

## California Arbovirus Surveillance Bulletin #25

Week 34 Friday, August 26, 2016



### Weekly Update

#### **Humans**

A total of 32 new cases of West Nile virus (WNV) illness were reported this week from the following 13 counties: Butte (5), Colusa (1), Fresno (1), Kern (1), Kings (1), Los Angeles (10), San Diego (3), San Joaquin (3), Shasta (1), Stanislaus (1), Sutter (2), Yolo (2), and Yuba (1). **These are the first WNV cases reported from Colusa, Kings, Shasta, and Sutter counties in 2016.** To date this year, 78 cases of WNV illness have been reported from 17 counties. Of the 78 case-patients, 54 (69%) had neuroinvasive illness, and two fatalities have been reported from Sacramento (1) and Yolo (1) counties. The median age of the individuals is 60 years (range: 15-85 years) and 42 (54%) are male. Dates of symptom onset range from June 17 to August 12. In addition, 18 asymptomatic WNV-positive blood donors have been reported from Fresno (1), Los Angeles (4), Orange (2) Sacramento (2), San Diego (1), Stanislaus (4), Tehama (1), and Yolo (3) counties.

#### **Dead Birds**

This week, a total of 74 dead birds tested positive for WNV from the following 21 counties: Butte (3), Contra Costa (4), El Dorado (1), Fresno (1), Glenn (1), Los Angeles (15), Merced (1), Orange (4), Placer (1), Riverside (1), Sacramento (13), San Diego (7), San Joaquin (3), Santa Clara (5), Solano (2), Sonoma (2), Stanislaus (3), Sutter (1), Tulare (1), Yolo (4), and Yuba (1). **This is the first detection of WNV in El Dorado County this year.** In 2016, 1,081 dead birds have tested positive for WNV from 32 counties, whereas at this time last year, 581 WNV positive birds had been reported from 36 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 218 WNV positive mosquito pools were reported this week from the following 18 counties: Butte (5), Fresno (10), Kern (9), Kings (13), Lake (7), Los Angeles (40), Madera (12), Merced (2), Orange (33), Sacramento (9), San Bernardino (8), San Joaquin (14), Santa Clara (1), Shasta (2), Solano (4), Stanislaus (13), Tulare (8), and Yolo (28). In 2016, 2,780 WNV positive mosquito pools have been reported from 30 counties, whereas at this time last year, 2,073 WNV positive mosquito pools had been reported from 29 counties.

##### St. Louis encephalitis virus

A total of 18 SLEV positive mosquito pools were reported this week from the following 3 counties: Kern (2), Los Angeles (1), and Riverside (15). To date this year, 110 SLEV positive mosquito pools have been reported from 5 counties. At this time last year, 21 SLEV positive mosquito pools had been reported from Riverside County.

#### **Sentinel Chickens**

##### West Nile virus

A total of 52 WNV seroconversions were reported this week from 24 flocks in 11 counties: Butte (8), Colusa (3), Contra Costa (2), Glenn (1), Lake (2), Los Angeles (17), Merced (7), Shasta (1), Sutter (6), Tehama (2), and Yuba (3). **These are the first WNV seroconversions reported from Lake and Shasta counties in 2016.** To date this year, 213 WNV seroconversions have been detected in 55 flocks located in 15 counties, whereas at this time last year, 174 WNV seroconversions had been detected in 49 flocks located in 20 counties.

##### St. Louis encephalitis virus

No new SLEV seroconversions were reported this week. In 2016, 2 SLEV seroconversions have been detected in one flock located in San Bernardino County.

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<b>YTD WNV Activity by Element and County, 2016</b>				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		7	2	
Butte	12	18	43	33
Colusa	1			9
Contra Costa		17	4	5
El Dorado		1		
Fresno	4	5	159	
Glenn		4	11	9
Kern	5		73	
Kings	1	3	88	
Lake		3	29	2
Los Angeles	24	87	271	54
Madera		5	72	
Marin		4		
Merced		5	10	30
Napa			4	
Nevada		2		
Orange	1	38	273	
Placer		18	95	2
Riverside		12	29	
Sacramento	4	391	408	
San Bernardino	3	3	68	9
San Diego	4	227	65	9
San Joaquin	4	32	278	
San Mateo		10	5	
Santa Clara		71	11	
Santa Cruz		2	3	
Shasta	1	1	8	1
Solano		5	9	2
Sonoma		3	1	
Stanislaus	5	9	215	
Sutter	2	8	68	31
Tehama	1			4
Tulare		3	226	
Ventura		20		
Yolo	4	63	236	
Yuba	2	4	16	13
<b>Totals</b>	<b>78</b>	<b>1,081</b>	<b>2,780</b>	<b>213</b>

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2015 & 2016 YTD West Nile Virus Comparisons		
	2015	2016
Total # Dead Bird Reports	7,624	7,349
# Positive Counties	40	36
# Human Cases	83	78
# Positive Dead Birds / # Tested	581 / 1,996	1,081 / 2,225
# Positive Mosquito Pools / # Tested	2,073 / 23,684	2,780 / 31,460
# Seroconversions / # Tested	174 / 8,460	213 / 7,166

