

California Arbovirus Surveillance Bulletin #30

Week 39 Friday, September 30, 2016



Weekly Update

Humans

West Nile virus

A total of 42 new cases of West Nile virus (WNV) illness were reported this week from the following 14 counties: Fresno (1), Glenn (1), Kern (1), Lake (1), Los Angeles (16), Madera (2), Orange (6), Placer (2), Riverside (1), San Bernardino (3), San Diego (2), San Joaquin (1), Stanislaus (1), and Tulare (4). **This is the first human WNV case reported from Lake County in 2016.** To date this year, 276 cases of WNV illness have been reported from 28 counties. Of the 276 case-patients, 200 (72%) had neuroinvasive illness, and 9 fatalities have been reported from Los Angeles (3), Sacramento (1), San Diego (1), San Joaquin (1), Stanislaus (1), Yolo (1), and Tulare (1) counties. The median age of the individuals is 58 years (range: 8-91 years) and 169 (61%) are male. Dates of symptom onset range from June 17 to September 14. In addition, 30 asymptomatic WNV-positive blood donors have been reported from Fresno (2), Los Angeles (7), Madera (1), Orange (3) Sacramento (2), San Diego (2), San Francisco (1), San Luis Obispo (1), Stanislaus (4), Sutter (2), Tehama (1), Tulare (1), and Yolo (3) counties.

St. Louis encephalitis virus

No new cases were reported this week. In 2016, one case of St. Louis encephalitis virus (SLEV) disease has been reported from Sacramento County.

Dead Birds

This week, a total of 12 dead birds tested positive for WNV from the following 7 counties: Contra Costa (1), Orange (2), Placer (1), Sacramento (1), San Diego (3), Solano (2), and Stanislaus (2). In 2016, 1,288 dead birds have tested positive for WNV from 33 counties, whereas at this time last year, 1,104 WNV positive birds had been reported from 36 counties.

Mosquito Pools

West Nile virus

A total of 111 WNV positive mosquito pools were reported this week from the following 13 counties: Fresno (2), Kern (2), Kings (4), Los Angeles (20), Madera (1), Orange (55), Placer (1), Sacramento (3), San Bernardino (1), San Joaquin (14), Stanislaus (5), Tulare (1), and Yolo (2). In 2016, 3,360 WNV positive mosquito pools have been reported from 30 counties, whereas at this time last year, 2,855 WNV positive mosquito pools had been reported from 29 counties.

St. Louis encephalitis virus

A total of 14 SLEV positive mosquito pools were reported this week from the following 4 counties: Fresno (1), Kern (10), Kings (2), and Madera (1). **This is the first detection of SLEV activity in Fresno and Madera counties since 1992.** To date this year, 170 SLEV positive mosquito pools have been reported from 8 counties: Fresno (1), Kern (75), Kings (4), Los Angeles (2), Madera (1), Orange (2), Riverside (84), and Tulare (1) counties. At this time last year, 35 SLEV positive mosquito pools had been reported from Riverside County.

Sentinel Chickens

West Nile virus

A total of 5 WNV positive chickens were reported this week from 3 counties: Los Angeles (2), Placer (1), and San Bernardino (2). To date this year, 301 WNV seroconversions have been detected in 74 flocks located in 17 counties, whereas at this time last year, 330 WNV seroconversions had been detected in 83 flocks from 22 counties.

St. Louis encephalitis virus

One SLEV positive chicken was reported this week from Los Angeles County; **this is the first SLEV seroconversion detected in Los Angeles County this year.** In 2016, 3 SLEV seroconversions have been detected in 2 flocks from 2 counties: Los Angeles and San Bernardino. At this time last year, 5 SLEV positive chickens from 2 flocks in Riverside County had been reported.

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YTD WNV Activity by Element and County, 2016				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		11	2	
Butte	19	21	48	38
Colusa	2			9
Contra Costa	1	27	9	5
El Dorado	1	4		
Fresno	9	6	180	
Glenn	5	4	11	10
Kern	9		80	
Kings	2	4	118	
Lake	1	4	39	4
Los Angeles	92	111	388	99
Madera	4	5	99	
Marin		5		
Merced		5	11	33
Monterey	1			
Napa		1	4	
Nevada		2		1
Orange	18	78	382	
Placer	5	28	103	7
Riverside	3	14	31	
Sacramento	18	409	454	
San Bernardino	6	5	79	20
San Diego	11	255	65	9
San Joaquin	6	35	348	
San Mateo		11	5	
Santa Clara	1	85	13	
Santa Cruz		2	3	
Shasta	1	3	12	3
Solano		13	16	7
Sonoma		8	2	
Stanislaus	17	12	257	
Sutter	9	10	68	32
Tehama	5			8
Tulare	7	3	257	
Ventura	2	32		
Yolo	12	71	258	3
Yuba	9	4	18	13
Totals	276	1,288	3,360	301

