

## California Arbovirus Surveillance Bulletin #29

Week 37 Friday, September 18, 2015



### Weekly Update

#### **Humans**

**Thirty-four new human cases of West Nile virus (WNV) illness were reported this week from the following 10 counties: Butte (2), Kern (1), Los Angeles (8), Marin (1), Orange (12), Riverside (4), Sacramento (1), San Bernardino (3), Stanislaus (1), and Tehama (1). These are the first cases reported from Marin and Sacramento counties this year.** As of September 16, a total of 157 human cases of WNV illness have been reported to the California Department of Public Health from 25 counties; five were fatal. At this time last year, 238 cases had been reported from 26 counties. Of the 157 case-patients, 101 (64%) had neuroinvasive illness. The median age of the individuals is 56 years (range: 5-91 years); 100 (64%) are male. Dates of symptom onset ranged from May 15 to September 4. In addition, 27 asymptomatic WNV-positive blood donors have been reported this year from the following counties: Butte (5), Glenn (2), Los Angeles (6), Napa (1), Orange (1), Placer (1), Riverside (2), Sacramento (1), San Bernardino (4), Tehama (2) and Tulare (1), and Yolo (1).

#### **Dead Birds**

A total of 93 WNV positive dead birds were reported this week from the following 16 counties: Alameda (1), Butte (1), El Dorado (1), Los Angeles (5), Orange (5), Placer (1), Riverside (9), Sacramento (2), San Bernardino (1), San Diego (19), San Joaquin (2), San Mateo (1), Santa Clara (35), Sonoma (1), Ventura (6), and Yolo (3). In 2015, 855 birds have tested positive for WNV from 36 counties. At this time last year, 1,979 WNV positive birds had been detected in 35 counties.

#### **Mosquito Pools**

A total of 224 WNV positive mosquito pools were reported this week from the following 16 counties: Butte (3), Contra Costa (1), Fresno (16), Kern (7), Kings (8), Lake (1), Los Angeles (13), Madera (1), Orange (123), Riverside (4), Sacramento (10), San Bernardino (5), San Joaquin (1), Stanislaus (10), Tulare (19), and Yolo (2). In 2015, 2,668 mosquito pools have tested positive for WNV from 29 counties, and 29 mosquito pools have tested positive for St. Louis encephalitis virus (SLEV) from one county (Riverside). At this time last year, 2,853 WNV mosquito pools had been reported from 29 counties.

#### **Sentinel Chickens**

A total of 34 WNV seroconversions were reported this week from 18 flocks located in 8 counties: Contra Costa (6), Lake (2), Merced (5), Nevada (2), Riverside (2), San Bernardino (9), Shasta (4), and Sutter (4). **In addition, 2 chickens from 2 flocks located in Riverside County tested positive for SLEV antibodies. These are the first SLEV seroconversions detected in California since 2003.** In 2015, 269 WNV seroconversions have been detected among 71 flocks located in 21 counties. At this time last year, 302 WNV positive chickens had been reported from 79 flocks in 20 counties.

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<b>YTD WNV Activity by Element and County, 2015</b>				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		14	4	
Butte	42	38	94	37
Colusa	1	3		10
Contra Costa		8	4	14
El Dorado		3		
Fresno		3	97	
Glenn	17	4	21	8
Humboldt		2		
Kern	4	1	133	
Kings		3	139	
Lake	2	5	30	4
Los Angeles	12	31	147	31
Madera	1	1	19	
Marin	1	3		
Mendocino	1			
Merced		2	8	17
Napa		7		
Nevada	2	10		3
Orange	18	38	327	
Placer		19	49	8
Riverside	15	55	136	11
Sacramento	1	85	140	1
San Bernardino	7	19	214	23
San Diego	1	158	8	
San Joaquin	1	15	190	
San Mateo		12	5	
Santa Barbara			1	
Santa Clara	3	160	11	4
Shasta	2	14	48	19
Siskiyou	1			
Solano		8	4	6
Sonoma		7	9	
Stanislaus	4	13	65	9
Sutter	2	16	54	35
Tehama	4			11
Trinity		2		
Tulare	4	22	519	
Ventura		14		4
Yolo	4	54	169	3
Yuba	7	6	23	11
<b>Totals</b>	<b>157</b>	<b>855</b>	<b>2,668</b>	<b>269</b>

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2014 & 2015 YTD West Nile Virus Comparisons		
	2014	2015
Total # Dead Bird Reports	11,703	8,633
# Positive Counties	37	40
# Human Cases	238	157
# Positive Dead Birds / # Tested	1,979 / 3,246	855 / 2,398
# Positive Mosquito Pools / # Tested	2,853 / 23,317	2,668 / 28,125
# Seroconversions / # Tested	302 / 11,482	269 / 9,571

### TESTING SUMMARIES

#### Humans

		WNV	SLE	WEE
Human Cases	Week	34	0	0
	YTD	157	0	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	156	93
	YTD	2,398	855

#### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	437	34	2	0
	YTD	9,571	269	2	0
Mosquito Pools	Week	1,598	224	0	0
	YTD	28,125	2,668	29	0

### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Alameda	Alameda Co MAD	Fremont	94555	American Crow	9/14/2015	WNV
Butte	Butte Co MVCD	Gridley	95948	Yellow-billed Magpie	9/1/2015	WNV
El Dorado	El Dorado Co Env Management	El Dorado Hills	95762	Western Scrub-Jay	9/7/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Agoura Hills	91301	American Crow	9/16/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Van Nuys	91401	American Crow	9/17/2015	WNV
Los Angeles	Los Angeles Co West VCD	Marina Del Rey	90292	American Crow	9/10/2015	WNV
Los Angeles	San Gabriel Valley MVCD	Altadena	91001	American Crow	9/11/2015	WNV
Los Angeles	San Gabriel Valley MVCD	Temple City	91780	American Crow	9/11/2015	WNV
Orange	Orange Co VCD	Anaheim	92804	American Crow	9/2/2015	WNV
Orange	Orange Co VCD	Coto De Caza	92679	American Crow	9/9/2015	WNV
Orange	Orange Co VCD	Irvine	92604	American Crow	9/6/2015	WNV
Orange	Orange Co VCD	Santa Ana	92704	Cooper's Hawk	8/11/2015	WNV
Orange	Orange Co VCD	Tustin	92780	American Crow	9/2/2015	WNV
Placer	Placer MVCD	Roseville	95661	Mourning Dove	9/11/2015	WNV

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Riverside	Northwest Mosquito VCD	Calimesa	92320	American Crow	9/10/2015	WNV
Riverside	Northwest Mosquito VCD	Corona	92880	American Crow	9/8/2015	WNV
Riverside	Northwest Mosquito VCD	Corona	92880	American Crow	9/8/2015	WNV
Riverside	Northwest Mosquito VCD	Lake Elsinore	92530	Common Raven	9/6/2015	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	8/26/2015	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	9/6/2015	WNV
Riverside	Northwest Mosquito VCD	Riverside	92501	Unknown	8/31/2015	WNV
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	9/2/2015	WNV
Riverside	Northwest Mosquito VCD	Riverside	92506	American Crow	9/3/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95757	House Finch	9/11/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	American Crow	9/14/2015	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	9/10/2015	WNV
San Diego	San Diego Co VCP	Carlsbad	92008	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	9/11/2015	WNV
San Diego	San Diego Co VCP	El Cajon	92020	American Crow	9/15/2015	WNV
San Diego	San Diego Co VCP	Escondido	92025	American Crow	9/9/2015	WNV
San Diego	San Diego Co VCP	La Mesa	91941	American Crow	9/11/2015	WNV
San Diego	San Diego Co VCP	Oceanside	92054	American Crow	9/15/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/11/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/14/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	9/15/2015	WNV
San Diego	San Diego Co VCP	San Diego	92037	American Crow	9/11/2015	WNV
San Diego	San Diego Co VCP	San Diego	92037	American Crow	9/11/2015	WNV
San Diego	San Diego Co VCP	San Diego	92109	American Crow	9/10/2015	WNV
San Diego	San Diego Co VCP	San Diego	92111	American Crow	9/9/2015	WNV
San Diego	San Diego Co VCP	San Diego	92131	American Crow	9/9/2015	WNV
San Diego	San Diego Co VCP	Santee	92071	American Crow	9/9/2015	WNV
San Diego	San Diego Co VCP	Santee	92071	American Crow	9/14/2015	WNV
San Joaquin	San Joaquin Co MVCD	Tracy	95376	American Crow	9/14/2015	WNV
San Joaquin	San Joaquin Co MVCD	Tracy	95376	American Crow	9/16/2015	WNV
San Mateo	San Mateo Co MAD	Redwood City	94065	American Crow	9/13/2015	WNV
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	9/10/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/7/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/8/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/8/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/9/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/9/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/12/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	9/14/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	9/7/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	9/9/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	9/14/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	9/15/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos Hills	94022	Western Scrub-Jay	9/15/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Gatos	95032	American Crow	9/9/2015	WNV
Santa Clara	Santa Clara Co VCD	Morgan Hill	95037	Unknown	9/17/2015	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94040	American Crow	9/16/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95118	American Crow	9/11/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	9/7/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	9/8/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	9/13/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95120	Western Scrub-Jay	9/10/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	9/16/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	9/9/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	9/16/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	9/16/2015	WNV

