8/16/17	WNV
Stanislaus	TRLK1615	744	Cx. tarsalis	Modesto	46	CO2	8/15/17	WNV

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Stanislaus	TRLK17189	729	Cx. tarsalis	Modesto	50	CO2	8/10/17	WNV
Stanislaus	TRLK17189	730	Cx. tarsalis	Modesto	50	CO2	8/10/17	WNV
Stanislaus	TRLK17190	732	Cx. pipiens	Modesto	50	CO2	8/10/17	WNV
Stanislaus	TRLK17190	733	Cx. pipiens	Modesto	50	CO2	8/10/17	WNV
Stanislaus	TRLK17190	734	Cx. pipiens	Modesto	39	CO2	8/10/17	WNV
Stanislaus	TRLK305	749	Cx. tarsalis	Grayson	50	CO2	8/15/17	WNV
Stanislaus	TRLK502	759	Cx. tarsalis	Modesto	18	CO2	8/15/17	WNV
Stanislaus	TRLK615	726	Cx. pipiens	Modesto	35	CO2	8/10/17	WNV
Stanislaus	TRLK9732	739	Cx. tarsalis	Newman	50	CO2	8/15/17	WNV
Stanislaus	TRLK9732	740	Cx. tarsalis	Newman	50	CO2	8/15/17	WNV
Stanislaus	TRLK9742	735	Cx. tarsalis	Crows Landing	32	CO2	8/15/17	WNV
Sutter	SUYA5	353	Cx. tarsalis	Live Oak	7	CO2	8/15/17	WNV
Sutter	SUYA9	361	Cx. tarsalis	Sutter	50	CO2	8/15/17	WNV
Tulare	DLTA6404	2284	Cx. tarsalis	Dinuba	50	CO2	8/16/17	WNV
Tulare	DLTA6404	2286	Cx. quinquefasciatus	Dinuba	28	CO2	8/16/17	WNV
Tulare	DLTA6404	2291	Cx. quinquefasciatus	Dinuba	45	CO2	8/16/17	WNV
Tulare	DLTA6404	2292	Cx. tarsalis	Dinuba	44	CO2	8/16/17	WNV
Tulare	DLTA6404	2293	Cx. stigmatosoma	Dinuba	11	CO2	8/16/17	WNV
Tulare	DLTA6404	2294	Cx. quinquefasciatus	Dinuba	11	CO2	8/16/17	WNV
Tulare	DLTA6407	2274	Cx. quinquefasciatus	Dinuba	22	GRVD	8/15/17	WNV
Tulare	DLTA6407	2275	Cx. tarsalis	Dinuba	10	GRVD	8/15/17	WNV
Tulare	DLTA6407	2323	Cx. quinquefasciatus	Dinuba	15	GRVD	8/17/17	WNV
Tulare	DLTA6408	2262	Cx. quinquefasciatus	Dinuba	19	GRVD	8/11/17	WNV
Tulare	DLTA6417	2270	Cx. quinquefasciatus	Dinuba	18	GRVD	8/15/17	WNV
Tulare	DLTA8414	2278	Cx. quinquefasciatus	Visalia	15	GRVD	8/15/17	WNV
Tulare	DLTA8419	2272	Cx. quinquefasciatus	Goshen	20	GRVD	8/15/17	WNV
Tulare	DLTA8424	2277	Cx. quinquefasciatus	Visalia	13	GRVD	8/15/17	WNV
Tulare	DLTA8426	2257	Cx. quinquefasciatus	Visalia	26	GRVD	8/11/17	WNV
Tulare	DLTA8427	2267	Cx. quinquefasciatus	Visalia	36	GRVD	8/15/17	WNV
Tulare	DLTA8435	2254	Cx. quinquefasciatus	Visalia	15	GRVD	8/11/17	WNV
Tulare	DLTA8520	2263	Cx. quinquefasciatus	Visalia	40	GRVD	8/11/17	WNV
Tulare	DLTA8530	2304	Cx. quinquefasciatus	Visalia	31	GRVD	8/16/17	WNV
Tulare	DLTA8534	2311	Cx. quinquefasciatus	Visalia	10	GRVD	8/17/17	WNV
Tulare	DLTA9412	2309	Cx. quinquefasciatus	Visalia	11	GRVD	8/17/17	WNV
Tulare	DLTA9505	2295	Cx. quinquefasciatus	Visalia	11	GRVD	8/16/17	WNV
Tulare	DLTA9512	2302	Cx. quinquefasciatus	Farmersville	23	GRVD	8/16/17	WNV
Tulare	DLTA9602	2303	Cx. quinquefasciatus	Exeter	34	GRVD	8/16/17	WNV
Tulare	DLTA9610	2327	Cx. quinquefasciatus	Exeter	15	GRVD	8/17/17	WNV
Tulare	TLRE192434	179	Cx. quinquefasciatus	Tulare	33	GRVD	8/16/17	<b>SLEV</b>
Tulare	TLRE202401	185	Cx. quinquefasciatus	Tulare	21	GRVD	8/17/17	WNV
Tulare	TLRE202404	181	Cx. quinquefasciatus	Tulare	50	GRVD	8/16/17	WNV
Tulare	TLRE202635	174	Cx. quinquefasciatus	Plainview	50	GRVD	8/11/17	WNV
Tulare	TLRE212531	177	Cx. quinquefasciatus	Tipton	11	GRVD	8/11/17	WNV
Tulare	TLRE212620	175	Cx. quinquefasciatus	Woodville	19	GRVD	8/11/17	WNV
Tulare	TLRE212634	176	Cx. quinquefasciatus	Poplar	13	GRVD	8/11/17	WNV
Yolo	SAYO103007	4694	Cx. tarsalis	Dunnigan	50	CO2	8/18/17	WNV
Yolo	SAYO103007	4696	Cx. tarsalis	Dunnigan	50	CO2	8/18/17	WNV
Yolo	SAYO103007	4697	Cx. tarsalis	Dunnigan	50	CO2	8/18/17	WNV
Yolo	SAYO125002	4687	Cx. tarsalis	Yolo	33	CO2	8/17/17	WNV
Yolo	SAYO125010	4715	Cx. tarsalis	Woodland	19	CO2	8/18/17	WNV
Yolo	SAYO125021	4736	Cx. tarsalis	Woodland	50	CO2	8/18/17	WNV
Yolo	SAYO135005	4762	Cx. tarsalis	Woodland	46	CO2	8/18/17	WNV
Yolo	SAYO135020	4730	Cx. tarsalis	woodland	26	CO2	8/18/17	WNV
Yuba	SUYA10	356	Cx. tarsalis	Olivehurst	50	CO2	8/15/17	WNV



