

## California Arbovirus Surveillance Bulletin #19

Week 34 Friday, August 21, 2020



### Weekly Update

#### **Humans**

A total of nine human cases of West Nile virus (WNV) illness were reported this week from six counties: Los Angeles (1), Madera (1), Orange (1), Placer (1), Riverside (1), and Stanislaus (4). **These are the first human WNV cases reported from Placer and Riverside counties this year.** In 2020, a total of 27 human WNV cases have been reported from 7 counties. Of the 27 cases, 21 (78%) had neuroinvasive illness and two (7.4%) were fatal. The median age of the individuals is 61 years and 21 (78%) are male. Dates of symptom onset ranged from June 16 to August 6. In addition to the 27 cases, 4 asymptomatic WNV-positive blood donors have been reported from Los Angeles (2) and Stanislaus (2) counties. At this time last year, 45 human WNV cases had been reported from 11 counties.

#### **Dead Birds**

A total of 13 WNV positive dead birds were reported this week from 5 counties: Contra Costa (1), Los Angeles (3), Orange (2), Sacramento (6), and Yolo (1). **This is the first positive bird from Contra Costa County this year.** In 2020, a total of 124 WNV positive dead birds have been reported from 17 counties. At this time last year, 81 WNV positive dead birds had been reported from 13 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 232 WNV positive mosquito pools were reported this week from 21 counties: Butte (4), Contra Costa (1), Fresno (38), Kern (13), Kings (7), Lake (1), Los Angeles (22), Madera (9), Merced (5), Orange (20), Placer (13), Riverside (2), Sacramento (8), San Bernardino (1), San Joaquin (14), Shasta (3), Solano (2), Stanislaus (23), Sutter (4), Tulare (24), and Yolo (18). **This is the first detection of WNV activity in San Bernardino County this year.** In 2020, a total of 1,114 WNV positive mosquito pools have been reported from 26 counties. At this time last year, 2,269 WNV positive mosquito pools had been reported from 23 counties.

##### St. Louis encephalitis virus

A total of 31 St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from 5 counties: Fresno (18), Kern (1), Kings (1), Madera (1), and Riverside (10). In 2020, a total of 238 SLEV positive mosquito pools have been reported from Fresno (85), Imperial (9), Kern (8), Kings (3), Madera (2), Riverside (128), San Joaquin (1) and Tulare (2) counties. At this time last year, 154 SLEV positive mosquito pools had been reported from 7 counties.

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### Sentinel Chickens

A total of 18 WNV positive chickens were reported this week from 2 counties: Butte (8) and Sutter (10). **These are the first WNV positive chickens reported from Sutter County this year.** In 2020, a total of 40 chickens have tested positive for WNV from 6 counties. At this time last year, 45 WNV positive chickens had been reported from 8 counties.

2019 & 2020 YTD West Nile Virus Comparisons		
	2019	2020
Total # Dead Bird Reports	3,868	3,639
# Positive Counties	26	29
# Human Cases	45	27
# Positive Dead Birds / # Tested	81 / 1,198	124 / 990
# Positive Mosquito Pools / # Tested	2,269 / 29,483	1,114 / 25,477
# Seroconversions / # Tested	45 / 5,679	40 / 4,167

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<b>YTD WNV Activity by Element and County, 2020</b>					
County	Humans*	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			1		
Amador		1			
Butte			2	20	12
Contra Costa			1	2	
Fresno			4	158	
Glenn				2	1
Imperial				3	
Kern				33	
Kings				40	
Lake				5	
Los Angeles	5		26	140	2
Madera	2			33	
Merced		1	2	40	14
Napa			1		
Orange	2		14	74	
Placer	1		1	35	
Riverside	1		1	48	
Sacramento			55	43	
San Bernardino				1	
San Diego	1			2	
San Joaquin		1	1	77	
Santa Clara			5	8	
Shasta				10	
Solano			1	3	
Stanislaus	15	1	4	219	
Sutter				15	10
Tulare			1	60	1
Yolo			4	42	
Yuba				1	
<b>Totals</b>	<b>27</b>	<b>4</b>	<b>124</b>	<b>1,114</b>	<b>40</b>

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## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	9	0	0
	YTD	27	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	53	13
	YTD	990	124

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	283	18	0	0
	YTD	4,167	40	0	0

### Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	232 / 1,948	31 / 1,753	0 / 1,624	0 / 19	0 / 19	0 / 19
		YTD	1,114 / 25,477	238 / 24,361	0 / 22,904	0 / 230	0 / 230	0 / 230

## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Contra Costa	Contra Costa MVCD	Martinez	94553	California Scrub-Jay	8/15/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Cerritos	90703	American Crow	8/13/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90808	American Crow	8/17/2020	WNV
Los Angeles	Greater Los Angeles Co VCD - SFS	Long Beach	90815	American Crow	8/13/2020	WNV
Orange	Orange Co VCD	Fullerton	92832	American Crow	8/3/2020	WNV
Orange	Orange Co VCD	Fullerton	92833	American Crow	8/7/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95610	California Scrub-Jay	8/12/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	California Scrub-Jay	8/12/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Gold River	95670	American Crow	8/16/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95841	Yellow-billed Magpie	8/13/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	8/17/2020	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	Yellow-billed Magpie	8/13/2020	WNV
Yolo	Sacramento-Yolo MVCD	Winters	95694	California Scrub-Jay	8/17/2020	WNV

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**Mosquito Pools**

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO116	328	Cx. tarsalis	Nelson	50	CO2	8/11/2020	WNV
Butte	BUCO147	330	Cx. tarsalis	Gridley	50	CO2	8/17/2020	WNV
Butte	BUCO147	331	Cx. tarsalis	Gridley	50	CO2	8/17/2020	WNV
Butte	BUCO37	322	Cx. tarsalis	Honcut	50	CO2	8/12/2020	WNV
Contra Costa	CNTR8302	139	Cx. pipiens	Knightsen	10	CO2	8/17/2020	WNV
Fresno	CNSL1270	1024	Cx. quinquefasciatus	Fresno	25	GRVD	8/11/2020	SLEV
Fresno	CNSL1270	1024	Cx. quinquefasciatus	Fresno	25	GRVD	8/11/2020	WNV
Fresno	CNSL1449	1020	Cx. quinquefasciatus	Clovis	13	GRVD	8/11/2020	SLEV
Fresno	CNSL1521	1019	Cx. quinquefasciatus	Fresno	24	GRVD	8/11/2020	SLEV
Fresno	CNSL1760	840	Cx. quinquefasciatus	Fresno	50	GRVD	8/14/2020	SLEV
Fresno	CNSL1760	840	Cx. quinquefasciatus	Fresno	50	GRVD	8/14/2020	WNV
Fresno	CNSL1822	1023	Cx. quinquefasciatus	Clovis	45	GRVD	8/11/2020	SLEV
Fresno	CNSL1822	1023	Cx. quinquefasciatus	Clovis	45	GRVD	8/11/2020	WNV
Fresno	CNSL1859	827	Cx. quinquefasciatus	Fresno	28	GRVD	8/11/2020	WNV
Fresno	CNSL1872	1050	Cx. quinquefasciatus	Clovis	38	GRVD	8/14/2020	SLEV