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Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	9/17/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	9/13/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95138	American Crow	9/3/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95139	American Crow	9/17/2015	WNV
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	9/16/2015	WNV
Santa Clara	Santa Clara Co VCD	Saratoga	95070	American Crow	9/14/2015	WNV
Santa Clara	Santa Clara Co VCD	Saratoga	95070	American Crow	9/17/2015	WNV
Santa Clara	Santa Clara Co VCD	Saratoga	95070	Steller's Jay	9/15/2015	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	American Crow	9/18/2015	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	9/9/2015	WNV
Sonoma	Marin-Sonoma MVCD	Santa Rosa	95401	American Crow	9/14/2015	WNV
Ventura	Ventura Co Env Health Dept	Camarillo	93010	American Crow	9/1/2015	WNV
Ventura	Ventura Co Env Health Dept	Ojai	93023	American Crow	8/30/2015	WNV
Ventura	Ventura Co Env Health Dept	Ojai	93023	American Crow	9/2/2015	WNV
Ventura	Ventura Co Env Health Dept	Ojai	93023	American Crow	9/8/2015	WNV
Ventura	Ventura Co Env Health Dept	Simi Valley	93063	American Crow	8/28/2015	WNV
Ventura	Ventura Co Env Health Dept	Simi Valley	93063	California Towhee	9/8/2015	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	Western Scrub-Jay	9/15/2015	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Crow	9/14/2015	WNV
Yolo	Sacramento-Yolo MVCD	Esparto	95627	American Crow	9/15/2015	WNV

### Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO12	357	Cx. tarsalis	Gridley	50	CO2	9/14/2015	WNV
Butte	BUCO12	358	Cx. tarsalis	Gridley	50	CO2	9/14/2015	WNV
Butte	BUCO12	359	Cx. tarsalis	Gridley	50	CO2	9/14/2015	WNV
Contra Costa	CNTR8202	245	Cx. tarsalis	Discovery Bay	25	CO2	9/14/2015	WNV
Fresno	CNSL1955	450	Cx. quinquefasciatus	Clovis	50	GRVD	9/10/2015	WNV
Fresno	CNSL1955	451	Cx. quinquefasciatus	Clovis	50	GRVD	9/10/2015	WNV
Fresno	CNSL3315	452	Cx. quinquefasciatus	Reedley	50	CO2	9/10/2015	WNV
Fresno	CNSL6128	455	Cx. quinquefasciatus	Riverdale	50	CO2	9/15/2015	WNV
Fresno	FRNO10	118	Cx. quinquefasciatus	Fresno	45	GRVD	9/9/2015	WNV
Fresno	FRNO90	116	Cx. quinquefasciatus	Fresno	12	GRVD	9/4/2015	WNV
Fresno	FRNO90	119	Cx. quinquefasciatus	Fresno	50	GRVD	9/10/2015	WNV
Fresno	FRWS2105	216	Cx. tarsalis	Dos Palos	50	CO2	9/15/2015	WNV
Fresno	FRWS2105	217	Cx. tarsalis	Dos Palos	50	CO2	9/15/2015	WNV
Fresno	FRWS2105	218	Cx. tarsalis	Dos Palos	50	CO2	9/15/2015	WNV
Fresno	FRWS400017	235	Cx. quinquefasciatus	Mendota	50	CO2	9/15/2015	WNV
Fresno	FRWS400017	236	Cx. tarsalis	Mendota	50	CO2	9/15/2015	WNV
Fresno	FRWS400017	237	Cx. tarsalis	Mendota	50	CO2	9/15/2015	WNV
Fresno	FRWS4110	230	Cx. tarsalis	Mendota	50	CO2	9/15/2015	WNV
Fresno	FRWS4110	231	Cx. tarsalis	Mendota	50	CO2	9/15/2015	WNV
Fresno	FRWS5110	222	Cx. tarsalis	Tranquillity	50	CO2	9/15/2015	WNV
Kern	KERN1002	504	Cx. quinquefasciatus	Bakersfield	45	GRVD	9/9/2015	WNV
Kern	KERN2005	503	Cx. quinquefasciatus	Bakersfield	50	GRVD	9/9/2015	WNV
Kern	KERN2023	510	Cx. quinquefasciatus	Bakersfield	23	CO2	9/10/2015	WNV
Kern	KERN2034	506	Cx. quinquefasciatus	Bakersfield	29	GRVD	9/9/2015	WNV
Kern	KERN3022	514	Cx. quinquefasciatus	Wasco	24	CO2	9/11/2015	WNV
Kern	KERN43	511	Cx. quinquefasciatus	Shafter	16	GRVD	9/11/2015	WNV
Kern	KERN46	513	Cx. quinquefasciatus	Wasco	39	CO2	9/11/2015	WNV
Kings	KNGS3070	523	Cx. tarsalis		50	CO2	9/11/2015	WNV
Kings	KNGS3070	528	Cx. pipiens		50	CO2	9/11/2015	WNV
Kings	KNGS4401	505	Cx. pipiens	Lemoore	50	BGSENT	9/9/2015	WNV
Kings	KNGS5508	535	Cx. pipiens	Hanford	16	BGSENT	9/11/2015	WNV