### TESTING SUMMARIES

#### Humans

		WNV	SLE	WEE
Number of Cases Reported	Week	32	0	0
	YTD	78	0	0

#### Dead Birds

		Total Tested	WNV Positive
Dead Birds	Week	114	74
	YTD	2,225	1,081

#### Sentinel Chickens

		Total Tested	WNV +	SLEV +	WEEV +
Chicken Sera	Week	418	52	0	0
	YTD	7,166	213	2	0

#### Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	218 / 1,163	18 / 831	0 / 831	0 / 16	0 / 16	0 / 16
		YTD	2,780 / 31,460	110 / 19,620	0 / 19,620	0 / 217	0 / 217	0 / 217

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### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Butte	Butte Co MVCD	Chico	95926	Western Scrub-Jay	8/17/2016	WNV
Butte	Butte Co MVCD	Paradise	95969	American Crow	8/16/2016	WNV
Butte	Butte Co MVCD	Paradise	95969	Western Scrub-Jay	8/18/2016	WNV
Contra Costa	Contra Costa MVCD	Concord	94518	American Crow	8/24/2016	WNV
Contra Costa	Contra Costa MVCD	Concord	94521	American Crow	8/24/2016	WNV
Contra Costa	Contra Costa MVCD	Danville	94526	American Crow	8/23/2016	WNV
Contra Costa	Contra Costa MVCD	Oakley	94561	Western Scrub-Jay	8/19/2016	WNV
El Dorado	El Dorado Co Env Management	Placerville	95667	Western Scrub-Jay	8/17/2016	WNV
Fresno	Fresno Westside MAD	Mendota	93640	American Crow	8/17/2016	WNV
Glenn	Glenn Co MVCD	Willows	95988	American Crow	8/17/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91352	American Crow	8/16/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91352	American Crow	8/22/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91423	American Crow	8/18/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Santa Clarita	91350	American Crow	8/17/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Santa Clarita	91350	American Crow	8/19/2016	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Valencia	91354	American Crow	8/16/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Agoura Hills	91301	American Crow	8/24/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Calabasas	91302	American Crow	8/22/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	La Canada	91011	American Crow	8/17/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	American Crow	8/23/2016	WNV
Los Angeles	Los Angeles Co Veterinarian	Sherman Oaks	91423	American Crow	8/22/2016	WNV
Los Angeles	San Gabriel Valley MVCD	Glendora	91741	American Crow	8/7/2016	WNV
Los Angeles	San Gabriel Valley MVCD	Monterey Park	91754	American Crow	8/21/2016	WNV
Los Angeles	San Gabriel Valley MVCD	Sierra Madre	91024	Black-billed Magpie	8/23/2016	WNV
Los Angeles	San Gabriel Valley MVCD	Temple City	91780	American Crow	8/8/2016	WNV
Merced	Merced Co MAD	Hilmar	95324	Sparrow	8/15/2016	WNV
Orange	Orange Co VCD	Dana Point	92624	American Crow	8/25/2016	WNV
Orange	Orange Co VCD	Huntington Beach	92649	American Crow	8/16/2016	WNV
Orange	Orange Co VCD	Huntington Beach	92649	American Crow	8/16/2016	WNV
Orange	Orange Co VCD	Mission Viejo	92692	American Crow	8/25/2016	WNV
Placer	Placer MVCD	Granite Bay	95746	American Crow	8/22/2016	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	8/16/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Fair Oaks	95628	Western Scrub-Jay	8/18/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Folsom	95630	Western Scrub-Jay	8/19/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Galt	95632	American Crow	8/20/2016	WNV
Sacramento	Sacramento-Yolo MVCD	North Highlands	95660	Northern Mockingbird	8/19/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	American Crow	8/21/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Rio Linda	95673	American Crow	8/17/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	8/22/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95835	American Robin	8/18/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95841	American Robin	8/17/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95841	Yellow-billed Magpie	8/17/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	8/22/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	Northern Mockingbird	8/21/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	Northern Mockingbird	8/21/2016	WNV
San Diego	San Diego Co VCP	Alpine	91901	Steller's Jay	8/24/2016	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	8/23/2016	WNV
San Diego	San Diego Co VCP	Escondido	92027	American Crow	8/23/2016	WNV