Fresno	CNSL1872	1050	Cx. quinquefasciatus	Clovis	38	GRVD	8/14/2020	WNV
Fresno	CNSL1947	1048	Cx. quinquefasciatus	Clovis	28	GRVD	8/14/2020	SLEV
Fresno	CNSL2020	1051	Cx. quinquefasciatus	Clovis	31	GRVD	8/14/2020	SLEV
Fresno	CNSL2523	835	Cx. quinquefasciatus	Sanger	35	CO2	8/12/2020	WNV
Fresno	CNSL2548	1035	Cx. tarsalis	Clovis	10	BGSENT	8/12/2020	SLEV
Fresno	CNSL4129	1028	Cx. quinquefasciatus	Selma	28	GRVD	8/12/2020	WNV
Fresno	CNSL5029	834	Cx. quinquefasciatus	Kingsburg	18	GRVD	8/12/2020	WNV
Fresno	CNSL5037	1031	Cx. quinquefasciatus	Kingsburg	18	GRVD	8/12/2020	WNV
Fresno	CNSL5130	832	Cx. quinquefasciatus	Kingsburg	50	GRVD	8/12/2020	WNV
Fresno	CNSL5158	833	Cx. quinquefasciatus	Kingsburg	29	GRVD	8/12/2020	WNV
Fresno	CNSL6074	1045	Cx. quinquefasciatus	Caruthers	39	GRVD	8/13/2020	WNV
Fresno	CNSL6281	1047	Cx. quinquefasciatus	Caruthers	50	GRVD	8/13/2020	WNV
Fresno	CNSL6292	1041	Cx. quinquefasciatus	Caruthers	28	GRVD	8/13/2020	WNV
Fresno	CNSL6298	1042	Cx. quinquefasciatus	Caruthers	50	GRVD	8/13/2020	WNV
Fresno	CNSL8041	1056	Cx. quinquefasciatus	Fresno	50	GRVD	8/14/2020	WNV
Fresno	CNSL8127	826	Cx. quinquefasciatus	Fresno	32	GRVD	8/11/2020	WNV
Fresno	CNSL9060	843	Cx. quinquefasciatus	Clovis	50	GRVD	8/14/2020	SLEV
Fresno	CNSL9060	843	Cx. quinquefasciatus	Clovis	50	GRVD	8/14/2020	WNV
Fresno	CNSL9159	1052	Cx. quinquefasciatus	Clovis	28	GRVD	8/14/2020	SLEV
Fresno	CNSL9165	1037	Cx. quinquefasciatus	Clovis	17	GRVD	8/13/2020	WNV
Fresno	FRNO122	364	Cx. quinquefasciatus	Fresno	43	GRVD	8/18/2020	SLEV
Fresno	FRNO151	374	Cx. quinquefasciatus	Fresno	50	GRVD	8/19/2020	SLEV
Fresno	FRNO19	377	Cx. quinquefasciatus	Fresno	50	GRVD	8/19/2020	SLEV
Fresno	FRNO19	377	Cx. quinquefasciatus	Fresno	50	GRVD	8/19/2020	WNV
Fresno	FRNO19	378	Cx. quinquefasciatus	Fresno	50	GRVD	8/19/2020	SLEV
Fresno	FRNO19	378	Cx. quinquefasciatus	Fresno	50	GRVD	8/19/2020	WNV
Fresno	FRNO19	379	Cx. quinquefasciatus	Fresno	39	GRVD	8/19/2020	SLEV
Fresno	FRNO207	340	Cx. quinquefasciatus	Fresno	15	GRVD	8/11/2020	WNV
Fresno	FRNO207	370	Cx. quinquefasciatus	Fresno	36	GRVD	8/18/2020	WNV
Fresno	FRNO250	339	Cx. quinquefasciatus	Fresno	43	GRVD	8/11/2020	WNV
Fresno	FRNO252	338	Cx. quinquefasciatus	Fresno	21	GRVD	8/11/2020	WNV