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Kings	KNGS5516	496	Cx. tarsalis	Hanford	21	BGSENT	9/9/2015	WNV
Kings	KNGS5516	498	Cx. pipiens	Hanford	50	BGSENT	9/9/2015	WNV
Kings	KNGS5516	501	Cx. pipiens	Hanford	50	BGSENT	9/9/2015	WNV
Kings	KNGS5519	508	Cx. pipiens	Hanford	19	BGSENT	9/9/2015	WNV
Lake	LAKE315	570	Cx. thriambus	Kelseyville	20	REST	9/10/2015	WNV
Los Angeles	ANTV4328	30	Cx. tarsalis	Palmdale	6	CO2	9/15/2015	WNV
Los Angeles	ANTV5526	28	Cx. quinquefasciatus	Palmdale	4	CO2	9/15/2015	WNV
Los Angeles	GRLA2031	5774	Cx. quinquefasciatus	Northridge	35	GRVD	9/10/2015	WNV
Los Angeles	GRLA2034	5773	Cx. quinquefasciatus	Tarzana	50	GRVD	9/10/2015	WNV
Los Angeles	GRLA2035	5775	Cx. quinquefasciatus	Tarzana	33	GRVD	9/10/2015	WNV
Los Angeles	GRLA2115	628	Cx. quinquefasciatus	Bell	50	GRVD	9/1/2015	WNV
Los Angeles	GRLA2278	652	Cx. quinquefasciatus	Long Beach	50	GRVD	9/9/2015	WNV
Los Angeles	GRLA2315	642	Cx. quinquefasciatus	Carson	13	GRVD	9/2/2015	WNV
Los Angeles	GRLA2383	649	Cx. quinquefasciatus	Whittier	44	GRVD	9/9/2015	WNV
Los Angeles	GRLA2540	5778	Cx. quinquefasciatus	Porter Ranch	50	GRVD	9/10/2015	WNV
Los Angeles	GRLA2636	5769	Cx. quinquefasciatus	Van Nuys	42	CO2	9/10/2015	WNV
Los Angeles	GRLA2890	651	Cx. quinquefasciatus	Lakewood	21	GRVD	9/9/2015	WNV
Los Angeles	GRLA3056	630	Cx. quinquefasciatus	Cudahy	21	GRVD	9/1/2015	WNV
Madera	MADR239	256	Cx. quinquefasciatus	Madera	25	CO2	9/9/2015	WNV
Orange	ORCO1	3418	Cx. quinquefasciatus	Irvine	25	GRVD	9/10/2015	WNV
Orange	ORCO1005	3312	Cx. quinquefasciatus	Buena Park	37	GRVD	9/3/2015	WNV
Orange	ORCO1008	3325	Cx. quinquefasciatus	Fullerton	50	GRVD	9/4/2015	WNV
Orange	ORCO1008	3460	Cx. quinquefasciatus	Fullerton	44	GRVD	9/15/2015	WNV
Orange	ORCO1008	3461	Cx. quinquefasciatus	Fullerton	36	GRVD	9/15/2015	WNV
Orange	ORCO1009	3280	Cx. quinquefasciatus	Garden Grove	42	GRVD	9/3/2015	WNV
Orange	ORCO1009	3282	Cx. quinquefasciatus	Garden Grove	30	GRVD	9/3/2015	WNV
Orange	ORCO1014	3390	Cx. quinquefasciatus	Mission Viejo	31	GRVD	9/9/2015	WNV
Orange	ORCO1014	3438	Cx. quinquefasciatus	Mission Viejo	36	GRVD	9/11/2015	WNV
Orange	ORCO1014	3439	Cx. quinquefasciatus	Mission Viejo	19	GRVD	9/11/2015	WNV
Orange	ORCO1015	3314	Cx. quinquefasciatus	Orange	27	GRVD	9/4/2015	WNV
Orange	ORCO1015	3315	Cx. quinquefasciatus	Orange	32	GRVD	9/4/2015	WNV
Orange	ORCO1015	3316	Cx. quinquefasciatus	Orange	50	GRVD	9/4/2015	WNV
Orange	ORCO1015	3319	Cx. quinquefasciatus	Orange	23	GRVD	9/4/2015	WNV
Orange	ORCO1015	3321	Cx. quinquefasciatus	Orange	50	GRVD	9/4/2015	WNV
Orange	ORCO1015	3322	Cx. quinquefasciatus	Orange	12	GRVD	9/4/2015	WNV
Orange	ORCO1015	3385	Cx. quinquefasciatus	Orange	50	GRVD	9/9/2015	WNV
Orange	ORCO1015	3386	Cx. quinquefasciatus	Orange	50	GRVD	9/9/2015	WNV
Orange	ORCO1015	3387	Cx. quinquefasciatus	Orange	50	GRVD	9/9/2015	WNV
Orange	ORCO1021	3160	Cx. quinquefasciatus	Tustin	34	GRVD	8/27/2015	WNV
Orange	ORCO1021	3162	Cx. quinquefasciatus	Tustin	47	GRVD	8/27/2015	WNV
Orange	ORCO1021	3175	Cx. quinquefasciatus	Tustin	29	GRVD	9/1/2015	WNV
Orange	ORCO1021	3176	Cx. quinquefasciatus	Tustin	29	GRVD	9/1/2015	WNV
Orange	ORCO1021	3177	Cx. quinquefasciatus	Tustin	50	GRVD	9/1/2015	WNV
Orange	ORCO1021	3178	Cx. quinquefasciatus	Tustin	24	GRVD	9/1/2015	WNV
Orange	ORCO1021	3182	Cx. quinquefasciatus	Tustin	30	GRVD	9/1/2015	WNV
Orange	ORCO1021	3271	Cx. quinquefasciatus	Tustin	49	GRVD	9/3/2015	WNV
Orange	ORCO1021	3272	Cx. quinquefasciatus	Tustin	42	GRVD	9/3/2015	WNV
Orange	ORCO1021	3276	Cx. quinquefasciatus	Tustin	36	GRVD	9/3/2015	WNV
Orange	ORCO1021	3278	Cx. quinquefasciatus	Tustin	50	GRVD	9/3/2015	WNV
Orange	ORCO1021	3279	Cx. quinquefasciatus	Tustin	39	GRVD	9/3/2015	WNV
Orange	ORCO1021	3285	Cx. quinquefasciatus	Tustin	38	GRVD	9/3/2015	WNV
Orange	ORCO1021	3286	Cx. quinquefasciatus	Tustin	50	GRVD	9/3/2015	WNV
Orange	ORCO1021	3287	Cx. quinquefasciatus	Tustin	21	GRVD	9/3/2015	WNV

