

## California Arbovirus Surveillance Bulletin #24

Week 38 Friday, September 20, 2024



### WEEKLY UPDATE

#### **Humans**

##### West Nile virus

A total of 9 new human cases of West Nile virus (WNV) disease were reported this week from 6 counties: Butte (1), Calaveras (1), Contra Costa (1), Fresno (4), Shasta (1), and Stanislaus (1). **This is the first report of WNV activity from Calaveras County and the first human case of WNV disease for Shasta County this year.** In 2024, 59 human cases of WNV disease were reported from 19 counties. Of the 59 cases, 42 (71%) had neuroinvasive disease and 6 (10%) were fatal. The median age of the case-patients was 58 years and 37 (63%) of the case-patients were male. The dates of symptom onset ranged from May 28 to September 3. In addition to the 59 cases of WNV disease, 10 asymptomatic WNV-positive blood donors have been reported from 6 counties: Butte (1), Fresno (3), Los Angeles (1), San Bernardino (2), Santa Clara (2), and Stanislaus (1). At this time last year, 153 human cases of WNV disease had been reported from 25 counties.

##### St. Louis encephalitis virus

No human cases of St. Louis encephalitis virus (SLEV) disease have been reported. At this time last year, 2 human cases of SLEV disease had been reported from 2 counties.

#### **Dead Birds**

A total of 24 new WNV positive dead birds were reported from 5 counties: Alameda (2), Placer (1), San Diego (1), San Mateo (3), and Santa Clara (17). In 2024, 451 WNV positive dead birds have been reported from 18 counties. At this time last year, 654 WNV positive dead birds had been reported from 29 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 94 new WNV positive mosquito pools were reported from 16 counties: Butte (1), Contra Costa (1), Fresno (8), Kings (6), Los Angeles (15), Madera (15), Orange (5), Placer (5), Riverside (2), Sacramento (3), San Bernardino (3), San Joaquin (3), Shasta (3), Tulare (18), Yolo (4), and Yuba (2). In 2024, 1,748 WNV positive mosquito pools have been reported from 25 counties. At this time last year, 3,983 WNV positive mosquito pools had been reported from 30 counties.

##### St. Louis encephalitis virus

A total of 6 new SLEV positive mosquito pools were reported from 3 counties: Fresno (2), Kings (1), and Madera (3). In 2024, 25 SLEV positive mosquito pools have been reported from 5 counties: Fresno (12), Imperial (1), Kings (3), Madera (4), and Tulare (5). At this time last year, 552 SLEV positive mosquito pools had been reported from 15 counties.

#### **Sentinel Chickens**

A total of 23 new WNV positive chickens were reported this week from 7 counties: Butte (1), Colusa (2), Los Angeles (12), Sacramento (1), Sutter (2), Tehama (2), and Yolo (3). **These are the first WNV positive chickens reported from Colusa, Sacramento, and Yolo counties this year.** In 2024, 139 WNV positive sentinel chickens have been reported from 15 counties. At this time last year, 155 WNV positive chickens had been reported from 17 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	5,490	5,356
No. Positive Counties	40	31
No. Human Cases	153	59
No. Positive Dead Birds / No. Tested	654 / 1,641	451 / 1,557
No. Positive Mosquito Pools / No. Tested	3,983 / 43,322	1,748 / 38,642
No. Seroconversions / No. Tested	155 / 3,031	139 / 3,878

<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			48	20	
Butte	11		4	70	27
Calaveras	1				
Colusa			1		2
Contra Costa	2		6	10	8
Fresno	8			194	
Imperial				2	
Kern	2			43	
Kings	5			87	
Lake			2	13	5
Los Angeles	2	1	11	145	32
Madera				102	
Merced	1			35	12
Nevada					1
Orange	1		1	42	
Placer		1	3	91	
Riverside	2		2	217	
Sacramento	2	1	59	53	1
San Bernardino	3		10	74	
San Diego		1	4		
San Joaquin	1	1	6	151	
San Mateo			29		
Santa Clara	3		256	33	
Shasta	1			35	2
Solano			2	11	5
Stanislaus	4			45	
Sutter				32	19
Tehama	1				5
Tulare				150	10
Yolo	5		5	61	3
Yuba	4	1	2	32	7
<b>Totals</b>	<b>59</b>	<b>6</b>	<b>451</b>	<b>1,748</b>	<b>139</b>