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Fresno	FRNO257	353	Cx. quinquefasciatus	Fresno	37	GRVD	8/13/2020	WNV
Fresno	FRNO261	365	Cx. quinquefasciatus	Fresno	34	GRVD	8/18/2020	SLEV
Fresno	FRNO36	375	Cx. quinquefasciatus	Fresno	22	GRVD	8/19/2020	WNV
Fresno	FRNO40	352	Cx. quinquefasciatus	Fresno	20	GRVD	8/12/2020	WNV
Fresno	FRNO7	376	Cx. quinquefasciatus	Fresno	31	GRVD	8/19/2020	WNV
Fresno	FRNO8007	345	Cx. quinquefasciatus	Fresno	12	GRVD	8/12/2020	WNV
Fresno	FRWS200003	233	Cx. tarsalis	Dos Palos	50	CO2	8/18/2020	WNV
Fresno	FRWS200020	225	Cx. tarsalis	Firebaugh	50	CO2	8/13/2020	WNV
Fresno	FRWS3104	226	Cx. tarsalis	Firebaugh	39	CO2	8/18/2020	WNV
Fresno	FRWS3201	228	Cx. tarsalis	Firebaugh	28	CO2	8/18/2020	WNV
Fresno	FRWS4102	232	Cx. tarsalis	Kerman	14	CO2	8/18/2020	WNV
Fresno	FRWS5101	236	Cx. tarsalis	Mendota	50	CO2	8/18/2020	WNV
Fresno	FRWS5101	237	Cx. tarsalis	Mendota	50	CO2	8/18/2020	WNV
Fresno	FRWS999930	224	Cx. quinquefasciatus	Firebaugh	10	GRVD	8/13/2020	SLEV
Fresno	FRWS999930	224	Cx. quinquefasciatus	Firebaugh	10	GRVD	8/13/2020	WNV
Kern	DLNO107	221	Cx. quinquefasciatus	Delano	38	GRVD	8/18/2020	WNV
Kern	DLNO11	208	Cx. quinquefasciatus	McFarland	50	BGSENT	8/13/2020	WNV
Kern	DLNO113	219	Cx. quinquefasciatus	Delano	50	GRVD	8/18/2020	WNV
Kern	DLNO115	224	Cx. quinquefasciatus	Delano	33	GRVD	8/18/2020	WNV
Kern	DLNO117	220	Cx. quinquefasciatus	Delano	50	GRVD	8/18/2020	WNV
Kern	DLNO29	217	Cx. quinquefasciatus	Delano	50	GRVD	8/18/2020	WNV
Kern	DLNO33	201	Cx. quinquefasciatus	McFarland	50	CO2	8/12/2020	WNV
Kern	DLNO43	213	Cx. quinquefasciatus	McFarland	42	GRVD	8/14/2020	WNV
Kern	DLNO51	211	Cx. quinquefasciatus	McFarland	50	GRVD	8/14/2020	WNV
Kern	DLNO67	223	Cx. quinquefasciatus	Delano	12	GRVD	8/18/2020	WNV
Kern	DLNO68	214	Cx. quinquefasciatus	Delano	17	GRVD	8/14/2020	WNV
Kern	DLNO87	206	Cx. quinquefasciatus	McFarland	40	BGSENT	8/13/2020	WNV
Kern	KERN115	432	Cx. tarsalis	Bakersfield	50	CO2	8/13/2020	WNV
Kern	KERN121	430	Cx. quinquefasciatus	Bakersfield	50	GRVD	8/12/2020	SLEV
Kings	CNSL5123	837	Cx. quinquefasciatus	Kingsburg	23	GRVD	8/14/2020	SLEV
Kings	KNGS3063	406	Cx. tarsalis	Lemoore	22	BGSENT	8/14/2020	WNV
Kings	KNGS3063	407	Cx. pipiens	Lemoore	19	BGSENT	8/14/2020	WNV
Kings	KNGS3102	403	Cx. tarsalis	Armona	50	CO2	8/14/2020	WNV
Kings	KNGS3102	404	Cx. tarsalis	Armona	19	CO2	8/14/2020	WNV
Kings	KNGS4009	388	Cx. pipiens	Armona	24	BGSENT	8/11/2020	WNV
Kings	KNGS4405	400	Cx. pipiens	Lemoore	29	BGSENT	8/12/2020	WNV
Kings	KNGS4501	398	Cx. pipiens	Armona	41	BGSENT	8/12/2020	WNV
Lake	LAKE328	398	Cx. tarsalis	Upper Lake	50	CO2	8/14/2020	WNV
Los Angeles	ANTV7058	84	Cx. tarsalis	Lancaster	5	CO2	8/18/2020	WNV
Los Angeles	GRLA2115	453	Cx. quinquefasciatus	Bell	50	GRVD	8/11/2020	WNV
Los Angeles	GRLA2116	448	Cx. quinquefasciatus	South Gate	36	GRVD	8/11/2020	WNV
Los Angeles	GRLA2247	469	Cx. quinquefasciatus	Pico Rivera	50	GRVD	8/12/2020	WNV
Los Angeles	GRLA2268	464	Cx. quinquefasciatus	Cerritos	26	GRVD	8/12/2020	WNV
Los Angeles	GRLA2270	444	Cx. quinquefasciatus	Bellflower	14	GRVD	8/11/2020	WNV
Los Angeles	GRLA2323	474	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/14/2020	WNV
Los Angeles	GRLA2346	468	Cx. quinquefasciatus	Montebello	50	GRVD	8/12/2020	WNV
Los Angeles	GRLA3041	463	Cx. quinquefasciatus	Artesia	50	GRVD	8/12/2020	WNV
Los Angeles	GRLA3046	443	Cx. quinquefasciatus	Bellflower	50	GRVD	8/11/2020	WNV
Los Angeles	GRLA3047	442	Cx. quinquefasciatus	Downey	50	GRVD	8/11/2020	WNV
Los Angeles	GRLA3048	466	Cx. quinquefasciatus	Pico Rivera	50	GRVD	8/12/2020	WNV