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Orange	ORCO1021	3303	Cx. quinquefasciatus	Tustin	50	GRVD	9/3/2015	WNV
Orange	ORCO1021	3304	Cx. quinquefasciatus	Tustin	50	GRVD	9/3/2015	WNV
Orange	ORCO1024	3330	Cx. quinquefasciatus	Yorba Linda	8	GRVD	9/4/2015	WNV
Orange	ORCO1032	3253	Cx. quinquefasciatus	Anaheim	50	GRVD	9/2/2015	WNV
Orange	ORCO1033	3243	Cx. quinquefasciatus	Tustin	50	GRVD	9/2/2015	WNV
Orange	ORCO1033	3379	Cx. quinquefasciatus	Tustin	40	GRVD	9/9/2015	WNV
Orange	ORCO1033	3380	Cx. quinquefasciatus	Tustin	40	GRVD	9/9/2015	WNV
Orange	ORCO130	3250	Cx. quinquefasciatus	Garden Grove	42	GRVD	9/2/2015	WNV
Orange	ORCO130	3251	Cx. quinquefasciatus	Garden Grove	42	GRVD	9/2/2015	WNV
Orange	ORCO130	3335	Cx. quinquefasciatus	Garden Grove	50	GRVD	9/9/2015	WNV
Orange	ORCO169	3246	Cx. quinquefasciatus	Orange	16	GRVD	9/2/2015	WNV
Orange	ORCO169	3491	Cx. quinquefasciatus	Orange	4	GRVD	9/15/2015	WNV
Orange	ORCO17	3481	Cx. quinquefasciatus	Orange	9	GRVD	9/15/2015	WNV
Orange	ORCO170	3236	Cx. quinquefasciatus	Anaheim	50	GRVD	9/2/2015	WNV
Orange	ORCO170	3237	Cx. quinquefasciatus	Anaheim	50	GRVD	9/2/2015	WNV
Orange	ORCO170	3360	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO170	3361	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO170	3362	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO170	3363	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO170	3365	Cx. quinquefasciatus	Anaheim	29	GRVD	9/9/2015	WNV
Orange	ORCO170	3366	Cx. tarsalis	Anaheim	7	GRVD	9/9/2015	WNV
Orange	ORCO193	3449	Cx. quinquefasciatus	Huntington Beach	38	GRVD	9/11/2015	WNV
Orange	ORCO198	3233	Cx. quinquefasciatus	La Habra	50	GRVD	9/2/2015	WNV
Orange	ORCO198	3234	Cx. quinquefasciatus	La Habra	50	GRVD	9/2/2015	WNV
Orange	ORCO198	3235	Cx. quinquefasciatus	La Habra	27	GRVD	9/2/2015	WNV
Orange	ORCO198	3354	Cx. quinquefasciatus	La Habra	52	GRVD	9/9/2015	WNV
Orange	ORCO198	3355	Cx. quinquefasciatus	La Habra	50	GRVD	9/9/2015	WNV
Orange	ORCO198	3483	Cx. quinquefasciatus	La Habra	38	GRVD	9/15/2015	WNV
Orange	ORCO2	3345	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO2	3346	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO2	3347	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO2	3348	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO2	3350	Cx. quinquefasciatus	Fullerton	18	GRVD	9/9/2015	WNV
Orange	ORCO2	3404	Cx. quinquefasciatus	Fullerton	50	GRVD	9/10/2015	WNV
Orange	ORCO2	3405	Cx. quinquefasciatus	Fullerton	50	GRVD	9/10/2015	WNV
Orange	ORCO2	3406	Cx. quinquefasciatus	Fullerton	50	GRVD	9/10/2015	WNV
Orange	ORCO2	3408	Cx. quinquefasciatus	Fullerton	36	GRVD	9/10/2015	WNV
Orange	ORCO2	3409	Cx. quinquefasciatus	Fullerton	50	GRVD	9/10/2015	WNV
Orange	ORCO2	3410	Cx. quinquefasciatus	Fullerton	50	GRVD	9/10/2015	WNV
Orange	ORCO2	3475	Cx. quinquefasciatus	Fullerton	50	GRVD	9/15/2015	WNV
Orange	ORCO2	3476	Cx. quinquefasciatus	Fullerton	50	GRVD	9/15/2015	WNV
Orange	ORCO2	3477	Cx. quinquefasciatus	Fullerton	41	GRVD	9/15/2015	WNV
Orange	ORCO202	3224	Cx. quinquefasciatus	Fullerton	50	GRVD	9/2/2015	WNV
Orange	ORCO202	3369	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO202	3370	Cx. quinquefasciatus	Fullerton	50	GRVD	9/9/2015	WNV
Orange	ORCO202	3371	Cx. quinquefasciatus	Fullerton	30	GRVD	9/9/2015	WNV
Orange	ORCO205	3265	Cx. quinquefasciatus	Tustin	21	GRVD	9/3/2015	WNV
Orange	ORCO205	3381	Cx. quinquefasciatus	Tustin	44	GRVD	9/9/2015	WNV
Orange	ORCO205	3479	Cx. quinquefasciatus	Tustin	39	GRVD	9/15/2015	WNV
Orange	ORCO21	3239	Cx. quinquefasciatus	Orange	19	GRVD	9/2/2015	WNV
Orange	ORCO213	3344	Cx. quinquefasciatus	Garden Grove	29	CO2	9/9/2015	WNV
Orange	ORCO217	3257	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/3/2015	WNV

