

## California Arbovirus Surveillance Bulletin #18

Week 32 Friday, August 9, 2024



### WEEKLY UPDATE

#### **Humans**

##### West Nile virus

A total of 4 new human cases of West Nile virus (WNV) disease were reported this week from 2 counties: Butte (2) and Riverside (2). **These are the first human cases of WNV disease reported for Butte and Riverside counties this year.** In 2024, 9 human cases of WNV disease were reported from 6 counties. Of the 9 cases, 6 (67%) had neuroinvasive disease and 1 (11%) was fatal. The median age of the case-patients was 48 years and 7 (78%) of the case-patients were male. The dates of symptom onset ranged from May 28 to July 26. In addition to the 9 cases of WNV disease, 6 asymptomatic WNV-positive blood donors have been reported from 4 counties: Butte (1), Fresno (3), San Bernardino (1), and Stanislaus (1). At this time last year, 14 human cases of WNV disease had been reported from 8 counties.

##### St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 1 human case of SLEV disease had been reported from 1 county.

#### **Dead Birds**

A total of 34 new WNV positive dead birds were reported from 7 counties: Alameda (5), Colusa (1), Los Angeles (1), Sacramento (4), San Bernardino (1), San Joaquin (1), and Santa Clara (21). **This is the first detection of WNV activity in Colusa County this year.** In 2024, 218 WNV positive dead birds have been reported from 16 counties. At this time last year, 236 WNV positive dead birds had been reported from 20 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 107 new WNV positive mosquito pools were reported from 20 counties: Alameda (2), Butte (13), Contra Costa (2), Fresno (10), Kern (3), Kings (2), Lake (1), Los Angeles (8), Madera (5), Merced (5), Placer (18), Riverside (3), San Bernardino (6), Santa Clara (5), Shasta (1), Solano (4), Stanislaus (2), Sutter (8), Tulare (4), and Yuba (5). **These are the first WNV positive mosquito pools reported from Contra Costa County this year.** In 2024, 838 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 1,988 WNV positive mosquito pools had been reported from 26 counties.

##### St. Louis encephalitis virus

No new SLEV positive mosquito pools were reported. In 2024, 13 SLEV positive mosquito pools have been reported from 3 counties: Fresno (9), Imperial (1), and Tulare (3). At this time last year, 182 SLEV positive mosquito pools had been reported from 9 counties.

#### **Sentinel Chickens**

A total of 26 new WNV positive chickens were reported this week from 5 counties: Butte (10), Lake (1), Sutter (6), Tulare (3), and Yuba (6). **These are the first WNV positive sentinel chickens reported from Sutter and Yuba counties this year.** In 2024, 46 WNV positive sentinel chickens have been reported from 8 counties. At this time last year, 60 WNV positive chickens had been reported from 5 counties.

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<b>2023 &amp; 2024 YTD West Nile Virus Comparisons</b>		
	<b>2023</b>	<b>2024</b>
Total No. Dead Bird Reports	3,866	4,119
No. Positive Counties	31	28
No. Human Cases	14	9
No. Positive Dead Birds / No. Tested	236 / 1,007	218 / 1,138
No. Positive Mosquito Pools / No. Tested	1,998 / 30,767	838 / 27,888
No. Seroconversions / No. Tested	60 / 2,277	46 / 2,660

<b>YTD WNV Activity by Element and County, 2024</b>					
<b>County</b>	<b>Humans</b>	<b>Horses</b>	<b>Dead Birds</b>	<b>Mosquito Pools</b>	<b>Sentinel Chickens</b>
Alameda			27	15	
Butte	2		4	30	11
Colusa			1		
Contra Costa	1		4	2	5
Fresno	1			132	
Imperial				2	
Kern				18	
Kings	1			28	
Lake			1	8	3
Los Angeles			5	38	
Madera				18	
Merced				14	5
Orange			1	12	
Placer		1		43	
Riverside	2		2	194	
Sacramento		1	46	20	
San Bernardino			6	45	
San Diego			2		
San Joaquin			4	75	
San Mateo			9		
Santa Clara			104	14	
Shasta				8	
Solano				6	4
Stanislaus				19	
Sutter				22	6
Tulare				38	6
Yolo			1	10	
Yuba	2	1	1	27	6
<b>Totals</b>	<b>9</b>	<b>3</b>	<b>218</b>	<b>838</b>	<b>46</b>