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### TESTING SUMMARIES

		WNV	SLEV	WEEV
<b>Human Cases</b>	Week	9	0	0
	YTD	59	0	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

<b>Dead Birds</b>	Week	24 / 53
	YTD	453 / 1,557

<b>Chicken Sera</b>	Week	23 / 252	0 / 252	0 / 252
	YTD	139 / 3,878	0 / 3,878	0 / 3,878

<b>Mosquito Pools</b>	Week	94 / 1,560	6 / 1,423	0 / 1,423	0 / 40	0 / 40	0 / 40
	YTD	1,748 / 38,642	25 / 35,768	0 / 35,791	0 / 915	0 / 915	0 / 915

### POSITIVES

#### Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Fremont	94555	American Crow	9/16/2024	WNV
Alameda	Alameda Co MAD	Fremont	94555	Unknown - Crow or Raven	9/16/2024	WNV
Placer	Placer MVCD	Roseville	95747	California Scrub-Jay	9/18/2024	WNV
San Diego	San Diego Co VCP	San Diego	92110	American Crow	9/16/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	9/10/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	9/17/2024	WNV
San Mateo	San Mateo Co MVCD	Menlo Park	94025	American Crow	9/18/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95126	Unknown	9/12/2024	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94303	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95133	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95126	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94306	American Crow	9/13/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95126	Unknown - Crow or Raven	9/16/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95136	Unknown - Crow or Raven	9/16/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95112	American Crow	9/16/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	9/16/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Crow	9/16/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95118	Unknown	9/17/2024	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95134	Unknown	9/17/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Crow	9/18/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	9/18/2024	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94301	American Crow	9/18/2024	WNV

