

California Arbovirus Surveillance Bulletin #30

Week 36 Friday, September 9, 2011



WEEKLY UPDATE

Human Cases

Six new human cases of West Nile virus (WNV) were reported this week from Glenn (1), Kern (3), and Los Angeles (2) counties. To date this year, 33 WNV cases have been reported from 11 counties; of the 33 cases, 20 (61%) developed neuroinvasive disease. The median age for all cases is 59 years (range: 19-86 years) and 21 (64%) are male. No fatalities have been reported. Additionally, 7 WNV-positive blood donors have been reported this year; 3 of the individuals subsequently developed symptoms and were reclassified as cases.

At this time last year, 38 WNV cases had been reported from 11 counties.

National Activity: As of September 6, 2011, 135 human cases of WNV had been reported nationwide in 26 states: Arizona (20), California (19), Colorado (2), Connecticut (1), Florida (9), Georgia (2), Idaho (1), Illinois (4), Indiana (3), Louisiana (4), Maryland (4), Michigan (1), Mississippi (20), Missouri (1), Nebraska (7), Nevada (5), New Jersey (1), New York (7), North Dakota (2), Ohio (6), Pennsylvania (1), South Dakota (1), Tennessee (2), Texas (9), Virginia (2), and Wyoming (1). Of the 135 cases, 85 (63%) developed neuroinvasive disease. Five WNV-related fatalities have been reported in Florida (1), Michigan (1), Mississippi (1), Pennsylvania (1), and Texas (1).

Horses

Three new horse cases of WNV were reported this week from Fresno (2) and Tulare (1) counties. Two of the 3 horses were unvaccinated and all are alive and recovering. In 2011, 5 horse cases of WNV have been reported from 4 counties. At this time last year, 14 horse cases of WNV had been reported from 9 counties.

Dead Birds & Squirrels

Fifty-six WNV positive dead birds were reported this week from 13 counties: Contra Costa (5), Los Angeles (17), Madera (1), Merced (1), Orange (2), Placer (1), Riverside (1), Sacramento (17), San Bernardino (5), San Joaquin (1), Santa Clara (3), Tulare (1), and Yolo (1). This is the first WNV positive dead bird reported from Madera and Merced Counties in 2011. To date this year, 358 dead birds from 19 counties and one tree squirrel from one county have tested positive for WNV. An additional 86 birds have tested positive for chronic* WNV infection from 23 counties.

At this time last year, 310 birds from 24 counties, and 13 tree squirrels from 7 counties had tested positive for WNV.

**In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section began differentiating between chronic and acute infections in WNV positive dead birds. Birds considered to have chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility.*

Mosquito Pools

A total of 218 WNV positive mosquito pools were reported this week from the following 16 counties: Contra Costa (1), Fresno (4), Kern (38), Kings (8), Lake (1), Los Angeles (40), Orange (11), Riverside (8), Sacramento (57), San Bernardino (14), San Joaquin (9), Santa Clara (3), Shasta (1), Stanislaus (19), Sutter (3), and Tulare (1). This is the first detection of WNV activity in Lake and Shasta counties this year. In 2011, 1,479 mosquito pools from 23 counties have tested positive for WNV.

At this time last year, 1,098 mosquito pools from 20 counties had tested positive for WNV.

Sentinel Chickens

Thirty-six WNV seroconversions were reported this week from 14 flocks in the following 5 counties: Butte (5), Kern (27), Los Angeles (1), Merced (2), and San Bernardino (1). These are the first WNV positive chickens reported from Butte and Merced counties in 2011. To date this year, 135 WNV positive chickens have been detected among 33 flocks in 10 counties.

At this time last year, 148 chickens (41 flocks) had tested positive for WNV from 16 counties.