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2015 & 2016 YTD West Nile Virus Comparisons		
	2015	2016
Total # Dead Bird Reports	9,236	8,396
# Positive Counties	40	37
# Human Cases	245	276
# Positive Dead Birds / # Tested	1,014 / 2,639	1,288 / 2,629
# Positive Mosquito Pools / # Tested	2,855 / 32,045	3,360 / 38,647
# Seroconversions / # Tested	330 / 10,414	301 / 8,975

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Number of Cases Reported	Week	42	0	0
	YTD	276	1	0

Dead Birds

		Total Tested	WNV Positive
Dead Birds	Week	52	12
	YTD	2,629	1,288

Sentinel Chickens

		Total Tested	WNV +	SLEV +	WEEV +
Chicken Sera	Week	288	5	1	0
	YTD	8,975	301	3	0

Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	111 / 1,696	14 / 1,054	0 / 1,054	0 / 88	0 / 88	0 / 88
	YTD	3,360 / 38,647	170 / 24,892	0 / 24,892	0 / 540	0 / 540	0 / 540

NEW POSITIVES

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Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Contra Costa	Contra Costa MVCD	Concord	94521	American Crow	9/28/2016	WNV
Orange	Orange Co VCD	Anaheim	92807	American Crow	9/23/2016	WNV
Orange	Orange Co VCD	Costa Mesa	92626	Yellow Warbler	9/22/2016	WNV
Placer	Placer MVCD	Loomis	95650	Oak Titmouse	9/19/2016	WNV
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95670	American Crow	9/23/2016	WNV
San Diego	San Diego Co VCP	Carlsbad	92008	American Crow	9/28/2016	WNV
San Diego	San Diego Co VCP	Carlsbad	92011	American Crow	9/26/2016	WNV
San Diego	San Diego Co VCP	Encinitas	92024	American Crow	9/26/2016	WNV
Solano	Solano Co MAD	Fairfield	94533	American Crow	9/26/2016	WNV
Solano	Solano Co MAD	Fairfield	94533	American Crow	9/29/2016	WNV
Stanislaus	Turlock MAD	Modesto	95358	House Sparrow	9/19/2016	WNV
Stanislaus	Turlock MAD	Turlock	95380	Yellow-billed Magpie	9/12/2016	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	FRWS400017	371	Cx. tarsalis	Mendota	50	CO2	9/27/2016	WNV
Fresno	FRWS410005	347	Cx. quinquefasciatus		17	OTHER	9/22/2016	WNV
Fresno	FRWS5110	375	Cx. tarsalis	Tranquillity	50	CO2	9/27/2016	SLEV
Kern	KERN1102	459	Cx. quinquefasciatus	Wasco	28	CO2	9/22/2016	SLEV
Kern	KERN115	440	Cx. tarsalis	Bakersfield	50	CO2	9/20/2016	SLEV
Kern	KERN2012	439	Cx. tarsalis	Bakersfield	15	CO2	9/20/2016	SLEV
Kern	KERN2030	449	Cx. quinquefasciatus	Bakersfield	17	GRVD	9/21/2016	WNV
Kern	KERN2042	437	Cx. quinquefasciatus	Lamont	46	GRVD	9/20/2016	SLEV
Kern	KERN29	458	Cx. tarsalis	Lamont	50	CO2	9/22/2016	SLEV
Kern	KERN3019	467	Cx. quinquefasciatus	Bakersfield	19	CO2	9/23/2016	SLEV
Kern	KERN3030	464	Cx. quinquefasciatus	Shafter	50	CO2	9/22/2016	SLEV
Kern	KERN3030	464	Cx. quinquefasciatus	Shafter	50	CO2	9/22/2016	WNV
Kern	KERN3033	441	Cx. quinquefasciatus	Bakersfield	50	CO2	9/20/2016	SLEV
Kern	KERN36	469	Cx. tarsalis	Bakersfield	30	CO2	9/23/2016	SLEV
Kern	KERN43	460	Cx. quinquefasciatus	Shafter	47	CO2	9/22/2016	SLEV
Kings	KNGS3005	513	Cx. tarsalis	Lemoore NAS	50	CO2	9/20/2016	SLEV
Kings	KNGS3024	486	Cx. tarsalis	Lemoore	50	CO2	9/13/2016	WNV
Kings	KNGS3024	487	Cx. tarsalis	Lemoore	50	CO2	9/13/2016	SLEV
Kings	KNGS3024	488	Cx. tarsalis	Lemoore	38	CO2	9/13/2016	WNV
Kings	KNGS3030	497	Cx. tarsalis	Lemoore	50	CO2	9/15/2016	WNV
Kings	KNGS3082	504	Cx. tarsalis	Lemoore	50	CO2	9/16/2016	WNV
Los Angeles	GRLA2007	5754	Cx. quinquefasciatus	Toluca Lake	28	GRVD	9/21/2016	WNV
Los Angeles	GRLA2017	5755	Cx. quinquefasciatus	Toluca Lake	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA2034	5771	Cx. quinquefasciatus	Tarzana	38	GRVD	9/22/2016	WNV
Los Angeles	GRLA2097	814	Cx. quinquefasciatus	La Mirada	47	GRVD	9/21/2016	WNV
Los Angeles	GRLA2268	818	Cx. quinquefasciatus	Cerritos	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA2540	5777	Cx. quinquefasciatus	Porter Ranch	50	GRVD	9/22/2016	WNV
Los Angeles	GRLA2952	813	Cx. quinquefasciatus	South Whittier	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA2953	816	Cx. quinquefasciatus	Santa Fe Springs	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA2957	821	Cx. quinquefasciatus	Hawaiian Gardens	50	GRVD	9/22/2016	WNV