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Los Angeles	GRLA3049	455	Cx. quinquefasciatus	Downey	33	GRVD	8/11/2020	WNV
Los Angeles	GRLA3054	454	Cx. quinquefasciatus	Bell Gardens	41	GRVD	8/11/2020	WNV
Los Angeles	GRLA3058	446	Cx. quinquefasciatus	Lynwood	28	GRVD	8/11/2020	WNV
Los Angeles	GRLA3062	482	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/14/2020	WNV
Los Angeles	LACW1009	472	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/12/2020	WNV
Los Angeles	LACW1048	477	Cx. quinquefasciatus	Inglewood	23	CO2	8/13/2020	WNV
Los Angeles	SGVA1115	835	Cx. quinquefasciatus	Rosemead	28	GRVD	8/13/2020	WNV
Los Angeles	SGVA291	867	Cx. quinquefasciatus	El Monte	49	GRVD	8/18/2020	WNV
Los Angeles	SGVA450	859	Cx. quinquefasciatus	La Puente	50	GRVD	8/18/2020	WNV
Los Angeles	SGVA695	862	Cx. quinquefasciatus	Rosemead	50	GRVD	8/18/2020	WNV
Madera	MADR1109	261	Cx. tarsalis	Madera	40	CO2	8/13/2020	WNV
Madera	MADR178	251	Cx. quinquefasciatus	Madera	50	CO2	8/13/2020	WNV
Madera	MADR195	265	Cx. quinquefasciatus	Madera	50	CO2	8/14/2020	WNV
Madera	MADR208	263	Cx. quinquefasciatus	Madera	34	CO2	8/14/2020	WNV
Madera	MADR227	253	Cx. tarsalis	Madera	14	CO2	8/13/2020	WNV
Madera	MADR239	256	Cx. quinquefasciatus	Madera	14	CO2	8/13/2020	WNV
Madera	MADR265	246	Cx. quinquefasciatus	Madera	9	CO2	8/12/2020	WNV
Madera	MADR3334	255	Cx. tarsalis	Madera	36	CO2	8/13/2020	WNV
Madera	MADR889	239	Cx. tarsalis	Firebaugh	50	CO2	8/11/2020	WNV
Madera	MADR896	244	Cx. tarsalis	Mendota	50	CO2	8/11/2020	SLEV
Merced	MERC201720	456	Cx. pipiens	hilmar	30	CO2	8/13/2020	WNV
Merced	MERC404	454	Cx. pipiens	Hilmar	50	CO2	8/13/2020	WNV
Merced	MERC405	448	Cx. tarsalis	Hilmar	39	CO2	8/13/2020	WNV
Merced	MERC405	449	Cx. pipiens	Hilmar	50	CO2	8/13/2020	WNV
Merced	MERC919927	467	Cx. pipiens	Merced	50	CO2	8/14/2020	WNV
Orange	ORCO1008	3408	Cx. quinquefasciatus	Fullerton	20	GRVD	8/18/2020	WNV
Orange	ORCO1008	3409	Cx. quinquefasciatus	Fullerton	50	GRVD	8/18/2020	WNV
Orange	ORCO1008	3410	Cx. quinquefasciatus	Fullerton	37	GRVD	8/18/2020	WNV
Orange	ORCO1008	3411	Cx. quinquefasciatus	Fullerton	36	GRVD	8/18/2020	WNV
Orange	ORCO1008	3412	Cx. quinquefasciatus	Fullerton	50	GRVD	8/18/2020	WNV
Orange	ORCO1008	3465	Cx. quinquefasciatus	Fullerton	44	GRVD	8/18/2020	WNV
Orange	ORCO1011	3429	Cx. quinquefasciatus	La Habra	35	GRVD	8/18/2020	WNV
Orange	ORCO1037	3479	Cx. quinquefasciatus	La Habra	37	GRVD	8/18/2020	WNV
Orange	ORCO202	3404	Cx. quinquefasciatus	Fullerton	19	GRVD	8/18/2020	WNV
Orange	ORCO218	3417	Cx. quinquefasciatus	Anaheim	30	GRVD	8/18/2020	WNV
Orange	ORCO218	3428	Cx. quinquefasciatus	Anaheim	32	GRVD	8/18/2020	WNV
Orange	ORCO218	3444	Cx. quinquefasciatus	Anaheim	30	GRVD	8/18/2020	WNV
Orange	ORCO218	3445	Cx. quinquefasciatus	Anaheim	26	GRVD	8/18/2020	WNV
Orange	ORCO218	3448	Cx. quinquefasciatus	Anaheim	30	GRVD	8/18/2020	WNV
Orange	ORCO218	3455	Cx. quinquefasciatus	Anaheim	44	GRVD	8/18/2020	WNV
Orange	ORCO218	3462	Cx. quinquefasciatus	Anaheim	28	GRVD	8/18/2020	WNV
Orange	ORCO29	3507	Cx. quinquefasciatus	Santa Ana	50	GRVD	8/18/2020	WNV
Orange	ORCO29	3538	Cx. quinquefasciatus	Santa Ana	50	CO2	8/19/2020	WNV
Orange	ORCO315	3572	Cx. erythrothorax	Huntington Beach	50	CO2	8/20/2020	WNV
Orange	ORCO68	3547	Cx. quinquefasciatus	San Juan Capistrano	11	CO2	8/19/2020	WNV
Placer	PLCR1022	1272	Cx. tarsalis	Roseville	50	CO2	8/18/2020	WNV
Placer	PLCR1022	1307	Cx. tarsalis	Roseville	50	CO2	8/19/2020	WNV
Placer	PLCR1023	1312	Cx. tarsalis	Roseville	50	CO2	8/19/2020	WNV
Placer	PLCR1113	1266	Cx. tarsalis	Pleasant Grove	50	CO2	8/18/2020	WNV