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2010 & 2011 YTD West Nile Virus Comparisons		
	2010	2011
Total # Dead Bird Reports	8,721	7,363
# Positive Counties	33	28
# Human Cases	38	33
# Horse Cases	14	5
# Positive Dead Birds / # Tested	310 / 1,753	358 / 1,747
# Positive Mosquito Pools / # Tested	1,098 / 23,046	1,479 / 23,774
# Seroconversions / # Tested	148 / 19,199	135 / 15,514
# Positive Squirrels / # Tested	13 / 77	1 / 63

YTD WNV Activity by Element and County, 2011

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Butte	1				5	
Contra Costa			10	4		
El Dorado			1			
Fresno	4	2	11	105		
Glenn	1				1	
Imperial				1		
Inyo				2		
Kern	4	1	3	276	78	
Kings			2	39		
Lake				1		
Los Angeles	10	1	145	324	15	
Madera	1		1	4		
Merced			1	8	2	
Orange	1		16	72		
Placer			3	32		
Riverside			3	22	5	
Sacramento			75	298	1	1
San Bernardino			14	68	25	
San Diego				1		
San Joaquin	1		9	41		
Santa Barbara	1					
Santa Clara			18	12		
Shasta				1		
Stanislaus	7		8	65		
Sutter				24	1	
Tulare	2	1	35	77	2	
Ventura			1			
Yolo			2	2		
Totals	33	5	358	1,479	135	1

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TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	6	0	0	0	0	0
	YTD	33	0	0	0	0	0
Horse Cases	Week	3	0	0	0	0	0
	YTD	5	0	0	0	0	0

Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	116	56
	YTD	1,747	358
Tree Squirrels	Week	3	0
	YTD	63	1

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	604	36	0	0
	YTD	15,514	135	0	0
Mosquito Pools: RT-PCR	Week	1,160	214	0	0
	YTD	23,598	1,470	0	0
Mosquito Pools: RAMP	Week	49	4	N/A	N/A
	YTD	176	9	N/A	N/A

NEW POSITIVES

Humans

WNV Cases							
ID	Report Date	County	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
11-0028	09/02/11	Glenn	>18	F	WNND	n/a	NO
11-0029	09/08/11	Kern	67	F	WNF	n/a	NO
11-0030	09/08/11	Kern	53	M	WNF	n/a	NO
11-0031	09/08/11	Kern	58	F	WNF	n/a	NO
11-0032	09/08/11	Los Angeles	76	F	WNND	08/03/11	NO
11-0033	09/08/11	Los Angeles	69	M	WNF	08/19/11	NO
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
BD11-0003	09/07/11	San Bernardino	40	F			
BD11-0004	09/08/11	Los Angeles	17	F			
BD11-0005	09/08/11	Los Angeles	36	M			