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### TESTING SUMMARIES

		WNV	SLEV	WEEV
<b>Human Cases</b>	Week	4	0	0
	YTD	9	0	0

Positive / Total Tested							
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA

<b>Dead Birds</b>	Week	34 / 80
	YTD	218 / 1,138

<b>Chicken Sera</b>	Week	26 / 216	0 / 216	0 / 216
	YTD	46 / 2,660	0 / 2,660	0 / 2,660

<b>Mosquito Pools</b>	Week	107 / 1,229	0 / 1,226	0 / 1,226	0 / 50	0 / 50	0 / 50
	YTD	838 / 27,888	13 / 26,081	0 / 26,104	0 / 452	0 / 452	0 / 452

### POSITIVES

#### Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Newark	94560	American Crow	6/25/2024	WNV
Alameda	Alameda Co MAD	Union City	94587	American Crow	7/29/2024	WNV
Alameda	Alameda Co MAD	Newark	94560	American Crow	8/1/2024	WNV
Alameda	Alameda Co MAD	Livermore	94550	Unknown - Crow or Raven	8/3/2024	WNV
Alameda	Alameda Co MAD	Pleasanton	94566	American Crow	8/5/2024	WNV
Colusa	Colusa MAD	Colusa	95932	California Scrub-Jay	7/24/2024	WNV
Los Angeles	Los Angeles Co West VCD	Venice	90291	American Crow	7/29/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	American Crow	7/30/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	Cooper's Hawk	7/30/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	American Crow	8/1/2024	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	House Finch	8/1/2024	WNV
San Bernardino	West Valley MVCD	Chino Hills	91709	American Crow	8/8/2024	WNV
San Joaquin	San Joaquin Co MVCD	Lodi	95240	California Scrub-Jay	7/31/2024	WNV
Santa Clara	Santa Clara Co VCD	Stanford	94305	American Crow	8/1/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95125	Unknown - Crow or Raven	8/1/2024	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	8/1/2024	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	8/1/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	Finch	8/1/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95136	American Crow	8/4/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95118	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Milpitas	95035	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95131	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95054	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94085	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95050	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	8/5/2024	WNV

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Santa Clara	Santa Clara Co VCD	Mountain View	94043	Unknown - Crow or Raven	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	Unknown - Crow or Raven	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95127	American Crow	8/5/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95111	American Crow	8/5/2024	WNV