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Orange	ORCO217	3258	Cx. quinquefasciatus	Santa Ana	20	GRVD	9/3/2015	WNV
Orange	ORCO217	3260	Cx. quinquefasciatus	Santa Ana	33	GRVD	9/3/2015	WNV
Orange	ORCO218	3174	Cx. quinquefasciatus	Anaheim	40	GRVD	9/1/2015	WNV
Orange	ORCO218	3180	Cx. quinquefasciatus	Anaheim	50	GRVD	9/1/2015	WNV
Orange	ORCO218	3297	Cx. quinquefasciatus	Anaheim	20	GRVD	9/3/2015	WNV
Orange	ORCO218	3298	Cx. quinquefasciatus	Anaheim	29	GRVD	9/3/2015	WNV
Orange	ORCO219	3181	Cx. quinquefasciatus	Irvine	31	GRVD	9/1/2015	WNV
Orange	ORCO229	3432	Cx. quinquefasciatus	Fountain Valley	33	GRVD	9/10/2015	WNV
Orange	ORCO236	3342	Cx. quinquefasciatus	Garden Grove	50	GRVD	9/9/2015	WNV
Orange	ORCO238	3208	Cx. quinquefasciatus	Anaheim	50	GRVD	9/2/2015	WNV
Orange	ORCO238	3356	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO238	3357	Cx. quinquefasciatus	Anaheim	29	GRVD	9/9/2015	WNV
Orange	ORCO29	3188	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/2/2015	WNV
Orange	ORCO29	3189	Cx. quinquefasciatus	Santa Ana	43	GRVD	9/2/2015	WNV
Orange	ORCO29	3337	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/9/2015	WNV
Orange	ORCO29	3338	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/9/2015	WNV
Orange	ORCO29	3395	Cx. quinquefasciatus	Santa Ana	50	CO2	9/9/2015	WNV
Orange	ORCO29	3396	Cx. quinquefasciatus	Santa Ana	50	CO2	9/9/2015	WNV
Orange	ORCO29	3397	Cx. quinquefasciatus	Santa Ana	50	CO2	9/9/2015	WNV
Orange	ORCO29	3398	Cx. quinquefasciatus	Santa Ana	50	CO2	9/9/2015	WNV
Orange	ORCO29	3399	Cx. quinquefasciatus	Santa Ana	40	CO2	9/9/2015	WNV
Orange	ORCO29	3400	Cx. quinquefasciatus	Santa Ana	40	CO2	9/9/2015	WNV
Orange	ORCO3	3247	Cx. quinquefasciatus	Garden Grove	55	GRVD	9/2/2015	WNV
Orange	ORCO3	3334	Cx. quinquefasciatus	Garden Grove	26	GRVD	9/9/2015	WNV
Orange	ORCO34	3231	Cx. quinquefasciatus	Brea	50	GRVD	9/2/2015	WNV
Orange	ORCO34	3232	Cx. quinquefasciatus	Brea	27	GRVD	9/2/2015	WNV
Orange	ORCO36	3373	Cx. quinquefasciatus	Cypress	18	GRVD	9/9/2015	WNV
Orange	ORCO41	3463	Cx. quinquefasciatus	Anaheim	30	GRVD	9/15/2015	WNV
Orange	ORCO5	3447	Cx. quinquefasciatus	Huntington Beach	50	GRVD	9/11/2015	WNV
Orange	ORCO50	3227	Cx. quinquefasciatus	Buena Park	26	GRVD	9/2/2015	WNV
Orange	ORCO50	3351	Cx. quinquefasciatus	Buena Park	20	GRVD	9/9/2015	WNV
Orange	ORCO52	3229	Cx. quinquefasciatus	Anaheim	50	GRVD	9/2/2015	WNV
Orange	ORCO52	3358	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2015	WNV
Orange	ORCO7	3306	Cx. quinquefasciatus	Seal Beach	50	GRVD	9/3/2015	WNV
Orange	ORCO82	3252	Cx. quinquefasciatus	Cypress	29	GRVD	9/2/2015	WNV
Orange	ORCO84	3242	Cx. quinquefasciatus	Orange	32	GRVD	9/2/2015	WNV
Orange	ORCO84	3492	Cx. quinquefasciatus	Orange	23	GRVD	9/15/2015	WNV
Riverside	NWST127	208	Cx. tarsalis	Calimesa	50	CO2	9/10/2015	WNV
Riverside	NWST139	211	Cx. quinquefasciatus	Riverside	49	CO2	9/11/2015	WNV
Riverside	NWST141	214	Cx. quinquefasciatus	Riverside	34	CO2	9/11/2015	WNV
Riverside	NWST6876	199	Cx. tarsalis	Corona	17	CO2	9/10/2015	WNV
Sacramento	SAYO202006	5162	Cx. tarsalis	Sacramento	50	CO2	9/11/2015	WNV
Sacramento	SAYO202018	5503	Cx. pipiens	Sacramento	1	GRVD	9/17/2015	WNV
Sacramento	SAYO203012	5183	Cx. tarsalis	Antelope	50	CO2	9/11/2015	WNV
Sacramento	SAYO213031	5181	Cx. pipiens	North Highlands	18	CO2	9/11/2015	WNV
Sacramento	SAYO224007	5420	Cx. tarsalis	Sacramento	25	CO2	9/15/2015	WNV
Sacramento	SAYO233047	5405	Cx. pipiens	Elk Grove	16	CO2	9/15/2015	WNV
Sacramento	SAYO234004	5406	Cx. tarsalis	Elk Grove	8	CO2	9/15/2015	WNV
Sacramento	SAYO234013	5408	Cx. tarsalis	Elk Grove	11	CO2	9/15/2015	WNV
Sacramento	SAYO235001	5222	Cx. tarsalis	Wilton	30	CO2	9/11/2015	WNV
Sacramento	SAYO242010	5372	Cx. pipiens	Elk Grove	50	CO2	9/15/2015	WNV
San Bernardino	SANB87	402	Cx. erythrothorax	Chino Hills	50	CO2	9/9/2015	WNV
San Bernardino	SANB88	429	Cx. tarsalis	Chino Hills	5	CO2	9/9/2015	WNV