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Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Butte	Butte Co MVCD	Chico	95926	American Crow	8/24/2011	WNV	Chronic	RT-PCR
Contra Costa	Contra Costa MVCD	Brentwood	94513	American Crow	9/1/2011	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Concord	94518	Western Scrub-Jay	9/2/2011	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Knightsen	94548	American Crow	8/31/2011	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Oakley	94561	Western Scrub-Jay	8/25/2011	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Walnut Creek	94598	American Crow	9/6/2011	WNV	Recent	RAMP
Los Angeles	Greater LA VCD - SFS	Cerritos	90703	American Crow	8/18/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Cerritos	90703	American Crow	8/25/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Hacienda Heights	91745	American Crow	8/30/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	La Mirada	90639	American Crow	8/23/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Lakewood	90713	American Crow	8/28/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Long Beach	90815	American Crow	8/24/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Long Beach	90808	American Crow	8/29/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Norwalk	90650	American Crow	8/24/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - SFS	Whittier	90602	American Crow	8/17/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - Sylmar	Valencia	91354	American Crow	8/26/2011	WNV	Recent	RT-PCR
Los Angeles	Greater LA VCD - Sylmar	Van Nuys	91406	American Crow	8/29/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Acton	93510	American Crow	8/22/2011	WNV	Chronic	RT-PCR
Los Angeles	Los Angeles Co Vet	Canoga Park	91303	American Crow	8/25/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Glendale	91201	House Sparrow	8/24/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Hacienda Heights	91745	American Crow	8/24/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Tarzana	91356	American Crow	8/25/2011	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Woodland Hills	91367	American Crow	8/25/2011	WNV	Recent	RT-PCR
Los Angeles	LA Co West VCD	Culver City	90232	American Crow	8/30/2011	WNV	Recent	RT-PCR
Madera	Madera Co MVCD	Madera	93637	Western Scrub-Jay	8/29/2011	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Delhi	95315	Western Scrub-Jay	8/29/2011	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92647	Cooper's Hawk	8/23/2011	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92646	American Crow	8/30/2011	WNV	Recent	RT-PCR
Placer	Placer MVCD	Lincoln	95648	American Robin	8/31/2011	WNV	Recent	RT-PCR
Riverside	Northwest MVCD	Corona	92880	American Crow	8/19/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	American Robin	8/26/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Yellow-billed Magpie	8/28/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Yellow-billed Magpie	8/29/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	American Crow	8/31/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	American Crow	9/1/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95757	Western Scrub-Jay	9/2/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Rancho Murieta	95683	Western Scrub-Jay	8/31/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95824	Western Scrub-Jay	8/27/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95820	American Crow	8/29/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	Western Scrub-Jay	8/30/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	Western Scrub-Jay	8/31/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	American Crow	8/30/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95814	American Crow	9/1/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95830	Western Scrub-Jay	9/1/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	Western Scrub-Jay	8/12/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95834	Western Scrub-Jay	8/27/2011	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Western Scrub-Jay	8/28/2011	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	American Crow	9/1/2011	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	Redlands	92374	American Crow	8/19/2011	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	Redlands	92374	American Crow	8/22/2011	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	Redlands	92373	American Crow	8/22/2011	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	San Bernardino	92404	American Crow	8/10/2011	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Alta Loma	91701	Black-headed Grosbeak	8/22/2011	WNV	Recent	RT-PCR
San Joaquin	San Joaquin Co MVCD	Stockton	95204	American White Pelican	8/25/2011	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin Co MVCD	Tracy	95376	American Crow	8/25/2011	WNV	Recent	RT-PCR
San Joaquin	San Joaquin Co MVCD	Tracy	95376	American Crow	8/25/2011	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	8/30/2011	WNV	Recent	VecTest
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	8/30/2011	WNV	Recent	VecTest
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	8/31/2011	WNV	Recent	VecTest
Shasta	Shasta MVCD	French Gulch	96033	Yellow-rumped Warbler	8/24/2011	WNV	Chronic	RT-PCR
Stanislaus	Turlock MAD	Hughson	95326	American Crow	8/25/2011	WNV	Chronic	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	8/28/2011	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95618	American Robin	8/27/2011	WNV	Recent	RT-PCR

