

California Arbovirus Surveillance Bulletin #31

Week 38 Friday, September 21, 2012



Human Cases

A total of 33 new cases of West Nile virus (WNV) were reported this week from the following 14 counties: Colusa (1), Contra Costa (1), Fresno (1), Glenn (3), Los Angeles (9), Orange (1), Riverside (4), Sacramento (1), San Bernardino (24), San Joaquin (2), Stanislaus (1), Sutter (1), Yolo (1), and Yuba (3). These are the first human cases reported from Yuba County this year. As of September 20, 2012, a total of 147 human cases of WNV illness have been reported in 24 counties. Of the 147 cases, 89 (61%) had neuroinvasive illness. The median age of the 147 individuals is 56 years (range: 2-93 years); 85 (58%) are male. Dates of symptom onset for all cases ranged from May 23-September 12, 2012. Six WNV-related fatalities have been reported to date in Fresno (1), Kern (1), Merced (1), Placer (1), and Sacramento (2) counties. A total of 28 WNV-positive blood donors have been reported this year; 7 individuals developed symptoms and were reclassified as cases.

At this time last year, 67 WNV cases had been reported from 16 counties.

National Comments: As of September 18, 2012, 3,142 cases had been reported nationwide from 45 states and the District of Columbia (DC). This is the highest number of cases reported through the third week of September since 2003. Two thirds of the cases have been reported from Texas, Mississippi, Michigan, South Dakota, Louisiana, Oklahoma, and California. Of the 3,142 cases, 1630 (52%) were classified as neuroinvasive disease, and 134 (4%) died.

Horses

Six new equine cases of WNV were reported this week from Calaveras (1), Kern (2), and Shasta (3) counties; this is the first detection of WNV activity in Calaveras County this year. In addition, an alpaca from Butte County tested positive for WNV and was euthanized as a result of her illness. In 2012, 17 horses from 10 counties have tested positive for WNV; five died or were euthanized as a result of their illness. At this time last year, 8 equine cases of WNV from 6 counties had been reported.

Dead Birds & Squirrels

A total of 85 WNV positive dead birds were reported this week from 20 counties: Alameda (3), Butte (9), Contra Costa (5), Fresno (1), Los Angeles (22), Merced (1), Nevada (1), Orange (4), Sacramento (6), San Bernardino (6), San Francisco (1), San Luis Obispo (1), San Mateo (1), Shasta (2), Solano (7), Sonoma (1), Stanislaus (4), Sutter (3), Ventura (4), and Yolo (3). This is the first detection of WNV activity in Nevada, San Francisco, and San Luis Obispo Counties this year. One tree squirrel tested positive for WNV in Santa Clara County. An additional 20 dead birds and 1 tree squirrel tested positive for chronic WNV infection (see Dead Bird Table for details). In 2012, 1,290 dead birds and 9 squirrels have tested positive for recent WNV infection from 36 and 5 counties, respectively. At this time last year, 463 dead birds from 24 counties and 3 tree squirrels from 3 counties had tested positive for WNV.

Mosquito Pools

A total of 135 WNV positive mosquito pools were reported this week from 18 counties: Contra Costa (2), Fresno (2), Kern (41), Kings (7), Lake (3), Los Angeles (28), Madera (2), Orange (4), Riverside (3), Sacramento (7), San Bernardino (3), San Joaquin (8), Shasta (1), Sonoma (1), Stanislaus (12), Sutter (1), Tulare (5), and Yolo (5). In 2012, 2,417 mosquito pools from 28 counties have tested positive for WNV. At this time last year, 1,806 mosquito pools had tested positive for WNV from 24 counties.

Sentinel Chickens

A total of 68 WNV seroconversions were reported this week from 35 flocks in 16 counties: Butte (5), Colusa (2), Contra Costa (2), Glenn (3), Kern (7), Lake (1), Los Angeles (17), Placer (3), Sacramento (12), San Bernardino (1), Shasta (2), Sonoma (1), Sutter (7), Tulare (3), Yolo (1), and Yuba (1); these are the first WNV positive chickens detected in Lake and Sonoma County this year. In 2012, 389 WNV antibody-positive chickens have been detected among 87 flocks in 20 counties. At this time last year, 217 WNV positive chickens had been detected from 15 counties.