### Mosquito Pools

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Alameda	ALCO 114722	32868	Cx erythrothorax	Union City	50	CO2	7/19/2024	WNV
Alameda	ALCO 742812	32450	Cx erythrothorax	Fremont	33	CO2	6/27/2024	WNV
Butte	BUCO 176	214	Cx tarsalis	Gridley	50	CO2	7/29/2024	WNV
Butte	BUCO 176	215	Cx tarsalis	Gridley	50	CO2	7/29/2024	WNV
Butte	BUCO 176	217	Cx tarsalis	Gridley	50	CO2	7/29/2024	WNV
Butte	BUCO 22	218	Cx tarsalis	Oroville	50	CO2	7/30/2024	WNV
Butte	BUCO 30	229	Cx tarsalis	Chico	50	CO2	7/29/2024	WNV
Butte	BUCO 34	234	Cx tarsalis	Richvale	50	CO2	7/30/2024	WNV
Butte	BUCO 34	235	Cx tarsalis	Richvale	50	CO2	7/30/2024	WNV
Butte	BUCO 43	232	Cx tarsalis	Chico	50	CO2	7/29/2024	WNV
Butte	BUCO 49	211	Cx tarsalis	Biggs	50	CO2	7/29/2024	WNV
Butte	BUCO 49	213	Cx tarsalis	Biggs	50	CO2	7/29/2024	WNV
Butte	BUCO 71	242	Cx tarsalis	Chico	50	CO2	7/31/2024	WNV
Butte	BUCO 84	239	Cx tarsalis	Nelson	50	CO2	7/30/2024	WNV
Butte	BUCO 84	240	Cx tarsalis	Nelson	50	CO2	7/30/2024	WNV
Contra Costa	CNTR 996406	1153	Cx tarsalis	Oakley	50	CO2	8/1/2024	WNV
Contra Costa	CNTR 996406	1158	Cx pipiens	Oakley	45	CO2	8/1/2024	WNV
Fresno	CNSL 3073	500	Cx quinquefasciatus	Parlier	49	GRVD	8/1/2024	WNV
Fresno	CNSL 4064	191	Cx quinquefasciatus	Selma	50	GRVD	8/1/2024	WNV
Fresno	CNSL 4070	179	Cx quinquefasciatus	Selma	50	GRVD	7/31/2024	WNV
Fresno	CNSL 4362	502	Cx quinquefasciatus	Selam	50	GRVD	8/1/2024	WNV
Fresno	FRNO 185	457	Cx quinquefasciatus	La Vina	50	GRVD	8/6/2024	WNV
Fresno	FRNO 262	447	Cx quinquefasciatus	Fresno	27	GRVD	8/6/2024	WNV
Fresno	FRNO 8	453	Cx tarsalis	Fresno	9	GRVD	8/6/2024	WNV
Fresno	FRWS 1202	115	Cx tarsalis	Dos Palos	50	CO2	8/6/2024	WNV
Fresno	FRWS 3104	118	Cx tarsalis	Firebaugh	12	CO2	8/6/2024	WNV
Fresno	FRWS 4102	128	Cx tarsalis	Kerman	50	CO2	8/6/2024	WNV
Kern	KERN 156	288	Cx tarsalis	Butttonwillow	24	CO2	7/30/2024	WNV
Kern	KERN 3014	291	Cx tarsalis	Bakersfield	50	CO2	8/1/2024	WNV
Kern	KERN 3030	284	Cx quinquefasciatus	Shafter	26	CO2	7/30/2024	WNV
Kings	CNSL 5193	186	Cx quinquefasciatus	Kingsburg	50	GRVD	7/31/2024	WNV
Kings	KNGS 3078	93	Cx tarsalis	Lemoore	50	CO2	7/31/2024	WNV
Lake	LAKE 302	234	Cx tarsalis	Clearlake Oaks	50	CO2	8/6/2024	WNV
Los Angeles	GRLA 2031	5652	Cx quinquefasciatus	Northridge	50	GRVD	7/31/2024	WNV
Los Angeles	GRLA 2032	5651	Cx quinquefasciatus	Northridge	50	GRVD	7/31/2024	WNV
Los Angeles	GRLA 2540	5655	Cx quinquefasciatus	Porter Ranch	50	GRVD	7/31/2024	WNV
Los Angeles	GRLA 2614	5666	Cx quinquefasciatus	Santa Clarita	50	GRVD	8/2/2024	WNV
Los Angeles	GRLA 2635	5646	Cx quinquefasciatus	Lake Balboa	50	GRVD	7/31/2024	WNV
Los Angeles	SGVA 1000	511	Cx quinquefasciatus	Azusa	46	GRVD	8/6/2024	WNV
Los Angeles	SGVA 1022	516	Cx quinquefasciatus	Azusa	50	GRVD	8/6/2024	WNV
Los Angeles	SGVA 62	520	Cx quinquefasciatus	Covina	24	GRVD	8/7/2024	WNV
Madera	MADR 12361	336	Cx tarsalis	Madera	50	CO2	7/31/2024	WNV
Madera	MADR 24	338	Cx tarsalis	Chowchilla	50	CO2	7/31/2024	WNV
Madera	MADR 581	346	Cx tarsalis	Madera	50	CO2	7/31/2024	WNV
Madera	MADR 750	352	Cx quinquefasciatus	Firebaugh	35	CO2	7/31/2024	WNV
Madera	MADR 750	353	Cx tarsalis	Firebaugh	50	CO2	7/31/2024	WNV
Merced	MERC 194778	267	Cx pipiens	Delhi	50	BGSENT	8/7/2024	WNV
Merced	MERC 201745	270	Cx pipiens	Delhi	50	BGSENT	8/7/2024	WNV
Merced	MERC 242283	272	Cx pipiens	Delhi	50	CO2	8/7/2024	WNV
Merced	MERC 492592	251	Cx pipiens	Delhi	50	BGSENT	8/7/2024	WNV
Merced	MERC 492592	253	Cx pipiens	Delhi	50	BGSENT	8/7/2024	WNV
Placer	PLCR 1114	930	Cx tarsalis	Lincoln	50	CO2	8/6/2024	WNV
Placer	PLCR 1114	931	Cx tarsalis	Lincoln	30	CO2	8/6/2024	WNV
Placer	PLCR 139	915	Cx tarsalis	Roseville	50	CO2	8/6/2024	WNV
Placer	PLCR 139	916	Cx tarsalis	Roseville	50	CO2	8/6/2024	WNV
Placer	PLCR 139	917	Cx tarsalis	Roseville	50	CO2	8/6/2024	WNV
Placer	PLCR 139	918	Cx tarsalis	Roseville	50	CO2	8/6/2024	WNV
Placer	PLCR 139	919	Cx tarsalis	Roseville	50	CO2	8/6/2024	WNV