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Placer	PLCR1113	1267	Cx. tarsalis	Pleasant Grove	50	CO2	8/18/2020	WNV
Placer	PLCR191373	1253	Cx. tarsalis	Roseville	50	CO2	8/18/2020	WNV
Placer	PLCR191998	1246	Cx. tarsalis	Lincoln	50	CO2	8/18/2020	WNV
Placer	PLCR191998	1247	Cx. tarsalis	Lincoln	50	CO2	8/18/2020	WNV
Placer	PLCR194232	1257	Cx. tarsalis	Roseville	50	CO2	8/18/2020	WNV
Placer	PLCR516	1332	Cx. tarsalis	Roseville	50	CO2	8/19/2020	WNV
Placer	PLCR516	1334	Cx. tarsalis	Roseville	50	CO2	8/19/2020	WNV
Placer	PLCR525	1210	Cx. tarsalis	Lincoln	31	CO2	8/18/2020	WNV
Placer	PLCR86	1329	Cx. tarsalis	Rocklin	11	CO2	8/19/2020	WNV
Riverside	COAV10	3585	Cx. tarsalis	Oasis	50	CO2	8/18/2020	SLEV
Riverside	COAV123	3521	Cx. tarsalis	Mecca	50	CO2	8/19/2020	SLEV
Riverside	COAV123	3522	Cx. tarsalis	Mecca	50	CO2	8/19/2020	WNV
Riverside	COAV131	3579	Cx. tarsalis	Oasis	43	CO2	8/18/2020	SLEV
Riverside	COAV132	3554	Cx. tarsalis	Oasis	50	CO2	8/18/2020	SLEV
Riverside	COAV132	3555	Cx. tarsalis	Oasis	50	CO2	8/18/2020	SLEV
Riverside	COAV132	3556	Cx. tarsalis	Oasis	50	CO2	8/18/2020	SLEV
Riverside	COAV132	3557	Cx. tarsalis	Oasis	50	CO2	8/18/2020	SLEV
Riverside	COAV35	3506	Cx. tarsalis	Mecca	50	CO2	8/18/2020	SLEV
Riverside	COAV54	3517	Cx. tarsalis	North Shore	31	CO2	8/19/2020	SLEV
Riverside	COAV57	3514	Cx. tarsalis	North Shore	16	CO2	8/19/2020	WNV
Riverside	COAV6	3580	Cx. tarsalis	Oasis	16	CO2	8/18/2020	SLEV
Sacramento	SAYO201009	4525	Cx. tarsalis	Sacramento	13	CO2	8/18/2020	WNV
Sacramento	SAYO202006	4482	Cx. tarsalis	Sacramento	50	CO2	8/18/2020	WNV
Sacramento	SAYO213009	4430	Cx. tarsalis	Sacramento	39	CO2	8/18/2020	WNV
Sacramento	SAYO214012	3874	Cx. tarsalis	Fair Oaks	5	GRVD	8/7/2020	WNV
Sacramento	SAYO232029	3808	Cx. tarsalis	Elk Grove	35	CO2	8/7/2020	WNV
Sacramento	SAYO254002	4213	Cx. pipiens	Galt	10	GRVD	8/14/2020	WNV
Sacramento	SAYO254015	4209	Cx. pipiens	Galt	20	GRVD	8/14/2020	WNV
Sacramento	SAYO261003	4339	Cx. tarsalis	Isleton	50	CO2	8/14/2020	WNV
San Bernardino	WVAL359	1437	Cx. quinquefasciatus	Chino	5	CO2	8/18/2020	WNV
San Joaquin	SJCM8008	1383	Cx. tarsalis	Manteca	13	CO2	8/18/2020	WNV
San Joaquin	SJCM8100	1394	Cx. pipiens	Tracy	12	CO2	8/20/2020	WNV
San Joaquin	SJCM8111	1330	Cx. tarsalis	Stockton	28	CO2	8/18/2020	WNV
San Joaquin	SJCM8160	1380	Cx. pipiens	Lodi	2	CO2	8/18/2020	WNV
San Joaquin	SJCM8161	1360	Cx. tarsalis	Ripon	31	CO2	8/18/2020	WNV
San Joaquin	SJCM8199	1373	Cx. tarsalis	Manteca	50	CO2	8/18/2020	WNV
San Joaquin	SJCM8205	1406	Cx. tarsalis	Farmington	3	CO2	8/20/2020	WNV
San Joaquin	SJCM8209	1415	Cx. pipiens	Lodi	50	CO2	8/20/2020	WNV
San Joaquin	SJCM8219	1343	Cx. tarsalis	Stockton	50	CO2	8/18/2020	WNV
San Joaquin	SJCM8219	1344	Cx. tarsalis	Stockton	50	CO2	8/18/2020	WNV
San Joaquin	SJCM8219	1347	Cx. pipiens	Stockton	50	CO2	8/18/2020	WNV
San Joaquin	SJCM8228	1388	Cx. tarsalis	Escalon	18	CO2	8/18/2020	WNV
San Joaquin	SJCM8230	1335	Cx. pipiens	Thornton	24	CO2	8/18/2020	WNV
San Joaquin	SJCM8233	1337	Cx. pipiens	Stockton	3	CO2	8/18/2020	WNV
Shasta	SHAS10020	491	Cx. pipiens	Anderson	50	CO2	8/18/2020	WNV
Shasta	SHAS116	479	Cx. pipiens	Anderson	50	GRVD	8/14/2020	WNV
Shasta	SHAS420	476	Cx. pipiens	Anderson	25	CO2	8/14/2020	WNV
Solano	SOLA4	307	Cx. tarsalis	Davis	50	CO2	8/13/2020	WNV
Solano	SOLA8807	327	Cx. tarsalis	Dixon	47	CO2	8/13/2020	WNV
Stanislaus	EAST1025	20372	Cx. pipiens	Modesto	50	CO2	8/13/2020	WNV