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2011 & 2012 YTD West Nile Virus Comparisons		
	2011	2012
Total # Dead Bird Reports	8,056	16,555
# Positive Counties	32	35
# Human Cases	67	147
# Horse Cases	8	17
# Positive Dead Birds / # Tested	463 / 1,905	1,290 / 3,367
# Positive Mosquito Pools / # Tested	1,806 / 26,970	2,417 / 26,536
# Seroconversions / # Tested	217 / 17,276	389 / 18,574
# Positive Squirrels / # Tested	3 / 68	9 / 121

YTD WNV Activity by Element and County, 2012						
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels*
Alameda			12			1
Butte	6	1	40	24	41	1
Calaveras		1				
Colusa	2		5		6	
Contra Costa	2		46	19	6	
El Dorado			4			
Fresno	14	2	19	126		
Glenn	5	1	15	4	7	
Imperial	1			4	8	
Kern	15	2	14	499	50	
Kings			1	87		
Lake			5	18	1	
Los Angeles	21		135	196	72	4
Madera	1		1	12		
Mendocino			1			
Merced	7	1	37	3		
Napa				1		
Nevada			1			
Orange	6		48	40		
Placer	5		50	107	8	
Riverside	7		3	119	47	
Sacramento	9	2	461	454	36	
San Bernardino	7		25	51	32	
San Francisco			1			
San Joaquin	6	2	50	141		
San Luis Obispo			1			
San Mateo			4			
Santa Clara			15	3		2
Santa Cruz			1			
Shasta		3	14	14	3	1
Solano	1		27	3	1	
Sonoma			3	3	1	
Stanislaus	13	1	41	179	8	
Sutter	6		22	19	36	
Tehama	1		4			
Tulare	3		46	127	9	
Ventura	2		31	2		
Yolo	4	1	98	147	4	
Yuba	3		9	15	13	
Totals	147	17	1,290	2,417	389	9

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TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	33	0	0	0	0	0
	YTD	147	0	0	0	0	0
Horse Cases	Week	6	0	0	0	0	0
	YTD	17	0	0	0	0	0

Dead Birds, Squirrels, & Rabbits

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	145	85
	YTD	3,367	1,290
Squirrels	Week	12	1
	YTD	121	9

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	373	68	0	0
	YTD	18,574	389	0	0
Mosquito Pools	Week	1,211	135	0	0
	YTD	26,536	2,417	0	0

POSITIVES: WEEK 38

Humans

WNV Cases							
ID	Report Date	County	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
12-0115	09/06/12	LOS ANGELES	29	F	WNF^	09/05/12	NO
12-0116	09/13/12	LOS ANGELES	52	M	WNF	08/09/12	NO
12-0117	09/13/12	LOS ANGELES	47	M	WNND^	08/29/12	NO
12-0118	09/13/12	LOS ANGELES	65	M	WNND	08/29/12	NO
12-0119	09/13/12	LOS ANGELES	42	M	WNND	08/23/12	NO
12-0120	09/13/12	LOS ANGELES	39	M	WNND	08/26/12	NO
12-0121	09/13/12	LOS ANGELES	62	M	WNND	08/30/12	NO
12-0122	09/13/12	LOS ANGELES	49	F	WNF	08/06/12	NO
12-0123	09/13/12	GLENN	>18	F	WNF	N/A	NO
12-0124	09/13/12	CONTRA COSTA	>18	F	WNND	08/03/12	NO
12-0125	09/13/12	GLENN	>18	F	WNND	N/A	NO
12-0126	09/13/12	SACRAMENTO	60	M	WNND	08/20/12	NO
12-0127	09/17/12	RIVERSIDE	22	F	WNND	08/22/12	NO

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12-0128	09/17/12	RIVERSIDE	73	M	WNND	08/23/12	NO
12-0129	09/17/12	SAN JOAQUIN	72	F	WNF	08/25/12	NO
12-0130	09/17/12	SAN JOAQUIN	11	F	WNND	08/26/12	NO
12-0131	09/18/12	LONG BEACH CITY	18	M	WNND	08/15/12	NO
12-0132	09/18/12	YUBA	N/A	F	WNND	N/A	NO
12-0133	09/18/12	YUBA	N/A	M	WNND	N/A	NO
12-0134	09/18/12	YUBA	N/A	F	WNF	N/A	NO
12-0135	09/18/12	FRESNO	56	F	WNF	09/11/12	NO
12-0136	09/18/12	YOLO	>18	F	WNF	09/05/12	NO
12-0137	09/18/12	GLENN	>18	M	WNF	N/A	NO
12-0138	09/18/12	STANISLAUS	63	F	WNND	09/05/12	NO
12-0139	09/18/12	SAN BERNARDINO	54	F	WNND	08/25/12	NO
12-0140	09/18/12	SAN BERNARDINO	33	M	WNND	08/20/12	NO
12-0141	09/18/12	SAN BERNARDINO	53	F	WNF	08/20/12	NO
12-0142	09/18/12	RIVERSIDE	16	F	WNND	08/17/12	NO
12-0143	09/19/12	COLUSA	>18	N/A	N/A	N/A	NO
12-0144	09/19/12	ORANGE	56	M	WNND	Week 36	NO
12-0145	09/17/12	SUTTER	>18	M	WNF	N/A	NO
12-0146	09/19/12	SAN BERNARDINO	52	F	WNF	08/06/12	NO
12-0147	09/19/12	RIVERSIDE	8	F	WNF	09/12/12	NO
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
ID	Report Date	County	Age	Sex			
BD12-0022	09/07/12	SACRAMENTO	63	M			
BD12-0023	09/07/12	ORANGE	53	F			
BD12-0024	09/18/12	MERCED	>18	F			

Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Alameda	Alameda MAD	Fremont	94536	Western Scrub-Jay	9/12/2012	WNV	Recent	RT-PCR
Alameda	Alameda MAD	Newark	94560	American Crow	9/5/2012	WNV	Recent	RT-PCR
Alameda	Alameda MAD	San Leandro	94577	Dark-eyed Junco	9/10/2012	WNV	Chronic	RT-PCR
Alameda	Alameda MAD	Fremont	94536	American Crow	9/11/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Chico	95926	Western Scrub-Jay	9/4/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Chico	95926	Western Scrub-Jay	9/6/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Chico	95928	Yellow-billed Magpie	8/31/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Durham	95938	Western Scrub-Jay	9/5/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Gridley	95948	American Crow	9/4/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Oroville	95966	Red-tailed Hawk	9/4/2012	WNV	Recent	RT-PCR

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Butte	Butte MVCD	Paradise	95969	Red-shouldered Hawk	9/10/2012	WNV	Recent	RT-PCR
Butte	Butte MVCD	Chico	95973	Western Scrub-Jay	9/4/2012	WNV	Recent	RT-PCR
Butte	Oroville MAD	Oroville	95966	Western Scrub-Jay	9/4/2012	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Knightsen	94513	American Crow	9/18/2012	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Brentwood	94513	American Crow	9/20/2012	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Concord	94521	American Crow	9/10/2012	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Concord	94521	Western Scrub-Jay	9/19/2012	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Knightsen	94548	American Crow	9/11/2012	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Lafayette	94549	Western Scrub-Jay	9/4/2012	WNV	Chronic	RT-PCR
Fresno	Fresno MVCD	Fresno	93722	American Crow	9/7/2012	WNV	Recent	RT-PCR
Los Angeles	Antelope Vall. MVCD	Lancaster	93534	House Finch	9/6/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - SFS	San Marino	91108	American Crow	9/5/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - Sylmar	Granada Hills	91344	American Crow	9/6/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - Sylmar	Van Nuys	91401	American Goldfinch	9/6/2012	WNV	Chronic	RT-PCR
Los Angeles	LA VCD - Sylmar	Van Nuys	91411	American Crow	9/10/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - Sylmar	Sherman Oaks	91423	American Crow	9/5/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - Sylmar	Sherman Oaks	91423	American Crow	9/9/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Los Angeles	90035	American Crow	9/6/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Culver City	90282	American Crow	9/11/2012	WNV	Chronic	RT-PCR
Los Angeles	LA Co Vet	Santa Monica	90403	American Crow	9/6/2012	WNV	Chronic	RT-PCR
Los Angeles	LA Co Vet	Lakewood	90713	Western Scrub-Jay	9/4/2012	WNV	Chronic	RT-PCR
Los Angeles	LA Co Vet	Canoga Park	91304	American Crow	9/11/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Valencia	91355	American Crow	9/7/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Sherman Oaks	91423	American Crow	8/29/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	N. Hollywood	91605	Canary	9/10/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Lancaster	93534	American Crow	9/7/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Los Angeles	90024	American Bittern	9/5/2012	WNV	Chronic	RT-PCR
Los Angeles	LA West VCD	Los Angeles	90036	American Crow	9/5/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Westchester	90045	American Crow	9/6/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Los Angeles	90066	American Crow	9/10/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Culver City	90232	American Crow	9/11/2012	WNV	Chronic	RT-PCR
Los Angeles	LA West VCD	Culver City	90232	American Crow	9/6/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Culver City	90232	American Crow	9/7/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Playa Del Rey	90293	American Crow	9/10/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Santa Monica	90403	American Crow	9/5/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Santa Monica	90405	American Crow	9/5/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Santa Monica	90405	American Crow	9/10/2012	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Torrance	90503	House Finch	9/11/2012	WNV	Recent	RT-PCR
Los Angeles	San Gabriel MVCD	Claremont	91711	Lesser Goldfinch	9/5/2012	WNV	Chronic	RT-PCR
Mariposa	Mariposa HD	Coulterville	95311	Red-shouldered Hawk	9/4/2012	WNV	Chronic	RT-PCR
Merced	Merced Co MAD	Merced	95340	American Crow	9/6/2012	WNV	Recent	RT-PCR
Nevada	Nevada Co EH	Grass Valley	95949	House Finch	9/12/2012	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Buena Park	90620	American Crow	9/11/2012	WNV	Recent	RT-PCR
Orange	Orange Co VCD	La Habra	90631	House Finch	9/11/2012	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Anaheim	92802	American Crow	9/10/2012	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Garden Grove	92843	American Crow	9/11/2012	WNV	Recent	RT-PCR
Riverside	Coachella Vall. MVCD	Indio	92201	Peregrine Falcon	9/6/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Rancho Cordova	95670	House Finch	9/8/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Rancho Cordova	95670	Western Scrub-Jay	9/11/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Gold River	95670	Western Scrub-Jay	9/12/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sloughhouse	95683	California Quail	9/6/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95827	European Starling	9/5/2012	WNV	Recent	RT-PCR