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San Diego	San Diego Co VCP	Escondido	92027	Common Raven	8/23/2016	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	8/22/2016	WNV
San Diego	San Diego Co VCP	San Diego	92115	American Crow	8/22/2016	WNV
San Diego	San Diego Co VCP	San Diego	92128	American Crow	8/22/2016	WNV
San Joaquin	San Joaquin Co MVCD	Lodi	95242	Western Scrub-Jay	8/24/2016	WNV
San Joaquin	San Joaquin Co MVCD	Manteca	95337	Yellow-billed Magpie	8/18/2016	WNV
San Joaquin	San Joaquin Co MVCD	Stockton	95206	American Crow	8/18/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95112	American Crow	8/23/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95112	American Crow	8/24/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	8/18/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	8/22/2016	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	8/18/2016	WNV
Solano	Solano Co MAD	Elmira	95625	American Crow	8/16/2016	WNV
Solano	Solano Co MAD	Vacaville	95687	American Crow	8/26/2016	WNV
Sonoma	Marin-Sonoma MVCD	Rohnert Park	94928	American Crow	8/19/2016	WNV
Sonoma	Marin-Sonoma MVCD	Rohnert Park	94928	American Crow	8/24/2016	WNV
Stanislaus	Turlock MAD	Hughson	95326	Western Scrub-Jay	8/16/2016	WNV
Stanislaus	Turlock MAD	Patterson	95363	Yellow-billed Magpie	8/12/2016	WNV
Stanislaus	Turlock MAD	Turlock	95380	American Crow	8/9/2016	WNV
Sutter	Sutter-Yuba MVCD	Pleasant Grove	95668	Unknown	8/18/2016	WNV
Tulare	Tulare MAD	Tipton	93272	American Crow	8/19/2016	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	8/22/2016	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Crow	8/16/2016	WNV
Yolo	Sacramento-Yolo MVCD	Woodland	95695	Loggerhead Shrike	8/19/2016	WNV
Yolo	Sacramento-Yolo MVCD	Woodland	95776	House Finch	8/18/2016	WNV
Yuba	Sutter-Yuba MVCD	Marysville	95901	American Crow	8/19/2016	WNV

## Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO125	269	Cx. tarsalis		13	CO2	8/16/16	WNV
Butte	BUCO55	270	Cx. tarsalis	Palermo	50	CO2	8/17/16	WNV
Butte	BUCO55	271	Cx. tarsalis	Palermo	40	CO2	8/17/16	WNV
Butte	BUCO60	286	Cx. tarsalis	Chico	50	CO2	8/22/16	WNV
Butte	BUCO9	253	Cx. tarsalis	Chico	42	CO2	8/10/16	WNV
Fresno	CNSL0	384	Unknown		50	NA	8/25/16	WNV
Fresno	CNSL3333	378	Cx. quinquefasciatus	Parlier	45	GRVD	8/19/16	WNV
Fresno	CNSL3341	375	Cx. quinquefasciatus	Reedley	22	GRVD	8/18/16	WNV
Fresno	FRWS220001	228	Cx. tarsalis	Firebaugh	32	CO2	8/23/16	WNV
Fresno	FRWS220001	229	Cx. quinquefasciatus	Firebaugh	27	CO2	8/23/16	WNV
Fresno	FRWS2301	223	Cx. quinquefasciatus	Firebaugh	50	CO2	8/18/16	WNV
Fresno	FRWS400021	225	Cx. quinquefasciatus		50	CO2	8/18/16	WNV
Fresno	FRWS4110	232	Cx. tarsalis	Mendota	50	CO2	8/23/16	WNV
Fresno	FRWS5101	235	Cx. tarsalis	Mendota	50	CO2	8/23/16	WNV
Fresno	FRWS5116	234	Cx. quinquefasciatus	Tranquility	23	GRVD	8/23/16	WNV
Kern	DLNO21	158	Cx. quinquefasciatus	Delano	50	CO2	8/18/16	WNV
Kern	DLNO3	157	Cx. quinquefasciatus	Delano	50	CO2	8/18/16	WNV
Kern	DLNO47	159	Cx. quinquefasciatus	Delano	50	GRVD	8/19/16	WNV
Kern	DLNO69	156	Cx. tarsalis	Delano	50	CO2	8/18/16	WNV
Kern	DLNO78	160	Cx. quinquefasciatus	Delano	25	GRVD	8/23/16	WNV
Kern	DLNO98	146	Cx. quinquefasciatus	Delano	32	GRVD	8/12/16	WNV
Kern	KERN2022	410	Cx. quinquefasciatus	Shafter	34	GRVD	8/18/16	WNV