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Stanislaus	EAST1088	20369	Cx. pipiens	Modesto	32	GRVD	8/13/2020	WNV
Stanislaus	EAST2002	20366	Cx. pipiens	Modesto	50	CO2	8/11/2020	WNV
Stanislaus	EAST2002	20368	Cx. tarsalis	Modesto	16	CO2	8/11/2020	WNV
Stanislaus	EAST2012	20360	Cx. tarsalis	Modesto	18	CO2	8/11/2020	WNV
Stanislaus	EAST2023	20370	Cx. pipiens	Modesto	50	GRVD	8/13/2020	WNV
Stanislaus	EAST2026	20356	Cx. pipiens	Modesto	42	GRVD	8/11/2020	WNV
Stanislaus	TRLK1107	749	Cx. pipiens	Denair	45	CO2	8/18/2020	WNV
Stanislaus	TRLK1301	726	Cx. pipiens	Denair	36	CO2	8/18/2020	WNV
Stanislaus	TRLK17152	715	Cx. pipiens	Denair	50	CO2	8/13/2020	WNV
Stanislaus	TRLK17152	717	Cx. pipiens	Denair	50	CO2	8/13/2020	WNV
Stanislaus	TRLK1905	756	Cx. pipiens	Denair	50	CO2	8/18/2020	WNV
Stanislaus	TRLK1905	758	Cx. pipiens	Denair	50	CO2	8/18/2020	WNV
Stanislaus	TRLK1905	759	Cx. pipiens	Denair	50	CO2	8/18/2020	WNV
Stanislaus	TRLK1905	760	Cx. tarsalis	Denair	50	CO2	8/18/2020	WNV
Stanislaus	TRLK20161	748	Cx. tarsalis	Ceres	25	CO2	8/18/2020	WNV
Stanislaus	TRLK406	724	Cx. pipiens	Turlock	17	CO2	8/18/2020	WNV
Stanislaus	TRLK407	731	Cx. pipiens	Turlock	37	CO2	8/18/2020	WNV
Stanislaus	TRLK432	736	Cx. pipiens	Turlock	50	CO2	8/18/2020	WNV
Stanislaus	TRLK432	737	Cx. pipiens	Turlock	50	CO2	8/18/2020	WNV
Stanislaus	TRLK432	739	Cx. tarsalis	Turlock	50	CO2	8/18/2020	WNV
Stanislaus	TRLK526	742	Cx. pipiens	Denair	46	CO2	8/18/2020	WNV
Stanislaus	TRLK526	743	Cx. tarsalis	Denair	23	CO2	8/18/2020	WNV
Sutter	SUYA14	389	Cx. tarsalis	Sutter	37	REST	8/17/2020	WNV
Sutter	SUYA31	390	Cx. tarsalis	Rio Oso	50	REST	8/18/2020	WNV
Sutter	SUYA63	388	Cx. tarsalis	Live Oak	17	REST	8/17/2020	WNV
Sutter	SUYA68	386	Cx. tarsalis	Sacramento	14	REST	8/18/2020	WNV
Tulare	DLNO104	207	Cx. quinquefasciatus	Earlimart	50	BGSENT	8/13/2020	WNV
Tulare	DLNO145	200	Cx. quinquefasciatus	Earlimart	50	CO2	8/12/2020	WNV
Tulare	DLNO92	222	Cx. quinquefasciatus	Earlimart	15	GRVD	8/18/2020	WNV
Tulare	DLNO96	199	Cx. quinquefasciatus	Earlimart	50	CO2	8/12/2020	WNV
Tulare	DLTA6407	1762	Cx. quinquefasciatus	Dinuba	16	GRVD	8/19/2020	WNV
Tulare	DLTA6407	1781	Cx. quinquefasciatus	Dinuba	50	GRVD	8/20/2020	WNV
Tulare	DLTA6408	1758	Cx. quinquefasciatus	Dinuba	16	GRVD	8/19/2020	WNV
Tulare	DLTA6417	1785	Cx. quinquefasciatus	Dinuba	16	GRVD	8/20/2020	WNV
Tulare	DLTA6518	1777	Cx. quinquefasciatus	Cutler	39	GRVD	8/20/2020	WNV
Tulare	DLTA7502	1759	Cx. quinquefasciatus	Seville	13	GRVD	8/19/2020	WNV
Tulare	DLTA7517	1735	Cx. quinquefasciatus	Yetttem	50	CO2	8/19/2020	WNV
Tulare	DLTA7517	1737	Cx. quinquefasciatus	Yetttem	50	CO2	8/19/2020	WNV
Tulare	DLTA7528	1743	Cx. quinquefasciatus	Ivanhoe	48	CO2	8/19/2020	WNV
Tulare	DLTA7529	1755	Cx. quinquefasciatus	Visalia	50	CO2	8/19/2020	WNV
Tulare	DLTA8414	1683	Cx. tarsalis	Visalia	24	CO2	8/14/2020	WNV
Tulare	DLTA8415	1665	Cx. quinquefasciatus	Visalia	50	CO2	8/14/2020	WNV
Tulare	DLTA8420	1716	Cx. quinquefasciatus	Goshen	34	CO2	8/18/2020	WNV
Tulare	DLTA8421	1711	Cx. quinquefasciatus	Goshen	28	CO2	8/18/2020	WNV
Tulare	DLTA8424	1685	Cx. quinquefasciatus	Visalia	10	GRVD	8/14/2020	WNV
Tulare	DLTA8424	1771	Cx. quinquefasciatus	Visalia	37	GRVD	8/20/2020	WNV
Tulare	DLTA8425	1773	Cx. quinquefasciatus	Visalia	10	GRVD	8/20/2020	WNV
Tulare	DLTA8426	1772	Cx. quinquefasciatus	Visalia	14	GRVD	8/20/2020	WNV
Tulare	DLTA8427	1775	Cx. quinquefasciatus	Visalia	19	GRVD	8/20/2020	WNV
Tulare	DLTA9602	1783	Cx. quinquefasciatus	Exeter	20	GRVD	8/20/2020	WNV