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Sacramento	Sac-Yolo MVCD	Sacramento	95833	House Finch	9/2/2012	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	Phelan	92371	Owl	9/4/2012	WNV	Recent	RT-PCR
San Bernardino	San Bernardino VCP	San Bernardino	92410	American Crow	9/4/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Chino Hills	91709	American Crow	8/31/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Chino	91710	American Crow	9/6/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Chino	91710	American Crow	9/9/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91730	Lovebird	9/4/2012	WNV	Chronic	RT-PCR
San Bernardino	West Valley MVCD	Montclair	91763	American Crow	9/5/2012	WNV	Recent	RT-PCR
San Francisco	SF EHD	San Francisco	94127	House Finch	9/11/2012	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Lodi	95240	Yellow-billed Magpie	8/23/2012	WNV	Chronic	RT-PCR
San Luis Obispo	SLO Animal Services	Atascadero	93423	Wild Turkey	9/10/2012	WNV	Recent	RT-PCR
San Luis Obispo	SLO Animal Services	Paso Robles	93446	Red-tailed Hawk	9/5/2012	WNV	Chronic	RT-PCR
San Mateo	San Mateo MAD	El Granada	94018	Lesser Goldfinch	9/6/2012	WNV	Chronic	RT-PCR
San Mateo	San Mateo MAD	Foster City	94404	House Sparrow	9/5/2012	WNV	Chronic	RT-PCR
San Mateo	San Mateo MAD	Foster City	94404	Double-Crested Cormorant	8/28/2012	WNV	Recent	RT-PCR
Santa Barbara	SB MVMD	Santa Barbara	93101	Western Scrub-Jay	9/9/2012	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara	Campbell	95008	E. Gray Squirrel	9/7/2012	WNV	Positive	RT-PCR
Santa Clara	Santa Clara	Campbell	95008	E. Gray Squirrel	9/7/2012	WNV	Chronic	RT-PCR
Shasta	Shasta MVCD	Redding	96003	Western Scrub-Jay	9/12/2012	WNV	Recent	RT-PCR
Shasta	Shasta MVCD	Palo Cedro	96073	American Crow	9/20/2012	WNV	Recent	RAMP
Solano	Solano MAD	Fairfield	94533	American Crow	9/12/2012	WNV	Recent	RAMP
Solano	Solano MAD	Fairfield	94533	American Crow	9/12/2012	WNV	Recent	RAMP
Solano	Solano MAD	Suisun City	94585	American Crow	9/8/2012	WNV	Recent	RAMP
Solano	Solano MAD	Vallejo	94591	American Crow	8/27/2012	WNV	Recent	RAMP
Solano	Solano MAD	Vacaville	95687	American Crow	9/5/2012	WNV	Recent	RAMP
Solano	Solano MAD	Vacaville	95687	American Crow	9/17/2012	WNV	Recent	RAMP
Solano	Solano MAD	Vacaville	95687	American Crow	9/18/2012	WNV	Recent	RAMP
Sonoma	Marin-Sonoma MVCD	Sebastopol	95472	Western Scrub-Jay	9/6/2012	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Modesto	95355	Lesser Goldfinch	9/11/2012	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Oakdale	95361	Western Scrub-Jay	9/10/2012	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Newman	95360	American Crow	9/6/2012	WNV	Chronic	RT-PCR
Stanislaus	Turlock MAD	Modesto	95358	Lesser Goldfinch	9/7/2012	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Modesto	95358	Anna's Hummingbird	9/11/2012	WNV	Recent	RT-PCR
Sutter	Sutter-Yuba MVCD	Yuba City	95991	American Crow	9/6/2012	WNV	Recent	RT-PCR
Sutter	Sutter-Yuba MVCD	Yuba City	95993	Western Scrub-Jay	9/6/2012	WNV	Recent	RT-PCR
Sutter	Sutter-Yuba MVCD	Yuba City	95993	House Finch	9/10/2012	WNV	Recent	RT-PCR
Ventura	Moorpark VCD	Moorpark	93021	American Crow	9/10/2012	WNV	Recent	RT-PCR
Ventura	Ventura EHD	Oak Park	91377	House Finch	9/12/2012	WNV	Recent	RT-PCR
Ventura	Ventura EHD	Simi Valley	93063	American Crow	9/8/2012	WNV	Chronic	RT-PCR
Ventura	Ventura EHD	Simi Valley	93063	American Crow	9/8/2012	WNV	Recent	RT-PCR
Ventura	Ventura EHD	Simi Valley	93063	California Towhee	9/11/2012	WNV	Recent	RT-PCR
Ventura	Ventura EHD	Simi Valley	93065	Mourning Dove	9/10/2012	WNV	Chronic	RT-PCR
Yolo	Sac-Yolo MVCD	Clarksburg	95612	Yellow-billed Magpie	9/12/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Woodland	95776	Western Scrub-Jay	8/27/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Dunnigan	95937	European Starling	9/12/2012	WNV	Recent	RT-PCR