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### Mosquito Pools

County	Site	Pool No	Species	City	Pool Size	Trap	Collected	Virus
Butte	BUCO 49	373	Cx tarsalis	Biggs	50	CO2	9/9/2024	WNV
Contra Costa	CNTR 8202	1689	Cx tarsalis	Discovery Bay	50	CO2	9/17/2024	WNV
Fresno	CNSL 2233	243	Cx stigmatosoma	Sanger	45	GRVD	9/11/2024	WNV
Fresno	CNSL 303	536	Cx quinquefasciatus	Orange Cove	25	GRVD	9/11/2024	WNV
Fresno	CNSL 4010	247	Cx quinquefasciatus	Fowler	31	GRVD	9/12/2024	SLEV
Fresno	CNSL 4308	250	Cx quinquefasciatus	Fowler	49	GRVD	9/12/2024	WNV
Fresno	CNSL 5009	246	Cx quinquefasciatus	Kingsburg	50	GRVD	9/11/2024	WNV
Fresno	FRWS 100007	282	Cx tarsalis	Firebaugh, Ca	19	CO2	9/17/2024	WNV
Fresno	FRWS 400002	264	Cx tarsalis	Mendota	50	BGSENT	9/12/2024	WNV
Fresno	FRWS 4102	284	Cx tarsalis	Kerman	50	CO2	9/17/2024	SLEV
Fresno	FRWS 4102	286	Cx tarsalis	Kerman	50	CO2	9/17/2024	WNV
Fresno	FRWS 510002	263	Cx quinquefasciatus	Tranquility	50	BGSENT	9/12/2024	WNV
Kings	KNGS 3117	257	Cx tarsalis	Grangeville	50	CO2	9/12/2024	WNV
Kings	KNGS 3128	241	Cx tarsalis	Island	20	CO2	9/10/2024	WNV
Kings	KNGS 3128	242	Cx pipiens	Island	23	CO2	9/10/2024	WNV
Kings	KNGS 3129	236	Cx tarsalis	Lemoore	50	CO2	9/10/2024	WNV
Kings	KNGS 3129	238	Cx pipiens	Lemoore	50	CO2	9/10/2024	WNV
Kings	KNGS 3129	240	Cx pipiens	Lemoore	45	CO2	9/10/2024	WNV
Kings	KNGS 8036	251	Cx tarsalis	Traver	50	CO2	9/11/2024	SLEV
Los Angeles	GRLA 2021	5860	Cx quinquefasciatus	Reseda	31	GRVD	9/11/2024	WNV
Los Angeles	GRLA 2268	719	Cx quinquefasciatus	Cerritos	13	GRVD	9/11/2024	WNV
Los Angeles	GRLA 2637	5849	Cx quinquefasciatus	Van Nuys	50	GRVD	9/10/2024	WNV
Los Angeles	GRLA 2651	5846	Cx quinquefasciatus	Sepulveda Basin	50	BGSENT	9/10/2024	WNV
Los Angeles	GRLA 2724	5866	Cx quinquefasciatus	Winnetka	32	GRVD	9/12/2024	WNV
Los Angeles	GRLA 2890	730	Cx quinquefasciatus	Lakewood	39	GRVD	9/13/2024	WNV
Los Angeles	GRLA 2962	5872	Cx quinquefasciatus	Chatsworth	31	BGSENT	9/12/2024	WNV
Los Angeles	GRLA 3040	717	Cx quinquefasciatus	La Mirada	24	GRVD	9/11/2024	WNV
Los Angeles	GRLA 3097	5880	Cx quinquefasciatus	Arleta	30	GRVD	9/13/2024	WNV
Los Angeles	SGVA 1498	709	Cx quinquefasciatus	West Covina	35	GRVD	9/19/2024	WNV
Los Angeles	SGVA 1498	711	Cx quinquefasciatus	West Covina	35	GRVD	9/19/2024	WNV
Los Angeles	SGVA 1500	708	Cx quinquefasciatus	West Covina	37	GRVD	9/19/2024	WNV
Los Angeles	SGVA 1501	705	Cx quinquefasciatus	West Covina	50	GRVD	9/19/2024	WNV
Los Angeles	SGVA 445	675	Cx quinquefasciatus	Rosemead	38	GRVD	9/17/2024	WNV
Los Angeles	SGVA 64	680	Cx quinquefasciatus	West Covina	27	GRVD	9/18/2024	WNV
Madera	MADR 1097	611	Cx tarsalis	Madera	50	CO2	9/12/2024	WNV
Madera	MADR 1150	628	Cx tarsalis	Madera	50	CO2	9/13/2024	WNV
Madera	MADR 1155	593	Cx tarsalis	Firebaugh	50	CO2	9/10/2024	WNV
Madera	MADR 12354	595	Cx quinquefasciatus	Madera	50	CO2	9/11/2024	WNV
Madera	MADR 12360	597	Cx tarsalis	Madera	50	CO2	9/11/2024	SLEV
Madera	MADR 12385	624	Cx tarsalis	Madera	43	CO2	9/12/2024	WNV
Madera	MADR 12386	625	Cx tarsalis	Madera	26	CO2	9/12/2024	WNV
Madera	MADR 12388	627	Cx tarsalis	Madera	32	CO2	9/13/2024	WNV
Madera	MADR 204	622	Cx tarsalis	Madera	50	CO2	9/12/2024	WNV
Madera	MADR 208	617	Cx tarsalis	Madera	50	CO2	9/12/2024	WNV
Madera	MADR 259	607	Cx tarsalis	Madera	50	CO2	9/12/2024	WNV
Madera	MADR 3191	591	Cx tarsalis	Firebaugh	50	CO2	9/10/2024	SLEV
Madera	MADR 363	631	Cx tarsalis	Firebaugh	50	CO2	9/13/2024	WNV
Madera	MADR 697	590	Cx tarsalis	Firebaugh	50	CO2	9/10/2024	WNV
Madera	MADR 726	608	Cx tarsalis	Madera	50	CO2	9/12/2024	WNV
Madera	MADR 751	580	Cx tarsalis	Chowchilla	37	CO2	9/10/2024	WNV
Madera	MADR 773	596	Cx quinquefasciatus	Madera	32	CO2	9/11/2024	SLEV
Madera	MADR 975	601	Cx tarsalis	Madera	50	CO2	9/11/2024	WNV
Orange	ORCO 1033	2643	Cx quinquefasciatus	Tustin	22	GRVD	9/17/2024	WNV
Orange	ORCO 29	2662	Cx quinquefasciatus	Santa Ana	46	GRVD	9/18/2024	WNV
Orange	ORCO 326	2610	Cx quinquefasciatus	La Habra	12	GRVD	9/17/2024	WNV
Orange	ORCO 342	2635	Cx quinquefasciatus	Fullerton	6	GRVD	9/17/2024	WNV
Orange	ORCO 345	2633	Cx quinquefasciatus	Santa Ana	16	BGSENT	9/17/2024	WNV
Placer	PLCR 139	1524	Cx tarsalis	Roseville	50	CO2	9/17/2024	WNV
Placer	PLCR 139	1525	Cx tarsalis	Roseville	50	CO2	9/17/2024	WNV
Placer	PLCR 139	1526	Cx tarsalis	Roseville	6	CO2	9/17/2024	WNV
Placer	PLCR 139	1527	Cx thriambus	Roseville	2	CO2	9/17/2024	WNV
Placer	PLCR 198710	1544	Cx tarsalis	Lincoln	24	CO2	9/17/2024	WNV
Riverside	COAV 30	5409	Cx tarsalis	Thermal	50	CO2	9/17/2024	WNV