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Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	City	Virus	Method
Contra Costa	CNTR3966	298	Cx. pipiens	40	9/8/2011	Brentwood	WNV	RAMP
Fresno	CNSL2027	731	Cx. quinquefasciatus	44	9/2/2011	Parlier	WNV	RTPCR
Fresno	CNSL2031	730	Cx. quinquefasciatus	50	9/2/2011	Sanger	WNV	RTPCR
Fresno	CNSL2054	725	Cx. quinquefasciatus	18	9/2/2011	Sanger	WNV	RTPCR
Fresno	CNSL2340	728	Cx. quinquefasciatus	50	9/2/2011	Sanger	WNV	RTPCR
Kern	KERN0115	1930	Cx. tarsalis	50	8/30/2011	Bakersfield	WNV	RTPCR
Kern	KERN0115	1931	Cx. tarsalis	50	8/30/2011	Bakersfield	WNV	RTPCR
Kern	KERN0015	2012	Cx. tarsalis	28	9/1/2011	Pumpkin Center	WNV	RTPCR
Kern	KERN0015	2014	Cx. quinquefasciatus	50	9/1/2011	Pumpkin Center	WNV	RTPCR
Kern	KERN0156	1956	Cx. tarsalis	45	8/30/2011	Butttonwillow	WNV	RTPCR
Kern	KERN2002	2034	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2002	2035	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2002	2036	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2002	2037	Cx. quinquefasciatus	19	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2007	2045	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2007	2046	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2010	2032	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2010	2033	Cx. quinquefasciatus	6	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2014	2030	Cx. quinquefasciatus	36	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2016	1992	Cx. quinquefasciatus	41	9/1/2011	Bakersfield	WNV	RTPCR
Kern	KERN2018	1989	Cx. quinquefasciatus	50	9/1/2011	Bakersfield	WNV	RTPCR
Kern	KERN2021	2024	Cx. quinquefasciatus	37	9/1/2011	Wasco	WNV	RTPCR
Kern	KERN2022	2022	Cx. quinquefasciatus	50	9/1/2011	Shafter	WNV	RTPCR
Kern	KERN2022	2023	Cx. quinquefasciatus	13	9/1/2011	Shafter	WNV	RTPCR
Kern	KERN2025	2042	Cx. quinquefasciatus	30	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2028	2043	Cx. quinquefasciatus	50	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN2040	1995	Cx. quinquefasciatus	50	9/1/2011	Arvin	WNV	RTPCR