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Los Angeles	GRLA3027	5752	Cx. quinquefasciatus	Studio City	30	GRVD	9/21/2016	WNV
Los Angeles	GRLA3038	5757	Cx. quinquefasciatus	Valley Village	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA3040	815	Cx. quinquefasciatus	La Mirada	34	GRVD	9/21/2016	WNV
Los Angeles	GRLA3048	810	Cx. quinquefasciatus	Pico Rivera	17	GRVD	9/21/2016	WNV
Los Angeles	GRLA3051	823	Cx. quinquefasciatus	Signal Hill	35	GRVD	9/22/2016	WNV
Los Angeles	GRLA3060	819	Cx. quinquefasciatus	Norwalk	50	GRVD	9/21/2016	WNV
Los Angeles	GRLA3070	827	Cx. quinquefasciatus	Commerce	50	GRVD	9/23/2016	WNV
Los Angeles	GRLA3073	834	Cx. quinquefasciatus	Lincoln Heights	50	GRVD	9/23/2016	WNV
Los Angeles	GRLA3074	835	Cx. quinquefasciatus	Lincoln Heights	50	GRVD	9/23/2016	WNV
Los Angeles	LACW1049	436	Cx. quinquefasciatus	Inglewood	39	GRVD	9/20/2016	WNV
Los Angeles	SGVA874	408	Cx. quinquefasciatus	Claremont	40	GRVD	8/31/2016	WNV
Madera	MADR195	406	Cx. quinquefasciatus	Madera	50	CO2	9/21/2016	WNV
Madera	MADR208	398	Cx. quinquefasciatus	Madera	27	CO2	9/21/2016	SLEV
Orange	ORCO1000	3733	Cx. quinquefasciatus	Placentia	20	GRVD	9/14/2016	WNV
Orange	ORCO1005	3939	Cx. quinquefasciatus	Buena Park	7	GRVD	9/23/2016	WNV
Orange	ORCO1009	3744	Cx. quinquefasciatus	Garden Grove	7	GRVD	9/15/2016	WNV
Orange	ORCO1011	3693	Cx. quinquefasciatus	La Habra	22	GRVD	9/14/2016	WNV
Orange	ORCO1011	3705	Cx. quinquefasciatus	La Habra	43	GRVD	9/14/2016	WNV
Orange	ORCO1011	3937	Cx. quinquefasciatus	La Habra	9	GRVD	9/23/2016	WNV
Orange	ORCO1014	3625	Cx. quinquefasciatus	Mission Viejo	16	GRVD	9/9/2016	WNV
Orange	ORCO1014	3629	Cx. quinquefasciatus	Mission Viejo	39	GRVD	9/9/2016	WNV
Orange	ORCO1014	3630	Cx. quinquefasciatus	Mission Viejo	8	GRVD	9/9/2016	WNV
Orange	ORCO1014	3906	Cx. quinquefasciatus	Mission Viejo	12	GRVD	9/22/2016	WNV
Orange	ORCO1014	3907	Cx. quinquefasciatus	Mission Viejo	11	GRVD	9/22/2016	WNV
Orange	ORCO1014	3912	Cx. quinquefasciatus	Mission Viejo	6	GRVD	9/22/2016	WNV
Orange	ORCO1015	3595	Cx. quinquefasciatus	Orange	50	GRVD	9/7/2016	WNV