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Kern	KERN3021	403	Cx. tarsalis	Wasco	35	CO2	8/16/16	WNV
Kern	KERN3029	409	Cx. tarsalis	Buttonwillow	45	CO2	8/17/16	WNV
Kern	KERN45	404	Cx. quinquefasciatus	Buttonwillow	50	CO2	8/16/16	SLEV
Kern	KERN45	405	Cx. tarsalis	Buttonwillow	37	CO2	8/16/16	SLEV
Kings	KNGS3018	355	Cx. tarsalis	Lemoore	37	CO2	8/17/16	WNV
Kings	KNGS3022	339	Cx. tarsalis	Hanford	17	CO2	8/12/16	WNV
Kings	KNGS3022	369	Cx. tarsalis	Hanford	19	CO2	8/19/16	WNV
Kings	KNGS3030	356	Cx. tarsalis	Lemoore	39	CO2	8/17/16	WNV
Kings	KNGS3072	374	Cx. tarsalis	Hanford	19	CO2	8/19/16	WNV
Kings	KNGS3077	310	Cx. tarsalis	Hanford	19	BGSENT	8/10/16	WNV
Kings	KNGS3093	357	Cx. tarsalis	Lemoore	10	CO2	8/17/16	WNV
Kings	KNGS3100	364	Cx. tarsalis	Hanford	50	CO2	8/18/16	WNV
Kings	KNGS3108	370	Cx. tarsalis	Island	50	CO2	8/19/16	WNV
Kings	KNGS3108	373	Cx. tarsalis	Island	50	CO2	8/19/16	WNV
Kings	KNGS4401	342	Cx. pipiens	Lemoore	37	BGSENT	8/16/16	WNV
Kings	KNGS4403	344	Cx. pipiens	Lemoore	50	BGSENT	8/16/16	WNV
Kings	KNGS4406	341	Cx. pipiens	Lemoore	20	BGSENT	8/16/16	WNV
Lake	LAKE131	518	Cx. tarsalis	Lower Lake	35	CO2	8/23/16	WNV
Lake	LAKE1404	510	Cx. tarsalis	Lakeport	26	REST	8/15/16	WNV
Lake	LAKE1404	511	Cx. tarsalis	Lakeport	42	REST	8/19/16	WNV
Lake	LAKE294	515	Cx. tarsalis	Kelseyville	25	CO2	8/23/16	WNV
Lake	LAKE302	526	Cx. tarsalis	Clearlake Oaks	50	CO2	8/23/16	WNV
Lake	LAKE302	527	Cx. tarsalis	Clearlake Oaks	50	CO2	8/23/16	WNV
Lake	LAKE94	520	Cx. tarsalis	Upper Lake	50	CO2	8/23/16	WNV
Los Angeles	GRLA2007	5644	Cx. quinquefasciatus	Toluca Lake	35	GRVD	8/19/16	WNV
Los Angeles	GRLA2017	5645	Cx. quinquefasciatus	Toluca Lake	36	GRVD	8/19/16	WNV
Los Angeles	GRLA2097	668	Cx. quinquefasciatus	La Mirada	47	GRVD	8/16/16	SLEV
Los Angeles	GRLA2100	673	Cx. quinquefasciatus	Norwalk	32	GRVD	8/16/16	WNV
Los Angeles	GRLA2268	671	Cx. quinquefasciatus	Cerritos	50	GRVD	8/16/16	WNV
Los Angeles	GRLA2278	696	Cx. quinquefasciatus	Long Beach	20	GRVD	8/19/16	WNV
Los Angeles	GRLA2297	686	Cx. quinquefasciatus	Los Angeles- South Park	47	GRVD	8/18/16	WNV
Los Angeles	GRLA2301	689	Cx. quinquefasciatus	Willowbrook	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2323	676	Cx. quinquefasciatus	Los Angeles	25	GRVD	8/17/16	WNV
Los Angeles	GRLA2416	5637	Cx. quinquefasciatus	Panorama City	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2500	5622	Cx. quinquefasciatus	Los Angeles	50	GRVD	8/17/16	WNV
Los Angeles	GRLA2511	5625	Cx. quinquefasciatus	Los Angeles	27	GRVD	8/17/16	WNV
Los Angeles	GRLA2574	5633	Cx. quinquefasciatus	Sherman Oaks	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2580	5632	Cx. quinquefasciatus	Sherman Oaks	34	GRVD	8/18/16	WNV
Los Angeles	GRLA2615	5620	Cx. quinquefasciatus	Newhall	33	GRVD	8/16/16	WNV
Los Angeles	GRLA2637	5636	Cx. quinquefasciatus	Van Nuys	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2650	5641	Cx. quinquefasciatus	Encino	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2655	5635	Cx. quinquefasciatus	Encino	50	GRVD	8/18/16	WNV
Los Angeles	GRLA2669	5621	Cx. quinquefasciatus	Granada Hills	13	GRVD	8/16/16	WNV
Los Angeles	GRLA2889	694	Cx. quinquefasciatus	Lakewood	44	GRVD	8/19/16	WNV
Los Angeles	GRLA2936	5631	Cx. quinquefasciatus	Burbank	42	GRVD	8/17/16	WNV
Los Angeles	GRLA2952	667	Cx. quinquefasciatus	South Whittier	47	GRVD	8/16/16	WNV
Los Angeles	GRLA2957	691	Cx. quinquefasciatus	Hawaiian Gardens	50	GRVD	8/19/16	WNV
Los Angeles	GRLA3027	5642	Cx. quinquefasciatus	Studio City	12	GRVD	8/19/16	WNV
Los Angeles	GRLA3034	5640	Cx. quinquefasciatus	North Hills	34	GRVD	8/18/16	WNV
Los Angeles	GRLA3038	5647	Cx. quinquefasciatus	Valley Village	50	GRVD	8/19/16	WNV
Los Angeles	GRLA3051	693	Cx. quinquefasciatus	Signal Hill	32	GRVD	8/19/16	WNV
Los Angeles	GRLA3060	672	Cx. quinquefasciatus	Norwalk	50	GRVD	8/16/16	WNV
Los Angeles	GRLA3065	690	Cx. quinquefasciatus	Willowbrook	27	GRVD	8/18/16	WNV
Los Angeles	GRLA3066	5650	Cx. quinquefasciatus	North Hollywood	50	GRVD	8/19/16	WNV