Kern	KERN2042	1993	Cx. quinquefasciatus	28	9/1/2011	Lamont	WNV	RTPCR
Kern	KERN2051	1986	Cx. quinquefasciatus	30	8/31/2011	Bakersfield	WNV	RTPCR
Kern	KERN0029	1971	Cx. tarsalis	14	8/31/2011	Lamont	WNV	RTPCR
Kern	KERN0029	1972	Cx. quinquefasciatus	45	8/31/2011	Lamont	WNV	RTPCR
Kern	KERN3017	1970	Cx. quinquefasciatus	15	8/31/2011	Bakersfield	WNV	RTPCR
Kern	KERN3026	2000	Cx. tarsalis	50	9/1/2011	Arvin93203	WNV	RTPCR
Kern	KERN3035	2048	Cx. quinquefasciatus	36	9/2/2011	Bakersfield	WNV	RTPCR
Kern	KERN3041	1935	Cx. tarsalis	50	8/30/2011	Bakersfield	WNV	RTPCR
Kern	KERN3041	1936	Cx. tarsalis	30	8/30/2011	Bakersfield	WNV	RTPCR
Kern	KERN3041	1937	Cx. quinquefasciatus	50	8/30/2011	Bakersfield	WNV	RTPCR
Kern	KERN0041	1950	Cx. tarsalis	50	8/30/2011	Lost Hills	WNV	RTPCR
Kern	KERN0043	2019	Cx. quinquefasciatus	50	9/1/2011	Shafter	WNV	RTPCR
Kern	KERN0043	2020	Cx. quinquefasciatus	50	9/1/2011	Shafter	WNV	RTPCR
Kern	KERN0043	2021	Cx. quinquefasciatus	30	9/1/2011	Shafter	WNV	RTPCR
Kern	KERN0083	1997	Cx. tarsalis	50	9/1/2011	Arvin	WNV	RTPCR
Kern	KERN0009	2026	Cx. quinquefasciatus	37	9/2/2011	Bakersfield	WNV	RTPCR
Kings	KNGS3039	623	Cx. tarsalis	50	8/30/2011	Lemoore	WNV	RTPCR
Kings	KNGS3046	639	Cx. pipiens	28	8/30/2011	Hanford	WNV	RTPCR
Kings	KNGS3050	609	Cx. tarsalis	50	8/30/2011	Lemoore	WNV	RTPCR
Kings	KNGS3051	638	Cx. pipiens	50	8/30/2011	Lemoore	WNV	RTPCR
Kings	KNGS3074	621	Cx. pipiens	29	8/30/2011	Armona	WNV	RTPCR
Kings	KNGS3074	622	Cx. tarsalis	50	8/30/2011	Armona	WNV	RTPCR
Kings	KNGS4003	637	Cx. pipiens	26	8/30/2011	Hanford	WNV	RTPCR
Kings	KNGS8007	602	Cx. pipiens	35	8/30/2011	Lemoore	WNV	RTPCR
Lake	LAKE1508	240	Cx. stigmatosoma	33	9/2/2011	Kelseyville	WNV	RTPCR
Los Angeles	GRLA2222	1347	Cx. quinquefasciatus	47	8/30/2011	Rowland Heights	WNV	RTPCR
Los Angeles	GRLA2229	1349	Cx. quinquefasciatus	16	8/30/2011	Rowland Heights	WNV	RTPCR
Los Angeles	GRLA2230	1350	Cx. quinquefasciatus	18	8/30/2011	Diamond Bar	WNV	RTPCR
Los Angeles	GRLA2438	6222	Cx. quinquefasciatus	42	8/30/2011	Chatsworth	WNV	RTPCR
Los Angeles	GRLA2635	6233	Cx. quinquefasciatus	50	8/30/2011	Van Nuys	WNV	RTPCR