Orange	ORCO1021	3637	Cx. quinquefasciatus	Tustin	50	GRVD	9/9/2016	WNV
Orange	ORCO1021	3638	Cx. quinquefasciatus	Tustin	12	GRVD	9/9/2016	WNV
Orange	ORCO1025	3919	Cx. quinquefasciatus	Costa Mesa	38	BGSENT	9/22/2016	WNV
Orange	ORCO1027	3945	Cx. quinquefasciatus	La Palma	24	GRVD	9/23/2016	WNV
Orange	ORCO1033	3825	Cx. quinquefasciatus	Tustin	26	GRVD	9/20/2016	WNV
Orange	ORCO1040	3830	Cx. quinquefasciatus	Orange	41	GRVD	9/20/2016	WNV
Orange	ORCO1040	3831	Cx. quinquefasciatus	Orange	41	GRVD	9/20/2016	WNV
Orange	ORCO1041	3808	Cx. quinquefasciatus	Tustin	18	GRVD	9/20/2016	WNV
Orange	ORCO124	3682	Cx. quinquefasciatus	Placentia	22	GRVD	9/13/2016	WNV
Orange	ORCO169	3804	Cx. quinquefasciatus	Orange	31	GRVD	9/20/2016	WNV
Orange	ORCO17	3584	Cx. quinquefasciatus	Orange	14	GRVD	9/7/2016	WNV
Orange	ORCO170	3608	Cx. quinquefasciatus	Anaheim	40	GRVD	9/9/2016	WNV
Orange	ORCO198	3689	Cx. quinquefasciatus	La Habra	16	GRVD	9/14/2016	WNV
Orange	ORCO198	3789	Cx. quinquefasciatus	La Habra	31	GRVD	9/20/2016	WNV
Orange	ORCO199	3708	Cx. quinquefasciatus	Costa Mesa	31	GRVD	9/14/2016	WNV
Orange	ORCO2	3800	Cx. quinquefasciatus	Fullerton	50	GRVD	9/20/2016	WNV
Orange	ORCO2	3802	Cx. quinquefasciatus	Fullerton	49	GRVD	9/20/2016	WNV
Orange	ORCO205	3716	Cx. quinquefasciatus	Tustin	27	GRVD	9/14/2016	WNV
Orange	ORCO205	3805	Cx. quinquefasciatus	Tustin	50	GRVD	9/20/2016	WNV
Orange	ORCO205	3806	Cx. quinquefasciatus	Tustin	46	GRVD	9/20/2016	WNV
Orange	ORCO208	3817	Cx. quinquefasciatus	Santa Ana	7	CO2	9/20/2016	WNV
Orange	ORCO217	3627	Cx. quinquefasciatus	Santa Ana	38	GRVD	9/9/2016	WNV
Orange	ORCO217	3758	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/15/2016	WNV
Orange	ORCO217	3784	Cx. quinquefasciatus	Santa Ana	19	GRVD	9/16/2016	WNV
Orange	ORCO217	3785	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/20/2016	WNV
Orange	ORCO217	3837	Cx. quinquefasciatus	Santa Ana	33	GRVD	9/20/2016	WNV
Orange	ORCO218	3684	Cx. quinquefasciatus	Anaheim	31	GRVD	9/13/2016	WNV
Orange	ORCO218	3688	Cx. quinquefasciatus	Anaheim	42	GRVD	9/13/2016	WNV