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San Bernardino	SANB89	410	Cx. quinquefasciatus	Ontario	7	CO2	9/10/2015	WNV
San Bernardino	SANB90	413	Cx. tarsalis	Chino	8	CO2	9/10/2015	WNV
San Bernardino	SANB93	424	Cx. quinquefasciatus	Chino	50	CO2	9/10/2015	WNV
San Joaquin	SJCM8029	2296	Cx. pipiens	Farmington	21	CO2	9/15/2015	WNV
Stanislaus	TRLK1214	1336	Cx. pipiens	Turlock	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1214	1338	Cx. pipiens	Turlock	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1214	1341	Cx. pipiens	Turlock	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1226	1322	Cx. tarsalis	Patterson	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1329	1291	Cx. pipiens	Modesto	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1329	1303	Cx. tarsalis	Modesto	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1329	1304	Cx. tarsalis	Modesto	50	CO2	9/11/2015	WNV
Stanislaus	TRLK1329	1305	Cx. tarsalis	Modesto	50	CO2	9/11/2015	WNV
Stanislaus	TRLK305	1366	Cx. tarsalis	Grayson	39	CO2	9/15/2015	WNV
Stanislaus	TRLK549	1390	Cx. pipiens	Newman	29	CO2	9/15/2015	WNV
Tulare	DLTA6407	1524	Cx. quinquefasciatus	Dinuba	50	GRVD	9/15/2015	WNV
Tulare	DLTA6407	1544	Cx. quinquefasciatus	Dinuba	50	GRVD	9/16/2015	WNV
Tulare	DLTA6407	1552	Cx. quinquefasciatus	Dinuba	39	GRVD	9/16/2015	WNV
Tulare	DLTA6407	1556	Cx. quinquefasciatus	Dinuba	27	GRVD	9/16/2015	WNV
Tulare	DLTA6408	1526	Cx. quinquefasciatus	Dinuba	50	GRVD	9/15/2015	WNV
Tulare	DLTA6408	1534	Cx. quinquefasciatus	Dinuba	49	GRVD	9/16/2015	WNV
Tulare	DLTA6408	1535	Cx. quinquefasciatus	Dinuba	25	GRVD	9/16/2015	WNV
Tulare	DLTA6408	1572	Cx. quinquefasciatus	Dinuba	33	GRVD	9/17/2015	WNV
Tulare	DLTA6408	1574	Cx. quinquefasciatus	Dinuba	17	GRVD	9/17/2015	WNV
Tulare	DLTA6408	1575	Cx. quinquefasciatus	Dinuba	46	GRVD	9/17/2015	WNV
Tulare	DLTA6416	1582	Cx. quinquefasciatus	Dinuba	20	GRVD	9/17/2015	WNV
Tulare	DLTA6420	1580	Cx. quinquefasciatus	Dinuba	25	GRVD	9/17/2015	WNV
Tulare	DLTA6420	1581	Cx. quinquefasciatus	Dinuba	32	GRVD	9/17/2015	WNV
Tulare	DLTA7316	1522	Cx. quinquefasciatus	Traver	22	GRVD	9/15/2015	WNV
Tulare	DLTA7502	1519	Cx. quinquefasciatus	Seville	28	GRVD	9/15/2015	WNV
Tulare	DLTA7529	1518	Cx. quinquefasciatus	Visalia	10	GRVD	9/15/2015	WNV
Tulare	DLTA8419	1520	Cx. quinquefasciatus	Goshen	31	GRVD	9/15/2015	WNV
Tulare	DLTA8423	1533	Cx. quinquefasciatus	Visalia	46	GRVD	9/15/2015	WNV
Tulare	DLTA8427	1509	Cx. quinquefasciatus	Visalia	19	GRVD	9/15/2015	WNV
Yolo	SAYO115001	5318	Cx. tarsalis	Knights Landing	50	CO2	9/11/2015	WNV
Yolo	SAYO115002	5303	Cx. tarsalis	Knights Landing	50	CO2	9/11/2015	WNV