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Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Contra Costa	CNTR4724	399	Brentwood	Culex pipiens	17	CO2	9/19/2012	WNV	RAMP
Contra Costa	CNTR4724	400	Brentwood	Culex tarsalis	22	CO2	9/19/2012	WNV	RAMP
Fresno	CNSL1022	492	Friant	Cx. quinquefasciatus	15	GRVD	9/18/2012	WNV	RTPCR
Fresno	FRWS4110	276	Mendota	Culex tarsalis	50	CO2	9/18/2012	WNV	RTPCR
Kern	KERN1102	2181	Wasco	Cx. quinquefasciatus	20	CO2	9/12/2012	WNV	RTPCR
Kern	KERN1102	2182	Wasco	Culex tarsalis	21	CO2	9/12/2012	WNV	RTPCR
Kern	KERN111	2188	Arvin	Culex tarsalis	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN111	2189	Arvin	Culex tarsalis	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN1137	2228	Bakersfield	Culex tarsalis	22	CO2	9/13/2012	WNV	RTPCR
Kern	KERN115	2087	Bakersfield	Cx. quinquefasciatus	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN115	2089	Bakersfield	Culex tarsalis	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN1156	2166	Arvin	Cx. quinquefasciatus	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN121	2203	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN2005	2085	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/10/2012	WNV	RTPCR
Kern	KERN2010	2196	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN2020	2197	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN2021	2151	Wasco	Cx. quinquefasciatus	50	GRVD	9/12/2012	WNV	RTPCR
Kern	KERN2022	2154	Shafter	Cx. quinquefasciatus	50	GRVD	9/12/2012	WNV	RTPCR
Kern	KERN2024	2132	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Kern	KERN2025	2212	Bakersfield	Cx. quinquefasciatus	28	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN2030	2134	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Kern	KERN2031	2208	Bakersfield	Cx. quinquefasciatus	50	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN2031	2209	Bakersfield	Cx. quinquefasciatus	19	GRVD	9/13/2012	WNV	RTPCR
Kern	KERN28	2163	Bakersfield	Cx. quinquefasciatus	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN29	2162	Lamont	Culex tarsalis	42	CO2	9/12/2012	WNV	RTPCR
Kern	KERN3014	2178	Bakersfield	Cx. quinquefasciatus	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN3014	2179	Bakersfield	Culex tarsalis	30	CO2	9/12/2012	WNV	RTPCR
Kern	KERN3022	2173	Wasco	Cx. quinquefasciatus	47	CO2	9/12/2012	WNV	RTPCR
Kern	KERN3024	2099	Bakersfield	Cx. quinquefasciatus	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN3024	2100	Bakersfield	Culex tarsalis	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN3027	2094	Arvin	Cx. quinquefasciatus	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN3029	2141	Buttonwillow	Cx. quinquefasciatus	50	CO2	9/11/2012	WNV	RTPCR
Kern	KERN3029	2142	Buttonwillow	Cx. quinquefasciatus	50	CO2	9/11/2012	WNV	RTPCR
Kern	KERN3030	2183	Shafter	Cx. quinquefasciatus	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN3032	2115	Bakersfield	Cx. quinquefasciatus	50	CO2	9/10/2012	WNV	RTPCR
Kern	KERN3035	2217	Bakersfield	Cx. quinquefasciatus	50	CO2	9/13/2012	WNV	RTPCR
Kern	KERN3041	2222	Bakersfield	Cx. quinquefasciatus	50	CO2	9/13/2012	WNV	RTPCR
Kern	KERN3041	2224	Bakersfield	Culex tarsalis	50	CO2	9/13/2012	WNV	RTPCR
Kern	KERN32	2112	Arvin	Cx. quinquefasciatus	39	CO2	9/10/2012	WNV	RTPCR
Kern	KERN36	2107	Bakersfield	Culex tarsalis	50	CO2	9/10/2012	WNV	RTPCR