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Placer	PLCR 17	933	Cx tarsalis	Sheridan	50	CO2	8/6/2024	WNV
Placer	PLCR 17	934	Cx tarsalis	Sheridan	50	CO2	8/6/2024	WNV
Placer	PLCR 17	935	Cx tarsalis	Sheridan	34	CO2	8/6/2024	WNV
Placer	PLCR 183970	944	Cx tarsalis	Auburn	2	CO2	8/7/2024	WNV
Placer	PLCR 191373	910	Cx tarsalis	Unknown	50	CO2	8/6/2024	WNV
Placer	PLCR 197802	899	Cx tarsalis	Elverta	50	CO2	8/6/2024	WNV
Placer	PLCR 197802	900	Cx tarsalis	Elverta	50	CO2	8/6/2024	WNV
Placer	PLCR 198710	912	Cx tarsalis	Lincoln	19	CO2	8/6/2024	WNV
Placer	PLCR 25	921	Cx tarsalis	Lincoln	50	CO2	8/6/2024	WNV
Placer	PLCR 678519	926	Cx tarsalis	Elverta	50	CO2	8/6/2024	WNV
Placer	PLCR 82	962	Cx thriambus	Lincoln	1	CO2	8/8/2024	WNV
Riverside	COAV 344	4550	Cx quinquefasciatus	La Quinta	17	BGSENT	8/6/2024	WNV
Riverside	COAV 610	4515	Cx tarsalis	Oasis	35	CO2	8/6/2024	WNV
Riverside	RIVR 88	97	Cx tarsalis	Nuevo	39	CO2	8/1/2024	WNV
San Bernardino	WVAL 1007	1498	Cx quinquefasciatus	Ontario	34	CO2	8/7/2024	WNV
San Bernardino	WVAL 3970	1479	Cx quinquefasciatus	Chino	5	BGSENT	8/6/2024	WNV
San Bernardino	WVAL 4718	1522	Cx quinquefasciatus	Chino	50	BGSENT	8/8/2024	WNV
San Bernardino	WVAL 4721	1478	Cx quinquefasciatus	Chino	46	BGSENT	8/6/2024	WNV
San Bernardino	WVAL 5004	1482	Cx quinquefasciatus	Rancho Cucamonga	5	GRVD	8/6/2024	WNV
San Bernardino	WVAL 6236	1537	Cx quinquefasciatus	Ontario	55	BGSENT	8/8/2024	WNV
Santa Clara	STCL 31143	2174	Cx pipiens	San Jose	2	CO2	8/6/2024	WNV
Santa Clara	STCL 31743	2144	Cx pipiens	San Jose	2	CO2	8/1/2024	WNV
Santa Clara	STCL 31914	2110	Cx pipiens	San Jose	6	CO2	8/1/2024	WNV
Santa Clara	STCL 32006	2147	Cx tarsalis	San Jose	2	GRVD	8/3/2024	WNV
Santa Clara	STCL 32006	2160	Cx tarsalis	San Jose	2	CO2	8/2/2024	WNV
Shasta	SHAS 619	516	Cx tarsalis	Redding	12	CO2	8/7/2024	WNV
Solano	SOLA 100003	319	Cx tarsalis	Dixon	13	CO2	8/7/2024	WNV
Solano	SOLA 38	312	Cx tarsalis	Dixon	50	CO2	8/7/2024	WNV
Solano	SOLA 38	313	Cx tarsalis	Dixon	50	CO2	8/7/2024	WNV
Solano	SOLA 38	314	Cx tarsalis	Dixon	50	CO2	8/7/2024	WNV
Stanislaus	TRLK 1615	405	Cx tarsalis	Modesto	49	CO2	8/6/2024	WNV
Stanislaus	TRLK 1712	417	Cx tarsalis	Newman	50	CO2	8/6/2024	WNV
Sutter	SUYA 24	330	Cx tarsalis	Yuba City	50	REST	7/29/2024	WNV
Sutter	SUYA 24	332	Cx tarsalis	Yuba City	16	REST	7/29/2024	WNV