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Orange	ORCO218	3738	Cx. quinquefasciatus	Anaheim	25	GRVD	9/15/2016	WNV
Orange	ORCO218	3893	Cx. quinquefasciatus	Anaheim	37	GRVD	9/21/2016	WNV
Orange	ORCO218	3894	Cx. quinquefasciatus	Anaheim	37	GRVD	9/21/2016	WNV
Orange	ORCO218	3899	Cx. erythrothorax	Anaheim	44	CO2	9/22/2016	WNV
Orange	ORCO221	3888	Cx. quinquefasciatus		9	GRVD	9/21/2016	WNV
Orange	ORCO227	3685	Cx. quinquefasciatus	Brea	43	GRVD	9/13/2016	WNV
Orange	ORCO238	3646	Cx. quinquefasciatus	Anaheim	50	GRVD	9/9/2016	WNV
Orange	ORCO241	3902	Cx. quinquefasciatus	Stanton	45	GRVD	9/22/2016	WNV
Orange	ORCO242	3905	Cx. quinquefasciatus	Fountain Valley	23	GRVD	9/22/2016	WNV
Orange	ORCO243	3909	Cx. quinquefasciatus	Anaheim	50	GRVD	9/22/2016	WNV
Orange	ORCO29	3819	Cx. quinquefasciatus	Santa Ana	50	GRVD	9/20/2016	WNV
Orange	ORCO41	3827	Cx. quinquefasciatus	Anaheim	24	GRVD	9/20/2016	WNV
Orange	ORCO50	3797	Cx. quinquefasciatus	Buena Park	21	GRVD	9/20/2016	WNV
Orange	ORCO7	3709	Cx. quinquefasciatus	Seal Beach	41	GRVD	9/14/2016	WNV
Placer	PLCR191373	2490	Cx. tarsalis		27	CO2	9/27/2016	WNV
Sacramento	SAYO215005	7532	Cx. pipiens	Folsom	33	GRVD	9/22/2016	WNV
Sacramento	SAYO224012	7549	Cx. tarsalis	Rancho Cordova	2	CO2	9/27/2016	WNV
Sacramento	SAYO232028	7745	Cx. tarsalis	Sacramento	50	CO2	9/29/2016	WNV
San Bernardino	WVAL5004	2292	Cx. quinquefasciatus	Rancho Cucamonga	15	GRVD	9/28/2016	WNV
San Joaquin	SJCM8020	2546	Cx. tarsalis	Acampo	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8032	2614	Cx. pipiens	Escalon	48	CO2	9/29/2016	WNV
San Joaquin	SJCM8037	2609	Cx. tarsalis	Lathrop	5	CO2	9/29/2016	WNV
San Joaquin	SJCM8083	2555	Cx. pipiens	Escalon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8109	2576	Cx. pipiens	Escalon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8109	2577	Cx. pipiens	Escalon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8125	2514	Cx. tarsalis	Stockton	10	CO2	9/27/2016	WNV
San Joaquin	SJCM8126	2622	Cx. tarsalis	Clements	13	CO2	9/29/2016	WNV
San Joaquin	SJCM8160	2539	Cx. pipiens	Lodi	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8161	2561	Cx. pipiens	Ripon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8161	2562	Cx. pipiens	Ripon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8161	2563	Cx. pipiens	Ripon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8161	2564	Cx. pipiens	Ripon	50	CO2	9/27/2016	WNV
San Joaquin	SJCM8185	2608	Cx. pipiens	Manteca	27	CO2	9/29/2016	WNV
Stanislaus	TRLK1107	1207	Cx. pipiens	Denair	21	CO2	9/27/2016	WNV
Stanislaus	TRLK1209	1203	Cx. tarsalis	Ceres	34	CO2	9/27/2016	WNV
Stanislaus	TRLK1615	1249	Cx. tarsalis		50	CO2	9/27/2016	WNV
Stanislaus	TRLK421	1206	Cx. pipiens	Hughson	4	CO2	9/27/2016	WNV
Stanislaus	TRLK526	1233	Cx. pipiens	Denair	50	CO2	9/27/2016	WNV
Tulare	TLRE68	120	Cx. quinquefasciatus	Tulare	50	CO2	9/21/2016	WNV
Yolo	SAYO114001	7658	Cx. tarsalis	Zamora	20	CO2	9/28/2016	WNV
Yolo	SAYO146002	7777	Cx. tarsalis	Davis	40	CO2	9/29/2016	WNV

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Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02
Los Angeles	LACW1012	Venice	9/1/2016	SLEV	2359	
Los Angeles	SGVA0009	Walnut	9/19/2016	WNV	1838	1839
Placer	PLCR0756	Roseville	9/26/2016	WNV	2141	
San Bernardino	SANB0003	Colton	9/20/2016	WNV	1730	
San Bernardino	SANB0008	Upland	9/20/2016	WNV	1752	

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.

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.

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.

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov