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Los Angeles	GRLA3069	5648	Cx. quinquefasciatus	Valley Village	30	GRVD	8/19/16	WNV
Los Angeles	GRLA3070	675	Cx. quinquefasciatus	Commerce	50	GRVD	8/17/16	WNV
Los Angeles	GRLA3075	684	Cx. quinquefasciatus	El Sereno	38	GRVD	8/17/16	WNV
Los Angeles	GRLA3076	5651	Cx. quinquefasciatus	Valley Glen	50	GRVD	8/19/16	WNV
Los Angeles	GRLA3078	5624	Cx. quinquefasciatus	Los Feliz	30	GRVD	8/17/16	WNV
Los Angeles	GRLA3079	5652	Cx. quinquefasciatus	North Hollywood	48	GRVD	8/19/16	WNV
Los Angeles	GRLA3080	5649	Cx. quinquefasciatus	North Hollywood	47	GRVD	8/19/16	WNV
Los Angeles	GRLA3102	5646	Cx. quinquefasciatus	Studio City	35	GRVD	8/19/16	WNV
Los Angeles	SGVA4	384	Cx. quinquefasciatus	Arcadia	10	GRVD	8/24/16	WNV
Los Angeles	SGVA4	385	Cx. quinquefasciatus	Arcadia	13	GRVD	8/24/16	WNV
Los Angeles	SGVA941	379	Cx. quinquefasciatus	El Monte	27	CO2	8/25/16	WNV
Madera	MADR1011	285	Cx. quinquefasciatus	Chowchilla	50	CO2	8/19/16	WNV
Madera	MADR1117	271	Cx. tarsalis	Firebaugh	50	CO2	8/18/16	WNV
Madera	MADR1117	272	Cx. quinquefasciatus	Firebaugh	50	CO2	8/18/16	WNV
Madera	MADR195	259	Cx. quinquefasciatus	Madera	50	CO2	8/16/16	WNV
Madera	MADR239	274	Cx. quinquefasciatus	Madera	12	CO2	8/18/16	WNV
Madera	MADR269	278	Cx. quinquefasciatus	Madera	26	CO2	8/18/16	WNV
Madera	MADR269	280	Cx. quinquefasciatus	Madera	50	CO2	8/18/16	WNV
Madera	MADR269	281	Cx. tarsalis	Madera	50	CO2	8/18/16	WNV
Madera	MADR298	264	Cx. quinquefasciatus	Chowchilla	50	CO2	8/17/16	WNV
Madera	MADR299	266	Cx. quinquefasciatus	Chowchilla	20	CO2	8/17/16	WNV
Madera	MADR315	276	Cx. quinquefasciatus	Madera Ranchos	15	CO2	8/18/16	WNV
Madera	MADR398	262	Cx. quinquefasciatus	Chowchilla	20	CO2	8/16/16	WNV
Merced	MERC408	227	Cx. tarsalis	Gustine	18	CO2	8/24/16	WNV
Merced	MERC413	233	Cx. tarsalis	Dos Palos	35	CO2	8/24/16	WNV
Orange	ORCO1009	2745	Cx. quinquefasciatus	Garden Grove	50	GRVD	8/9/16	WNV
Orange	ORCO1009	3212	Cx. quinquefasciatus	Garden Grove	50	GRVD	8/23/16	WNV
Orange	ORCO1009	3213	Cx. quinquefasciatus	Garden Grove	28	GRVD	8/23/16	WNV
Orange	ORCO1011	2560	Cx. quinquefasciatus	La Habra	45	GRVD	8/2/16	WNV
Orange	ORCO1011	2561	Cx. quinquefasciatus	La Habra	44	GRVD	8/2/16	WNV
Orange	ORCO1015	3143	Cx. quinquefasciatus	Orange	25	GRVD	8/19/16	WNV
Orange	ORCO1018	3142	Cx. quinquefasciatus	San Juan Capistrano	26	GRVD	8/19/16	WNV
Orange	ORCO1018	3209	Cx. quinquefasciatus	San Juan Capistrano	37	GRVD	8/23/16	WNV
Orange	ORCO1031	3108	Cx. quinquefasciatus	Los Alamitos	42	GRVD	8/18/16	WNV
Orange	ORCO1031	3112	Cx. quinquefasciatus	Los Alamitos	50	GRVD	8/18/16	WNV
Orange	ORCO1031	3167	Cx. quinquefasciatus	Los Alamitos	50	GRVD	8/23/16	WNV
Orange	ORCO1036	3158	Cx. quinquefasciatus	Buena Park	19	GRVD	8/23/16	WNV
Orange	ORCO1037	2758	Cx. quinquefasciatus	La Habra	33	GRVD	8/9/16	WNV
Orange	ORCO1037	3150	Cx. quinquefasciatus	La Habra	23	GRVD	8/23/16	WNV
Orange	ORCO1038	2753	Cx. quinquefasciatus	La Palma	50	GRVD	8/9/16	WNV
Orange	ORCO1039	3177	Cx. quinquefasciatus	Orange	33	GRVD	8/23/16	WNV
Orange	ORCO1040	3201	Cx. quinquefasciatus	Orange	50	GRVD	8/23/16	WNV
Orange	ORCO1040	3203	Cx. quinquefasciatus	Orange	49	GRVD	8/23/16	WNV
Orange	ORCO1041	3174	Cx. quinquefasciatus	Tustin	49	GRVD	8/23/16	WNV
Orange	ORCO169	3164	Cx. quinquefasciatus	Orange	23	GRVD	8/23/16	WNV
Orange	ORCO170	3094	Cx. quinquefasciatus	Anaheim	50	GRVD	8/18/16	WNV
Orange	ORCO2	3153	Cx. quinquefasciatus	Fullerton	50	GRVD	8/23/16	WNV
Orange	ORCO202	3152	Cx. quinquefasciatus	Fullerton	25	GRVD	8/23/16	WNV
Orange	ORCO208	3204	Cx. quinquefasciatus	Santa Ana	22	CO2	8/23/16	WNV
Orange	ORCO217	3140	Cx. quinquefasciatus	Santa Ana	20	GRVD	8/19/16	WNV
Orange	ORCO219	3206	Cx. quinquefasciatus	Irvine	20	GRVD	8/23/16	WNV
Orange	ORCO236	3086	Cx. quinquefasciatus	Garden Grove	50	GRVD	8/18/16	WNV
Orange	ORCO249	3115	Cx. quinquefasciatus	Newport Beach	19	GRVD	8/18/16	WNV
Orange	ORCO29	3192	Cx. quinquefasciatus	Santa Ana	50	GRVD	8/23/16	WNV