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Kern	KERN60	2122	Bakersfield	Cx. quinquefasciatus	29	CO2	9/10/2012	WNV	RTPCR
Kern	KERN83	2169	Arvin	Cx. quinquefasciatus	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN83	2170	Arvin	Culex tarsalis	50	CO2	9/12/2012	WNV	RTPCR
Kern	KERN83	2171	Arvin	Culex tarsalis	50	CO2	9/12/2012	WNV	RTPCR
Kern	WEST6209	132	Maricopa	Cx. quinquefasciatus	50	GRVD	9/19/2012	WNV	RTPCR
Kings	KNGS3018	578	Lemoore	Culex tarsalis	50	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS3018	579	Lemoore	Culex pipiens	50	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS3027	556	Lemoore	Culex erythrothorax	40	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS3033	561	Hanford	Culex pipiens	37	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS3043	563	Lemoore	Culex tarsalis	10	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS3074	560	Armona	Culex pipiens	29	CO2	9/17/2012	WNV	RTPCR
Kings	KNGS4003	545	Hanford	Culex pipiens	45	CO2	9/17/2012	WNV	RTPCR
Lake	LAKE234	387	Clearlake Oaks	Culex tarsalis	50	CO2	9/13/2012	WNV	RTPCR
Lake	LAKE234	390	Clearlake Oaks	Culex tarsalis	48	CO2	9/13/2012	WNV	RTPCR
Lake	LAKE84	405		Culex tarsalis	30	CO2	9/19/2012	WNV	RTPCR
Los Angeles	GRLA2166	1076	Montebello	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2182	1072	Pico Rivera	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2182	1073	Pico Rivera	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2194	1078	South El Monte	Cx. quinquefasciatus	48	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2194	1079	South El Monte	Cx. quinquefasciatus	12	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2274	1052	Lakewood	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2365	1049	Pico Rivera	Cx. quinquefasciatus	24	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2463	6019	Los Angeles	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2503	6007	Los Angeles	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2503	6008	Los Angeles	Cx. quinquefasciatus	35	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2509	6010	Los Angeles	Cx. quinquefasciatus	16	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2511	6011	Los Angeles	Cx. quinquefasciatus	45	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2511	6012	Los Angeles	Cx. quinquefasciatus	12	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2522	6016	Los Angeles	Cx. quinquefasciatus	18	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2527	6017	Los Angeles	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2527	6018	Los Angeles	Cx. quinquefasciatus	20	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2552	6013	Glendale	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2552	6014	Glendale	Cx. quinquefasciatus	21	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2580	6021	Sherman Oaks	Cx. quinquefasciatus	28	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2614	6041	Newhall	Cx. quinquefasciatus	45	GRVD	9/12/2012	WNV	RTPCR
Los Angeles	GRLA2724	6026	Canoga Park	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA2889	1091	Lakewood	Cx. quinquefasciatus	49	GRVD	9/13/2012	WNV	RTPCR
Los Angeles	GRLA2891	1094	Hawaiian Gardens	Cx. quinquefasciatus	47	GRVD	9/13/2012	WNV	RTPCR
Los Angeles	GRLA3009	6038	Santa Clarita	Cx. quinquefasciatus	27	GRVD	9/12/2012	WNV	RTPCR
Los Angeles	GRLA3048	1061	Pico Rivera	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA3048	1062	Pico Rivera	Cx. quinquefasciatus	28	GRVD	9/11/2012	WNV	RTPCR
Los Angeles	GRLA3127	6035	Castaic	Cx. quinquefasciatus	35	GRVD	9/12/2012	WNV	RTPCR
Los Angeles	LACW1049	305	Inglewood	Cx. quinquefasciatus	50	GRVD	9/11/2012	WNV	RTPCR
Madera	MADR1076	114	La Vina	Cx. quinquefasciatus	6	CO2	9/12/2012	WNV	RTPCR