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Los Angeles	GRLA2635	6255	Cx. quinquefasciatus	50	9/2/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2635	6256	Cx. quinquefasciatus	40	9/2/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2636	6232	Cx. quinquefasciatus	50	8/30/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2636	6238	Cx. quinquefasciatus	22	8/30/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2636	6254	Cx. quinquefasciatus	42	9/2/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2637	6227	Cx. quinquefasciatus	36	8/30/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2637	6241	Cx. quinquefasciatus	48	9/2/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2637	6242	Cx. quinquefasciatus	15	9/2/2011	Van Nuys	WNV	RTPCR
Los Angeles	GRLA2650	6228	Cx. quinquefasciatus	17	8/30/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2650	6243	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2650	6244	Cx. quinquefasciatus	42	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2651	6229	Cx. quinquefasciatus	50	8/30/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2651	6245	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2651	6246	Cx. quinquefasciatus	33	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2652	6247	Cx. quinquefasciatus	49	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2652	6248	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6235	Cx. quinquefasciatus	50	8/30/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6236	Cx. quinquefasciatus	50	8/30/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6240	Cx. quinquefasciatus	25	8/30/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6249	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6250	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6251	Cx. quinquefasciatus	50	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2655	6257	Cx. stigmatosoma	18	9/2/2011	Encino	WNV	RTPCR
Los Angeles	GRLA2671	6218	Cx. quinquefasciatus	33	8/30/2011	Granada Hills	WNV	RTPCR
Los Angeles	GRLA2881	1352	Cx. quinquefasciatus	33	8/30/2011	Long Beach	WNV	RTPCR
Los Angeles	GRLA2952	1360	Cx. quinquefasciatus	50	8/30/2011	South Whittier	WNV	RTPCR
Los Angeles	GRLA2953	1358	Cx. quinquefasciatus	42	8/30/2011	Santa Fe Springs	WNV	RTPCR
Los Angeles	GRLA2956	1355	Cx. quinquefasciatus	47	8/30/2011	Lakewood	WNV	RTPCR
Los Angeles	GRLA2957	1353	Cx. quinquefasciatus	50	8/30/2011	Hawaiian Gardens	WNV	RTPCR
Los Angeles	GRLA2957	1354	Cx. quinquefasciatus	24	8/30/2011	Hawaiian Gardens	WNV	RTPCR
Los Angeles	GRLA2967	6224	Cx. quinquefasciatus	50	8/30/2011	Chatsworth	WNV	RTPCR
Los Angeles	GRLA2967	6225	Cx. quinquefasciatus	22	8/30/2011	Chatsworth	WNV	RTPCR
Los Angeles	GRLA3045	1363	Cx. quinquefasciatus	50	8/30/2011	Whittier	WNV	RTPCR
Los Angeles	GRLA3045	1364	Cx. quinquefasciatus	12	8/30/2011	Whittier	WNV	RTPCR
Los Angeles	GRLA3052	1344	Cx. quinquefasciatus	50	8/30/2011	La Habra Heights	WNV	RTPCR
Orange	ORCO0170	991	Cx. quinquefasciatus	13	8/31/2011	Anaheim	WNV	RTPCR
Orange	ORCO0198	999	Cx. quinquefasciatus	50	8/31/2011	La Habra	WNV	RTPCR
Orange	ORCO0002	997	Cx. quinquefasciatus	54	8/31/2011	Fullerton	WNV	RTPCR
Orange	ORCO0003	983	Cx. quinquefasciatus	51	8/30/2011	Garden Grove	WNV	RTPCR
Orange	ORCO0003	984	Cx. quinquefasciatus	5	8/30/2011	Garden Grove	WNV	RTPCR
Orange	ORCO0003	1049	Cx. quinquefasciatus	50	9/1/2011	Garden Grove	WNV	RTPCR
Orange	ORCO0050	994	Cx. quinquefasciatus	20	8/31/2011	Buena Park	WNV	RTPCR
Orange	ORCO0050	1001	Cx. quinquefasciatus	50	8/31/2011	Buena Park	WNV	RTPCR
Orange	ORCO0070	1008	Cx. quinquefasciatus	50	8/31/2011	Anaheim	WNV	RTPCR
Orange	ORCO0082	1037	Cx. quinquefasciatus	43	9/1/2011	Cypress	WNV	RTPCR
Orange	ORCO0082	1043	Cx. quinquefasciatus	11	9/1/2011	Cypress	WNV	RTPCR
Riverside	COAV0121	2062	Cx. tarsalis	50	8/30/2011	Mecca	WNV	RTPCR
Riverside	COAV0122	2060	Cx. tarsalis	11	8/30/2011	Mecca	WNV	RTPCR
Riverside	COAV0035	2088	Cx. tarsalis	50	8/31/2011	Mecca	WNV	RTPCR
Riverside	COAV0037	2085	Cx. tarsalis	50	8/31/2011	Mecca	WNV	RTPCR
Riverside	COAV0048	2067	Cx. tarsalis	50	8/30/2011	Mecca	WNV	RTPCR
Riverside	COAV0048	2070	Cx. tarsalis	50	8/30/2011	Mecca	WNV	RTPCR
Riverside	COAV0048	2071	Cx. tarsalis	50	8/30/2011	Mecca	WNV	RTPCR
Riverside	COAV0610	2086	Cx. tarsalis	48	8/31/2011		WNV	RTPCR
Sacramento	SAYO204023	4912	Cx. pipiens	16	9/1/2011	Citrus Heights	WNV	RTPCR
Sacramento	SAYO204047	4903	Cx. pipiens	35	9/1/2011	Orangevale	WNV	RTPCR
Sacramento	SAYO205011	4934	Cx. pipiens	38	9/1/2011	Folsom	WNV	RTPCR
Sacramento	SAYO212014	5045	Cx. tarsalis	2	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO213027	4283	Cx. tarsalis	8	8/25/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO213027	4284	Cx. tarsalis	1	8/25/2011	Sacramento	WNV	RTPCR