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Yolo	SAYO114001	4519	Cx. pipiens	Zamora	3	GRVD	8/18/2020	WNV
Yolo	SAYO116002	4528	Cx. tarsalis	Knights Landing	50	CO2	8/18/2020	WNV
Yolo	SAYO124007	4311	Cx. pipiens	Woodland	8	GRVD	8/14/2020	WNV
Yolo	SAYO135005	4297	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO135005	4298	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO135006	4304	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO135010	4324	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO135018	4268	Cx. tarsalis	Woodland	37	CO2	8/14/2020	WNV
Yolo	SAYO136008	3839	Cx. tarsalis	Davis	50	CO2	8/7/2020	WNV
Yolo	SAYO136008	4279	Cx. tarsalis	Davis	50	CO2	8/14/2020	WNV
Yolo	SAYO136010	3878	Cx. tarsalis	Woodland	50	CO2	8/7/2020	WNV
Yolo	SAYO136010	4287	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO136010	4289	Cx. tarsalis	Woodland	50	CO2	8/14/2020	WNV
Yolo	SAYO136010	4292	Cx. pipiens	Woodland	2	GRVD	8/14/2020	WNV
Yolo	SAYO145003	4415	Cx. pipiens	Davis	25	CO2	8/18/2020	WNV
Yolo	SAYO145009	4404	Cx. pipiens	Davis	3	GRVD	8/18/2020	WNV
Yolo	SAYO145016	4409	Cx. tarsalis	Davis	46	CO2	8/18/2020	WNV
Yolo	SAYO145017	4399	Cx. pipiens	Davis	5	GRVD	8/18/2020	WNV

### Sentinel Chickens

County	Site Code	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04
Butte	BUCO0002	Oroville	8/11/2020	WNV	1828			
Butte	BUCO0003	Oroville	8/11/2020	WNV	1838			
Butte	BUCO0004	Gridley	8/11/2020	WNV	1841	1842		
Butte	BUCO0005	Honcut	8/11/2020	WNV	1850			
Butte	BUCO0006	Chico	8/11/2020	WNV	1851	1853	1854	
Sutter	SUYA0084	Yuba City	8/13/2020	WNV	2441	2443	2446	
Sutter	SUYA0014	Sutter	8/13/2020	WNV	2472			
Sutter	SUYA0015	Robbins	8/13/2020	WNV	2476	2478	2481	2482
Sutter	SUYA0020	Meridian	8/13/2020	WNV	2488	2489		

## 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.

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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, [www.westnile.ca.gov](http://www.westnile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.maps.calsurv.org](http://www.maps.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC websites: [www.cdc.gov](http://www.cdc.gov) and [www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

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