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Madera	MADR0011	119		Cx. quinquefasciatus	60	CO2	9/14/2012	WNV	RTPCR
Orange	ORCO198	1129	La Habra	Cx. quinquefasciatus	41	GRVD	9/11/2012	WNV	RTPCR
Orange	ORCO2	1131	Fullerton	Cx. quinquefasciatus	24	GRVD	9/11/2012	WNV	RTPCR
Orange	ORCO202	1137	Fullerton	Cx. quinquefasciatus	29	GRVD	9/11/2012	WNV	RTPCR
Orange	ORCO97	1167	Anaheim	Cx. quinquefasciatus	7	GRVD	9/13/2012	WNV	RTPCR
Riverside	COAV203	2385	Palm Desert	Cx. quinquefasciatus	9	CO2	9/13/2012	WNV	RTPCR
Riverside	NWST103	321		Cx. quinquefasciatus	21	GRVD	8/29/2012	WNV	RTPCR
Riverside	NWST99	328	Norco	Cx. quinquefasciatus	10	REST	9/5/2012	WNV	RTPCR
Sacramento	SAYO201006	5676	Sacramento	Culex tarsalis	50	CO2	9/13/2012	WNV	RTPCR
Sacramento	SAYO204035	5624	Sacramento	Culex pipiens	11	GRVD	9/13/2012	WNV	RTPCR
Sacramento	SAYO213035	5609	Sacramento	Culex tarsalis	5	CO2	9/13/2012	WNV	RTPCR
Sacramento	SAYO214012	5674	Fair Oaks	Culex pipiens	44	GRVD	9/13/2012	WNV	RTPCR
Sacramento	SAYO214028	5618	Carmichael	Culex pipiens	22	GRVD	9/13/2012	WNV	RTPCR
Sacramento	SAYO214033	5621	Fair Oaks	Culex pipiens	25	GRVD	9/13/2012	WNV	RTPCR
Sacramento	SAYO232005	5685	Sacramento	Culex erythrothorax	32	CO2	9/13/2012	WNV	RTPCR
San Bernardino	SANB17	508	Fontana	Culex tarsalis	50	CO2	9/5/2012	WNV	RTPCR
San Bernardino	WVAL1007	448	Ontario	Cx. quinquefasciatus	30	GRVD	9/14/2012	WNV	RTPCR
San Bernardino	WVAL2005	464	Chino	Cx. quinquefasciatus	19	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8077	1090	Stockton	Culex tarsalis	7	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8100	1105	Tracy	Culex tarsalis	6	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8143	1087	Stockton	Culex tarsalis	15	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8161	1062	Ripon	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8161	1064	Ripon	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8161	1065	Ripon	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8161	1066	Ripon	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
San Joaquin	SJCM8189	1108	Acampo	Culex pipiens	38	CO2	9/20/2012	WNV	RTPCR
Shasta	SHAS110	658		Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Sonoma	MARN313	1238	Santa Rosa	Culex tarsalis	1	GRVD	9/11/2012	WNV	RTPCR
Stanislaus	TRLK307	1203	Grayson	Culex tarsalis	50	CO2	9/11/2012	WNV	RTPCR
Stanislaus	TRLK406	1296	Turlock	Culex pipiens	29	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK421	1313	Hughson	Culex pipiens	29	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK515	1288	Turlock	Culex pipiens	50	CO2	9/14/2012	WNV	RTPCR
Stanislaus	TRLK516	1317	Denair	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK516	1319	Denair	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK516	1320	Denair	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK516	1322	Denair	Culex tarsalis	46	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK526	1312	Denair	Culex pipiens	46	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK531	1292	Turlock	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK613	1323	Hickman	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Stanislaus	TRLK625	1307	Turlock	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Sutter	SUYA15	357	Robbins	Culex tarsalis	50	CO2	9/12/2012	WNV	RTPCR
Tulare	DLTA6408	470	Dinuba	Cx. quinquefasciatus	30	GRVD	9/19/2012	WNV	RTPCR
Tulare	DLTA9606	462	Farmersville	Cx. quinquefasciatus	10	GRVD	9/14/2012	WNV	RTPCR
Tulare	TLRE37	78	Tulare	Culex tarsalis	33	CO2	9/18/2012	WNV	RTPCR
Tulare	TLRE79	82	Tulare	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR

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Tulare	TLRE79	83	Tulare	Culex pipiens	50	CO2	9/18/2012	WNV	RTPCR
Yolo	SAYO103005	5769	Dunnigan	Culex tarsalis	24	CO2	9/18/2012	WNV	RTPCR
Yolo	SAYO116002	5761	Knights Landing	Culex tarsalis	49	CO2	9/18/2012	WNV	RTPCR
Yolo	SAYO124004	5785	Woodland	Culex tarsalis	50	CO2	9/18/2012	WNV	RTPCR
Yolo	SAYO144002	5731	Davis	Culex tarsalis	41	CO2	9/18/2012	WNV	RTPCR
Yolo	SAYO144002	5732	Davis	Culex tarsalis	1	GRVD	9/18/2012	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05
Butte	BUCO000002	Oroville	9/11/12	WNV	1513	1515	1519		
Butte	BUCO000004	Gridley	9/11/12	WNV	1540				
Butte	BUCO000007	Chico	9/11/12	WNV	1571				
Colusa	CLSA000001	Colusa	9/11/12	WNV	1604	1607			
Contra Costa	CNTR008152	Knightsen	9/10/12	WNV	1619	1623			
Glenn	GLEN009701	Willows	9/12/12	WNV	1676	1679	1685		
Kern	DLNO000035		9/13/12	WNV	1728	1729			
Kern	DLNO000060	Delano	9/13/12	WNV	1702	1704	1708	1709	1710
Lake	LAKE000226	Lower Lake	9/11/12	WNV	1807				
Los Angeles	LACW001005	El Segundo	9/6/12	WNV	1080				
Los Angeles	LACW001006	Playa Del Rey	9/5/12	WNV	1086				
Los Angeles	LACW001009	Los Angeles	8/28/12	WNV	1093				
Los Angeles	LACW001010	Los Angeles (Miracle Mile)	8/28/12	WNV	1102	1100			
Los Angeles	LACW001012	Venice	9/6/12	WNV	1109				
Los Angeles	LACW001023	Topanga	8/31/12	WNV	1129				
Los Angeles	LACW001024	Calabasas	8/31/12	WNV	1135				
Los Angeles	LACW001026	Beverly Hills	9/7/12	WNV	1147	1150	1152		
Los Angeles	LACW001049	Inglewood	9/6/12	WNV	1154	1157	1158		
Los Angeles	LONG000004	Long Beach	9/17/12	WNV	3982	3988	3989		
Placer	PLCR000017	Sheridan	9/10/12	WNV	2803	2805			
Placer	PLCR001112	Roseville	9/10/12	WNV	2834				
Sacramento	SAYO202019	Rio Linda	9/10/12	WNV	2357	2363	2358	2359	
Sacramento	SAYO213009	Sacramento	9/4/12	WNV	2334	2335	2398		
Sacramento	SAYO242002	Elk Grove	9/4/12	WNV	2350	2351	2353		
Sacramento	SAYO254001	Galt	9/10/12	WNV	2309	2310			
San Bernardino	WVAL000006	Ontario	9/11/12	WNV	3786				
Shasta	SHAS000301	Redding	9/13/12	WNV	2736				
Shasta	SHAS009704	Redding	9/13/12	WNV	2742				

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Sonoma	MARN000118	Cloverdale	9/10/12	WNV	1844				
Sutter	SUYA000014	Sutter	9/13/12	WNV	1477				
Sutter	SUYA000015	Robbins	9/13/12	WNV	1493	1496	1491		
Sutter	SUYA000084	Yuba City	9/13/12	WNV	1431	1432	1439		
Tulare	DLNO000021	Earlimart	9/13/12	WNV	1715	1716	1722		
Yolo	SAYO123001	Esparto	9/4/12	WNV	2390				
Yuba	SUYA000010	Olivehurst	9/13/12	WNV	1457				

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:

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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.

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.