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05
Contra Costa	CNTR7402	Oakley	9/8/2015	WNV	1115	1116	1119	1120	1121
Contra Costa	CNTR8152	Knightsen	9/8/2015	WNV	1106				
Lake	LAKE0226	Lower Lake	9/8/2015	WNV	1310	1311			
Merced	MERC0501	El Nido	9/10/2015	WNV	1821	1824			
Merced	MERC0502	Hilmar	9/10/2015	WNV	1842				
Merced	MERC201501	Le Grand	9/10/2015	WNV	1847	1848			
Nevada	NEVA0004	Auburn	9/9/2015	WNV	2457	2459			
Riverside	COAV0035	Mecca	8/31/2015	SLEV	2547				

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Riverside	COAV0122	Mecca	8/17/2015	WNV	2550	2556			
Riverside	COAV0122	Mecca	8/17/2015	SLEV	2572				
San Bernardino	SANB0003	Colton	9/1/2015	WNV	2014	2016			
San Bernardino	SANB0008	Upland	8/31/2015	WNV	2053	2055			
San Bernardino	SANB0011	Rialto	9/1/2015	WNV	2033	2036			
San Bernardino	SANB0029	San Bernardino	9/1/2015	WNV	2026	2031	2032		
Shasta	SHAS9702	Millville	9/10/2015	WNV	1570				
Shasta	SHAS9704	Redding	9/10/2015	WNV	1585	1588	1589		
Sutter	SUYA0014	Sutter	9/10/2015	WNV	2247				
Sutter	SUYA0031	Rio Oso	9/10/2015	WNV	2223				
Sutter	SUYA0084	Yuba City	9/10/2015	WNV	2201	2205			

### 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.

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#### **Dead Birds**

Oral swab samples from corvids are collected onto RNA preservation cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) 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.

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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 the presence of 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 are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-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).*