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Riverside	COAV 34	5329	Cx tarsalis	Mecca	50	CO2	9/17/2024	WNV
Sacramento	SAYO 203032	4738	Cx tarsalis	Sacramento	18	CO2	9/17/2024	WNV
Sacramento	SAYO 223044	4799	Cx pipiens	Sacramento	6	GRVD	9/17/2024	WNV
Sacramento	SAYO 242010	4568	Cx pipiens	Elk Grove	2	CO2	9/13/2024	WNV
San Bernardino	SANB 0	356	Cx quinquefasciatus	San Bernardino	50	GRVD	9/6/2024	WNV
San Bernardino	SANB 37	295	Cx tarsalis	San Bernardino	50	CO2	8/20/2024	WNV
San Bernardino	SANB 403	330	Cx quinquefasciatus	Fontana	50	GRVD	8/28/2024	WNV
San Joaquin	SJCM 8003	1605	Cx pipiens	Tracy	6	CO2	9/17/2024	WNV
San Joaquin	SJCM 8206	1670	Cx tarsalis	Lodi	50	CO2	9/17/2024	WNV
San Joaquin	SJCM 8206	1674	Cx tarsalis	Lodi	32	CO2	9/17/2024	WNV
Shasta	SHAS 148	750	Cx tarsalis	Cottonwood	45	CO2	9/17/2024	WNV
Shasta	SHAS 629	753	Cx pipiens	Anderson	50	CO2	9/17/2024	WNV
Shasta	SHAS 917	762	Cx tarsalis	Redding	22	CO2	9/17/2024	WNV
Tulare	DLTA 184191	3057	Cx quinquefasciatus	Visalia	47	GRVD	9/11/2024	WNV
Tulare	DLTA 300011	3202	Cx quinquefasciatus	Visalia	27	BGSENT	9/17/2024	WNV
Tulare	DLTA 640412	3038	Cx tarsalis	Dinuba	22	CO2	9/10/2024	WNV
Tulare	DLTA 640412	3039	Cx stigmatosoma	Dinuba	23	CO2	9/10/2024	WNV
Tulare	DLTA 64163	3171	Cx quinquefasciatus	Dinuba	38	BGSENT	9/13/2024	WNV
Tulare	DLTA 6518	3061	Cx quinquefasciatus	Cutler	36	GRVD	9/11/2024	WNV
Tulare	DLTA 741443	3037	Cx quinquefasciatus	Monson	35	CO2	9/10/2024	WNV
Tulare	DLTA 83222	3081	Cx quinquefasciatus	Goshen	50	BGSENT	9/11/2024	WNV
Tulare	DLTA 83222	3082	Cx quinquefasciatus	Goshen	50	BGSENT	9/11/2024	WNV
Tulare	DLTA 83231	3137	Cx quinquefasciatus	Goshen	50	CO2	9/12/2024	WNV
Tulare	DLTA 83231	3142	Cx tarsalis	Goshen	6	CO2	9/12/2024	WNV
Tulare	DLTA 83231	3144	Cx quinquefasciatus	Goshen	40	CO2	9/12/2024	WNV
Tulare	DLTA 83231	3145	Cx quinquefasciatus	Goshen	11	CO2	9/12/2024	WNV
Tulare	DLTA 83231	3149	Cx tarsalis	Goshen	10	CO2	9/12/2024	WNV
Tulare	DLTA 83231	3150	Cx tarsalis	Goshen	21	CO2	9/12/2024	WNV
Tulare	DLTA 84121	3079	Cx quinquefasciatus	Visalia	31	BGSENT	9/11/2024	WNV
Tulare	DLTA 84121	3179	Cx quinquefasciatus	Visalia	32	BGSENT	9/17/2024	WNV
Tulare	DLTA 84233	3104	Cx quinquefasciatus	Visalia	20	GRVD	9/12/2024	WNV
Yolo	SAYO 103007	4703	Cx tarsalis	Dunnigan	6	CO2	9/17/2024	WNV
Yolo	SAYO 115008	4705	Cx tarsalis	Woodland	50	CO2	9/17/2024	WNV
Yolo	SAYO 146002	4833	Cx tarsalis	Davis	24	CO2	9/17/2024	WNV
Yolo	SAYO 147013	4770	Cx tarsalis	West Sacramento	34	CO2	9/17/2024	WNV
Yuba	SUYA 10	464	Cx tarsalis	Olivehurst	29	CO2	9/18/2024	WNV
Yuba	SUYA 4	462	Cx tarsalis	Wheatland	50	CO2	9/18/2024	WNV

### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03
Butte	BUCO 4	Gridley	9/11/2024	WNV	2222		
Colusa	CLSA 0	Colusa	9/10/2024	WNV	2978	2979	
Los Angeles	LACW 1002	Torrance	9/4/2024	WNV	3006	3007	3008
Los Angeles	LACW 1003	Redondo Beach	9/4/2024	WNV	3012		
Los Angeles	LACW 1005	El Segundo	9/12/2024	WNV	3023		
Los Angeles	LACW 1006	Playa Del Rey	9/12/2024	WNV	3027	3028	3029
Los Angeles	LACW 1007	Baldwin Hills	9/12/2024	WNV	3034	3035	
Los Angeles	LACW 1009	Los Angeles	9/10/2024	WNV	3036		
Los Angeles	LACW 1010	Los Angeles	9/4/2024	WNV	3045		
Sacramento	SAYO 261013	Isleton	9/18/2024	WNV	3158		
Sutter	SUYA 15	Robbins	9/12/2024	WNV	3326	3328	
Tehama	TEHA 1	Red Bluff	9/11/2024	WNV	3344	3349	
Yolo	SAYO 103013	Dunnigan	9/16/2024	WNV	3165		
Yolo	SAYO 116006	Knights Landing	9/13/2024	WNV	3169	3166	

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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>

*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 Hannah Romo: [Hannah.Romo@cdph.ca.gov](mailto:Hannah.Romo@cdph.ca.gov)*