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Orange	ORCO3	3085	Cx. quinquefasciatus	Garden Grove	38	GRVD	8/18/16	WNV
Orange	ORCO41	3187	Cx. quinquefasciatus	Anaheim	19	GRVD	8/23/16	WNV
Orange	ORCO45	3200	Cx. quinquefasciatus	Rancho St Margarita	23	GRVD	8/23/16	WNV
Orange	ORCO84	3178	Cx. quinquefasciatus	Orange	41	GRVD	8/23/16	WNV
Riverside	COAV10	2988	Cx. tarsalis	Thermal	41	CO2	8/23/16	SLEV
Riverside	COAV122	2983	Cx. tarsalis	Mecca	11	CO2	8/23/16	SLEV
Riverside	COAV123	2984	Cx. tarsalis	Mecca	20	CO2	8/23/16	SLEV
Riverside	COAV30	2977	Cx. tarsalis	Mecca	50	CO2	8/23/16	SLEV
Riverside	COAV30	2978	Cx. tarsalis	Mecca	50	CO2	8/23/16	SLEV
Riverside	COAV33	2991	Cx. tarsalis	Mecca	57	CO2	8/23/16	SLEV
Riverside	COAV34	2974	Cx. tarsalis	Mecca	24	CO2	8/23/16	SLEV
Riverside	COAV35	2980	Cx. tarsalis	Mecca	40	CO2	8/23/16	SLEV
Riverside	COAV45	2996	Cx. tarsalis	Mecca	50	CO2	8/23/16	SLEV
Riverside	COAV45	2997	Cx. tarsalis	Mecca	50	CO2	8/23/16	SLEV
Riverside	COAV46	2971	Cx. tarsalis	Mecca	11	CO2	8/23/16	SLEV
Riverside	COAV536	2993	Cx. tarsalis	Thermal	29	CO2	8/23/16	SLEV
Riverside	COAV611	2985	Cx. tarsalis	Mecca	50	CO2	8/23/16	SLEV
Riverside	COAV611	2986	Cx. tarsalis	Mecca	32	CO2	8/23/16	SLEV
Riverside	COAV8	2989	Cx. tarsalis	Mecca	37	CO2	8/23/16	SLEV
Sacramento	SAYO233070	5841	Cx. tarsalis	Sacramento	24	CO2	8/23/16	WNV
Sacramento	SAYO234022	5847	Cx. tarsalis	Elk Grove	7	CO2	8/23/16	WNV
Sacramento	SAYO244004	5868	Cx. tarsalis	Galt	45	CO2	8/23/16	WNV
Sacramento	SAYO245009	5866	Cx. pipiens	Galt	19	CO2	8/23/16	WNV
Sacramento	SAYO254021	5878	Cx. tarsalis	Galt	30	CO2	8/23/16	WNV
Sacramento	SAYO255003	5892	Cx. pipiens	Herald	14	CO2	8/23/16	WNV
Sacramento	SAYO255007	5902	Cx. tarsalis	Herald	50	CO2	8/23/16	WNV
Sacramento	SAYO255007	5903	Cx. tarsalis	Herald	50	CO2	8/23/16	WNV
Sacramento	SAYO255007	5906	Cx. pipiens	Herald	25	CO2	8/23/16	WNV
San Bernardino	WVAL2008	1866	Cx. quinquefasciatus	Chino	50	CO2	8/25/16	WNV
San Bernardino	WVAL2008	1869	Cx. quinquefasciatus	Chino	50	CO2	8/25/16	WNV
San Bernardino	WVAL2022	1860	Cx. quinquefasciatus	Fwy CA 60	13	GRVD	8/24/16	WNV
San Bernardino	WVAL5004	1846	Cx. quinquefasciatus	Rancho Cucamonga	27	GRVD	8/24/16	WNV
San Bernardino	WVAL6002	1876	Cx. quinquefasciatus	Ontario	50	CO2	8/25/16	WNV
San Bernardino	WVAL6012	1849	Cx. quinquefasciatus	Ontario	18	GRVD	8/24/16	WNV
San Bernardino	WVAL6015	1833	Cx. quinquefasciatus	Ontario	21	GRVD	8/18/16	WNV
San Bernardino	WVAL8001	1902	Cx. tarsalis	Corona	27	CO2	8/25/16	WNV
San Joaquin	SJCM8004	2139	Cx. tarsalis	Lodi	54	CO2	8/23/16	WNV
San Joaquin	SJCM8010	2111	Cx. tarsalis	Ripon	26	CO2	8/23/16	WNV
San Joaquin	SJCM8010	2112	Cx. pipiens	Ripon	14	CO2	8/23/16	WNV
San Joaquin	SJCM8041	2143	Cx. pipiens	Lodi	50	CO2	8/23/16	WNV
San Joaquin	SJCM8056	2122	Cx. tarsalis	Manteca	49	CO2	8/23/16	WNV
San Joaquin	SJCM8083	2166	Cx. pipiens	Escalon	54	CO2	8/23/16	WNV
San Joaquin	SJCM8109	2119	Cx. pipiens	Escalon	8	CO2	8/23/16	WNV
San Joaquin	SJCM8111	2126	Cx. tarsalis	Stockton	39	CO2	8/23/16	WNV
San Joaquin	SJCM8143	2151	Cx. tarsalis	Stockton	34	CO2	8/23/16	WNV
San Joaquin	SJCM8161	2155	Cx. pipiens	Ripon	39	CO2	8/23/16	WNV
San Joaquin	SJCM8189	2174	Cx. tarsalis	Acampo	7	CO2	8/25/16	WNV
San Joaquin	SJCM8189	2175	Cx. pipiens	Acampo	41	CO2	8/25/16	WNV
San Joaquin	SJCM9906	2132	Cx. tarsalis	French Camp	25	CO2	8/23/16	WNV
San Joaquin	SJCM9906	2133	Cx. pipiens	French Camp	5	CO2	8/23/16	WNV
Santa Clara	STCL4361	288	Cx. tarsalis	Milpitas	15	CO2	8/24/16	WNV
Shasta	SHAS10111	426	Cx. tarsalis		23	CO2	8/19/16	WNV
Shasta	SHAS116	435	Cx. tarsalis	Anderson	11	CO2	8/23/16	WNV
Solano	SOLA104	170	Cx. pipiens	Vacaville	50	CO2	8/18/16	WNV