Sutter	SUYA 27	354	Cx tarsalis	Tierra Buena	12	CO2	8/7/2024	WNV
Sutter	SUYA 30	333	Cx tarsalis	Live Oak	50	REST	7/29/2024	WNV
Sutter	SUYA 30	334	Cx tarsalis	Live Oak	13	REST	7/29/2024	WNV
Sutter	SUYA 30	373	Cx tarsalis	Live Oak	23	REST	8/5/2024	WNV
Sutter	SUYA 70	342	Cx tarsalis	Yuba City	12	CO2	8/6/2024	WNV
Sutter	SUYA 9	345	Cx tarsalis	Sutter	22	CO2	8/6/2024	WNV
Tulare	DLTA 841543	2444	Cx quinquefasciatus	Visalia	50	CO2	8/1/2024	WNV
Tulare	DLTA 84224	2483	Cx quinquefasciatus	Visalia	50	BGSENT	8/2/2024	WNV
Tulare	DLTA 9401	2450	Cx quinquefasciatus	Visalia	15	GRVD	8/1/2024	WNV
Tulare	TLRE 202635	75	Cx quinquefasciatus	Plainview	50	GRVD	7/30/2024	WNV
Yuba	SUYA 10	317	Cx tarsalis	Olivehurst	50	CO2	7/31/2024	WNV
Yuba	SUYA 39	324	Cx tarsalis	Marysville (Hallwood)	50	CO2	7/31/2024	WNV
Yuba	SUYA 4	363	Cx tarsalis	Wheatland	50	CO2	8/7/2024	WNV
Yuba	SUYA 4	365	Cx pipiens	Wheatland	10	CO2	8/7/2024	WNV
Yuba	SUYA 40	323	Cx tarsalis	Linda	47	CO2	7/31/2024	WNV

### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05	Band 06
Butte	BUCO 1	Chico	7/31/2024	WNV	2203					
Butte	BUCO 4	Gridley	7/31/2024	WNV	2219	2220	2221	2224		
Butte	BUCO 5	Honcut	7/31/2024	WNV	2225	2227	2228	2229		
Butte	BUCO 7	Chico	7/31/2024	WNV	2239					
Lake	LAKE 226	Lower Lake	8/1/2024	WNV	2988					
Sutter	SUYA 20	Meridian	8/1/2024	WNV	3317	3318				
Sutter	SUYA 30	Live Oak	8/1/2024	WNV	3302					
Sutter	SUYA 84	Yuba City	8/1/2024	WNV	3282	3283	3287			
Tulare	TLRE 8	Tulare	8/2/2024	WNV	3381	3383	3385			
Yuba	SUYA 7	Marysville	8/1/2024	WNV	3295	3296	3297	3298	3299	3301

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### 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).

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#### **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.

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#### **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.

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*Website Information:* For updated information on WNV in California, please visit the California WNV website, <https://westnile.ca.gov>, or the California Vector-Borne Disease Surveillance System website, <https://maps.vectorsurv.org>

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