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Yuba	SUYA37	370	Cx. tarsalis	Marysville	50	CO2	8/15/17	WNV
Yuba	SUYA4	369	Cx. tarsalis	Wheatland	42	CO2	8/15/17	WNV

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05	Band 06
Butte	BUCO1	Chico	8/8/17	WNV	1166					
Butte	BUCO2	Oroville	8/8/17	WNV	1130					
Butte	BUCO3	Oroville	8/8/17	WNV	1133	1134	1138			
Butte	BUCO5	Honcut	8/8/17	WNV	1145	1146				
Contra Costa	CNTR8152	Knightsen	8/7/17	WNV	1203	1204	1209	1210		
Lake	LAKE1000	Upper Lake	8/9/17	WNV	1296					
Los Angeles	LACW1002	Torrance	8/1/17	WNV	2507	2511				
Los Angeles	LONG3	Long Beach	8/14/17	WNV	1324					
Los Angeles	SGVA4	Arcadia	8/14/17	WNV	4539					
Los Angeles	SGVA6	Glendora	8/14/17	WNV	4548					
Merced	MERC1	Merced	8/11/17	WNV	1845	1848				
Merced	MERC2	Dos Palos	8/11/17	WNV	1871					
Merced	MERC3	Gustine	7/14/17	SLEV	1876					
Merced	MERC3	Gustine	8/11/17	WNV	1875					
Merced	MERC6	Merced	8/11/17	WNV	1863	1864	1865	1867		
San Bernardino	SANB11	Rialto	7/18/17	SLEV	2739	2733	2735	2740		
Solano	SOLA125	Cordelia	8/4/17	WNV	1685					
Sutter	SUYA15	Robbins	8/10/17	WNV	1734					
Sutter	SUYA30	Live Oak	8/10/17	WNV	1750	1752	1753	1754	1755	1756
Yuba	SUYA7	Marysville	8/10/17	WNV	1710					

## 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 Arbovirus Research and Training laboratory (DART) for West Nile virus by the singleplex qRT-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.

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### **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 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 submitted to DART are tested for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex qRT-PCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested for chikungunya, dengue, and Zika viral RNA by a separate qRT-PCR.

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*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](mailto:tina.feiszli@cdph.ca.gov).*