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Sacramento	SAYO222001	5056	Cx. pipiens	3	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO223019	5092	Cx. tarsalis	5	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO223042	4698	Cx. pipiens	6	8/31/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232005	4298	Cx. tarsalis	37	8/25/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232005	4299	Cx. erythrothorax	25	8/25/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232005	4879	Cx. tarsalis	27	9/1/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232005	4880	Cx. tarsalis	34	9/1/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232005	4881	Cx. pipiens	5	9/1/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO232012	4975	Cx. pipiens	19	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233003	4982	Cx. tarsalis	19	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233006	5012	Cx. pipiens	3	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233006	5013	Cx. pipiens	14	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233009	4963	Cx. tarsalis	45	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233012	4798	Cx. tarsalis	3	9/1/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233012	4799	Cx. pipiens	18	9/1/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233012	4800	Cx. pipiens	3	9/1/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233018	4997	Cx. pipiens	31	9/7/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO233019	4967	Cx. tarsalis	17	9/7/2011	Florin	WNV	RTPCR
Sacramento	SAYO233021	5016	Cx. tarsalis	30	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233021	5017	Cx. pipiens	50	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233021	5018	Cx. pipiens	9	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233025	5002	Cx. tarsalis	7	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233034	5020	Cx. tarsalis	2	9/7/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO233038	4952	Cx. tarsalis	2	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233038	4953	Cx. pipiens	5	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233040	5005	Cx. tarsalis	5	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233040	5007	Cx. pipiens	32	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233043	4977	Cx. pipiens	16	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233043	4978	Cx. pipiens	2	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233064	4950	Cx. pipiens	29	9/7/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO233067	5010	Cx. pipiens	5	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233069	4801	Cx. tarsalis	4	9/1/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233069	4802	Cx. pipiens	19	9/1/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233069	4961	Cx. pipiens	8	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO233069	4962	Cx. pipiens	2	9/7/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO234003	4815	Cx. tarsalis	5	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO234003	4817	Cx. pipiens	3	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO234005	5042	Cx. tarsalis	47	9/8/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO234008	4851	Cx. tarsalis	3	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO234011	5038	Cx. tarsalis	50	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO234011	5039	Cx. tarsalis	8	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO234011	5041	Cx. pipiens	2	9/8/2011	Sacramento	WNV	RTPCR
Sacramento	SAYO234015	4691	Cx. tarsalis	50	8/31/2011	Elk Grove	WNV	RTPCR
Sacramento	SAYO235003	4865	Cx. tarsalis	52	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO235003	4866	Cx. pipiens	15	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO235003	4867	Cx. pipiens	11	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO235013	4704	Cx. tarsalis	14	8/31/2011	Wilton	WNV	RTPCR
Sacramento	SAYO235013	4705	Cx. pipiens	5	8/31/2011	Wilton	WNV	RTPCR
Sacramento	SAYO244008	4813	Cx. tarsalis	39	9/1/2011	Wilton	WNV	RTPCR
Sacramento	SAYO245002	5070	Cx. tarsalis	50	9/8/2011	Wilton	WNV	RTPCR
Sacramento	SAYO245002	5072	Cx. pipiens	26	9/8/2011	Wilton	WNV	RTPCR
San Bernardino	SANB0002	603	Cx. tarsalis	50	8/17/2011	Redlands	WNV	RTPCR
San Bernardino	SANB0002	606	Cx. quinquefasciatus	50	8/17/2011	Redlands	WNV	RTPCR
San Bernardino	SANB0002	620	Cx. quinquefasciatus	14	8/25/2011	Redlands	WNV	RTPCR
San Bernardino	SANB0003	674	Cx. tarsalis	50	8/31/2011	Colton	WNV	RTPCR
San Bernardino	SANB0004	629	Cx. tarsalis	50	8/24/2011	San Bernadino	WNV	RTPCR
San Bernardino	SANB0004	630	Cx. tarsalis	28	8/24/2011	San Bernadino	WNV	RTPCR
San Bernardino	SANB0004	684	Cx. tarsalis	50	8/31/2011	San Bernadino	WNV	RTPCR
San Bernardino	SANB0007	601	Cx. tarsalis	27	8/17/2011	Fontana	WNV	RTPCR
San Bernardino	SANB0007	602	Cx. quinquefasciatus	14	8/17/2011	Fontana	WNV	RTPCR
San Bernardino	SANB0007	680	Cx. tarsalis	9	8/31/2011	Fontana	WNV	RTPCR
San Bernardino	SANB0011	580	Cx. quinquefasciatus	37	8/3/2011	Rialto	WNV	RTPCR
San Bernardino	SANB0011	595	Cx. tarsalis	50	8/10/2011	Rialto	WNV	RTPCR