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Solano	SOLA104	171	Cx. tarsalis	Vacaville	40	CO2	8/18/16	WNV
Solano	SOLA104	172	Cx. pipiens	Vacaville	28	CO2	8/18/16	WNV
Solano	SOLA122	164	Cx. tarsalis	Vacaville	27	CO2	8/18/16	WNV
Stanislaus	TRLK1303	873	Cx. tarsalis	Patterson	10	CO2	8/23/16	WNV
Stanislaus	TRLK1305	890	Cx. tarsalis	Westley	31	CO2	8/23/16	WNV
Stanislaus	TRLK1509	884	Cx. tarsalis	Turlock	46	CO2	8/23/16	WNV
Stanislaus	TRLK1615	857	Cx. tarsalis		50	CO2	8/18/16	WNV
Stanislaus	TRLK1615	858	Cx. tarsalis		50	CO2	8/18/16	WNV
Stanislaus	TRLK1615	859	Cx. tarsalis		50	CO2	8/18/16	WNV
Stanislaus	TRLK2	892	Cx. tarsalis	Modesto	25	CO2	8/23/16	WNV
Stanislaus	TRLK305	888	Cx. pipiens	Grayson	38	CO2	8/23/16	WNV
Stanislaus	TRLK319	878	Cx. tarsalis	Newman	50	CO2	8/23/16	WNV
Stanislaus	TRLK319	879	Cx. pipiens	Newman	19	CO2	8/23/16	WNV
Stanislaus	TRLK322	893	Cx. tarsalis	Modesto	50	CO2	8/23/16	WNV
Stanislaus	TRLK424	861	Cx. tarsalis	Patterson	49	CO2	8/18/16	WNV
Stanislaus	TRLK424	901	Cx. pipiens	Patterson	18	NA	8/23/16	WNV
Tulare	DLTA6308	2237	Cx. quinquefasciatus	Reedley	22	CO2	8/18/16	WNV
Tulare	DLTA6330	2238	Cx. quinquefasciatus	Kingsburg	16	CO2	8/18/16	WNV
Tulare	DLTA6409	2236	Cx. tarsalis	Dinuba	26	CO2	8/18/16	WNV
Tulare	DLTA6416	2252	Cx. quinquefasciatus	Dinuba	10	GRVD	8/23/16	WNV
Tulare	DLTA6519	2246	Cx. quinquefasciatus	Cutler	20	GRVD	8/23/16	WNV
Tulare	DLTA7502	2239	Cx. quinquefasciatus	Seville	9	GRVD	8/18/16	WNV
Tulare	DLTA8324	2249	Cx. quinquefasciatus	Goshen	20	GRVD	8/23/16	WNV
Tulare	TLRE56	94	Cx. tarsalis	Tulare	11	CO2	8/24/16	WNV
Yolo	SAYO115002	5930	Cx. tarsalis	Knights Landing	50	CO2	8/23/16	WNV
Yolo	SAYO115002	5931	Cx. tarsalis	Knights Landing	50	CO2	8/23/16	WNV
Yolo	SAYO115002	5933	Cx. tarsalis	Knights Landing	50	CO2	8/23/16	WNV
Yolo	SAYO116002	5925	Cx. tarsalis	Knights Landing	50	CO2	8/23/16	WNV
Yolo	SAYO116002	5928	Cx. tarsalis	Knights Landing	12	CO2	8/23/16	WNV
Yolo	SAYO125003	5995	Cx. tarsalis	Yolo	50	CO2	8/25/16	WNV
Yolo	SAYO125018	5313	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO125018	5314	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO125018	5316	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO125029	5285	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO135005	5306	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO135006	5325	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO135006	5980	Cx. tarsalis	Woodland	50	CO2	8/25/16	WNV
Yolo	SAYO135006	5981	Cx. tarsalis	Woodland	50	CO2	8/25/16	WNV
Yolo	SAYO135010	5939	Cx. tarsalis	Woodland	24	CO2	8/25/16	WNV
Yolo	SAYO135020	5289	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO136010	5297	Cx. tarsalis	Woodland	50	CO2	8/12/16	WNV
Yolo	SAYO136010	5984	Cx. tarsalis	Woodland	50	CO2	8/25/16	WNV
Yolo	SAYO143006	5782	Cx. tarsalis	Winters	50	CO2	8/23/16	WNV
Yolo	SAYO143008	5794	Cx. pipiens	Winters	47	GRVD	8/23/16	WNV
Yolo	SAYO145003	5960	Cx. tarsalis	Davis	46	CO2	8/25/16	WNV
Yolo	SAYO145005	5973	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV
Yolo	SAYO145005	5974	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV
Yolo	SAYO145013	5948	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV
Yolo	SAYO145018	5966	Cx. tarsalis	Davis	9	CO2	8/25/16	WNV
Yolo	SAYO145028	5963	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV
Yolo	SAYO146002	5945	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV
Yolo	SAYO146002	5946	Cx. tarsalis	Davis	50	CO2	8/25/16	WNV