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San Bernardino	SANB0011	642	Cx. tarsalis	25	8/24/2011	Rialto	WNV	RTPCR
San Bernardino	SANB0026	591	Cx. erythrothorax	20	8/10/2011	San Bernardino	WNV	RTPCR
San Joaquin	SJCM8010	786	Cx. pipiens	40	9/7/2011	Ripon	WNV	RTPCR
San Joaquin	SJCM8029	709	Cx. tarsalis	11	9/1/2011	Farmington	WNV	RTPCR
San Joaquin	SJCM8037	721	Cx. pipiens	8	9/1/2011	Lathrop	WNV	RTPCR
San Joaquin	SJCM8056	820	Cx. pipiens	50	9/7/2011	Manteca	WNV	RTPCR
San Joaquin	SJCM8083	805	Cx. pipiens	23	9/7/2011	Escalon	WNV	RTPCR
San Joaquin	SJCM8084	754	Cx. pipiens	17	9/7/2011	Stockton	WNV	RTPCR
San Joaquin	SJCM8100	801	Cx. tarsalis	21	9/7/2011	Tracy	WNV	RTPCR
San Joaquin	SJCM8109	759	Cx. pipiens	45	9/7/2011	Escalon	WNV	RTPCR
San Joaquin	SJCM8161	799	Cx. pipiens	50	9/7/2011	Ripon	WNV	RTPCR
Santa Clara	STCL1740	4012	Cx. tarsalis	7	9/7/2011	San Jose	WNV	PCR
Santa Clara	STCL1740	4013	Cx. tarsalis	21	9/7/2011	San Jose	WNV	PCR
Santa Clara	STCL2508	4018	Cx. tarsalis	25	9/8/2011	San Jose	WNV	PCR
Shasta	SHAS0145	318	Cx. tarsalis	26	9/2/2011		WNV	RTPCR
Stanislaus	EAST1023	11131	Cx. pipiens	31	9/7/2011	Modesto	WNV	RAMP
Stanislaus	EAST1044	11143	Cx. pipiens	34	9/8/2011	Empire	WNV	RAMP
Stanislaus	EAST1060	11133	Cx. pipiens	26	9/7/2011	Salida	WNV	RAMP
Stanislaus	TRLK0421	641	Cx. pipiens	39	9/7/2011	Hughson	WNV	RTPCR
Stanislaus	TRLK0432	669	Cx. pipiens	50	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0432	670	Cx. pipiens	50	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0432	673	Cx. tarsalis	34	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0435	659	Cx. pipiens	32	9/7/2011	Ceres	WNV	RTPCR
Stanislaus	TRLK0516	687	Cx. pipiens	50	9/7/2011	Denair	WNV	RTPCR
Stanislaus	TRLK0516	688	Cx. pipiens	50	9/7/2011	Denair	WNV	RTPCR
Stanislaus	TRLK0531	663	Cx. pipiens	30	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0533	654	Cx. tarsalis	50	9/7/2011	Hughson	WNV	RTPCR
Stanislaus	TRLK0536	668	Cx. pipiens	50	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0613	642	Cx. tarsalis	50	9/7/2011	Hickman	WNV	RTPCR
Stanislaus	TRLK0613	645	Cx. pipiens	50	9/7/2011	Hickman	WNV	RTPCR
Stanislaus	TRLK0613	648	Cx. pipiens	50	9/7/2011	Hickman	WNV	RTPCR
Stanislaus	TRLK0625	674	Cx. pipiens	50	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0625	680	Cx. pipiens	50	9/7/2011	Turlock	WNV	RTPCR
Stanislaus	TRLK0711	637	Cx. pipiens	50	9/7/2011	Hughson	WNV	RTPCR
Sutter	SUYA0014	269	Cx. pipiens	15	9/7/2011	Sutter	WNV	RTPCR
Sutter	SUYA0044	256	Cx. tarsalis	50	9/6/2011	Pleasant Grove	WNV	RTPCR
Sutter	SUYA0044	257	Cx. tarsalis	50	9/6/2011	Pleasant Grove	WNV	RTPCR
Tulare	DLTA8531	336	Cx. quinquefasciatus	49	9/7/2011	Visalia	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05	Band 06
Butte	BUCO0002	Oroville	8/29/2011	WNV	1119	1121				
Butte	BUCO0004	Gridley	8/29/2011	WNV	1136	1141				
Butte	BUCO0005	Honcut	8/29/2011	WNV	1150					
Kern	DLNO0060	Delano	9/1/2011	WNV	1427	1428	1429	1430	1432	1435
Kern	KERN0101	Lost Hills	8/29/2011	WNV	1583	1585				
Kern	KERN0102	Buttonwillow	8/29/2011	WNV	1592	1593	1597	1598		
Kern	KERN0112	Wasco	8/29/2011	WNV	1601	1602	1606	1610		
Kern	KERN0113	Bakersfield	8/29/2011	WNV	1577	1579	1580			
Kern	KERN0114	Bakersfield	8/29/2011	WNV	1668	1681				
Kern	KERN0115	Bakersfield	8/29/2011	WNV	1621	1622	1623	1625	1628	
Kern	KERN0117	Bakersfield	8/29/2011	WNV	1677					
Los Angeles	LACW1026	Beverly Hills	8/16/2011	WNV	1880					
Merced	MERC0502	Hilmar	8/30/2011	WNV	2014	2017				
San Bernardino	WVAL0002	Chino	8/26/2011	WNV	3269					

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TEST PROTOCOLS

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing or confirmation.

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

Dead Birds and Tree Squirrels:

Dead birds and tree squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

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 (WEEV), and St. Louis encephalitis (SLEV) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for WEEV, SLEV, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation 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.