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**Sentinel Chickens**

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04
Butte	BUCO0001	Chico	8/16/2016	WNV	1402			
Butte	BUCO0002	Oroville	8/16/2016	WNV	1407	1409	1445	
Butte	BUCO0003	Oroville	8/16/2016	WNV	1414	1418		
Butte	BUCO0007	Chico	8/16/2016	WNV	1437	1441		
Colusa	CLSA0001	Colusa	8/16/2016	WNV	1461	1467	1470	
Contra Costa	CNTR8152	Knightsen	8/15/2016	WNV	1507	1508		
Glenn	GLEN9701	Willows	8/17/2016	WNV	1565			
Lake	LAKE1000	Upper Lake	8/15/2016	WNV	1607	1611		
Los Angeles	LACW1002	Torrance	8/9/2016	WNV	2308			
Los Angeles	LACW1007	Baldwin Hills	8/19/2016	WNV	2338	2341	2342	
Los Angeles	SGVA0002	Monterey Park	8/8/2016	WNV	1805	1806	1807	1808
Los Angeles	SGVA0004	Arcadia	8/8/2016	WNV	1816	1841	1842	1844
Los Angeles	SGVA0006	Glendora	8/8/2016	WNV	1823	1824		
Los Angeles	SGVA0008	Pomona	8/8/2016	WNV	1834	1835	1836	
Merced	MERC0002	Dos Palos	8/19/2016	WNV	1645	1650		
Merced	MERC0003	Gustine	8/19/2016	WNV	1658			
Merced	MERC0501	El Nido	8/19/2016	WNV	1627	1628	1631	1632
Shasta	SHAS0301	Redding	8/18/2016	WNV	1930			
Sutter	SUYA0014	Sutter	8/18/2016	WNV	2043	2044	2045	2049
Sutter	SUYA0031	Rio Oso	8/18/2016	WNV	2025			
Sutter	SUYA0084	Yuba City	8/18/2016	WNV	2001			
Tehama	TEHA0001	Red Bluff	8/16/2016	WNV	2080			
Tehama	TEHA0066	Cottonwood	8/15/2016	WNV	2071			
Yuba	SUYA0010	Olivehurst	8/18/2016	WNV	2016	2017	2021	

**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 University of California, Davis Arbovirus Research and Training laboratory (DART) for West Nile virus by the singleplex RT-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.

**Sentinel Chickens:**

Dried blood spot specimens from sentinel chickens are tested by the California Department of Public Health Vector-Borne Disease Laboratory for the presence of antibodies to West Nile, western equine encephalomyelitis, and St. Louis encephalitis viruses by an EIA. Positive samples are confirmed by an IFA, western-blot, or plaque reduction neutralization test.

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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 Taqman multiplex RT-PCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested for chikungunya, dengue, and Zika viral RNA.

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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).*

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*Website Information: For updated information on WNV in California, please visit the California WNV website, [www.westmile.ca.gov](http://www.westmile.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.westmilemaps.usgs.gov](http://www.westmilemaps.usgs.gov).*

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