

California Arbovirus Surveillance Bulletin # 24

Week 31 Friday, August 6, 2010

Weekly Summary

WEEKLY COMMENTS



Humans

Six new human cases of West Nile virus (WNV) were reported this week from the following 4 counties: Madera (2), Sacramento (2), Stanislaus (1), and Tulare (1); these are the first cases reported from Madera, Sacramento, and Tulare counties in 2010. In addition, an asymptomatic WNV infection in a blood donor from Madera County was also reported this week. To date this year, 12 human cases of WNV have been reported from 6 counties. Of the 12 individuals, 6 (50%) developed neuroinvasive disease. The median age of the 12 individuals is 47 years (range: 27-63 years); 5 (42%) are male. No fatalities have been reported. At this time last year, 5 human cases had been reported from 4 counties.

Horses

The first equine case of WNV in 2010 was reported this week from Madera County. Symptom onset was July 25, 2010. The horse was not vaccinated against WNV, and was euthanized as a result of the illness. At this time last year, 3 WNV infections in horses had been reported from 2 counties.

Dead Birds & Squirrels

Thirty-six recently-infected* WNV positive dead birds were reported this week from the following 7 counties: Colusa (1), Kern (6), Merced (4), Sacramento (11), San Joaquin (6), Stanislaus (6), and Tulare (2). This is the first detection of WNV activity in Colusa County this year. An additional 26 birds from 14 counties tested positive for chronic infection with WNV.

Two WNV positive tree squirrels were reported this week from Fresno and Los Angeles counties. This is the first WNV positive tree squirrel reported from Los Angeles this year.

In 2010, 179 recently-infected* WNV positive dead birds have been reported from 19 counties, and 5 WNV positive squirrels have been reported from 4 counties. An additional 91 chronic WNV infections have been detected in birds from 21 counties (see www.westnile.ca.gov for more details). At this time last year, 271 birds from 32 counties and one tree squirrel had tested positive for WNV. Year-to-date totals from last year and previous years include both recent and chronic infections.

**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 West Nile virus 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

This week, 129 WNV positive mosquito pools were reported from the following 15 counties: Butte (1), Contra Costa (1), Fresno (24), Imperial (1), Kern (37), Kings (1), Los Angeles (5), Placer (8), Riverside (7), Sacramento (14), San Bernardino (2), Stanislaus (7), Sutter (4), Tulare (16) and Yolo (1). This is the first detection of WNV activity in Contra Costa County, and the first WNV positive mosquito pool detected in Butte County this year. In 2010, 562 mosquito pools from 21 counties have tested positive for WNV. At this time last year, 388 WNV positive mosquito pools had been reported from 18 counties.

Sentinel Chickens

This week, 21 WNV seroconversions were reported from 10 flocks located in Fresno (2), Imperial (2), Kern (6), Riverside (8), Sacramento (1), and San Bernardino (2) counties. These are the first WNV positive chickens detected in Fresno, Sacramento, and San Bernardino counties this year. In 2010, 45 WNV positive chickens have been detected among 11 flocks from 6 counties. At this time last year, 32 WNV positive chickens from 9 counties had been reported.

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2009 & 2010 YTD West Nile Virus Comparisons		
	2009	2010
Total # Dead Bird Reports	11,023	7,153
# Positive Counties	34	24
# Human Cases	5	12
# Horse Cases	3	1
# Positive Dead Birds / # Tested	271 / 1,830	179 / 1,375
# Positive Mosquito Pools / # Tested	388 / 15,143	562 / 16,655
# Seroconversions / # Tested	32 / 14,504	45 / 14,995
# Positive Squirrels / # Tested	1 / 60	5 / 56

YTD WNV Activity by Element and County, 2010

County	Humans	Horses	Dead Birds [^]	Mosquito Pools	Sentinel Chickens	Squirrels
Butte			2	1		1
Colusa			1			
Contra Costa				1		
Fresno	2		10	75	2	2
Imperial				10	10	
Kern	1		9	129	7	
Kings				8		
Los Angeles			9	11		1
Madera	2	1	7	6		
Merced			10	4		
Orange			3	7		
Placer			1	13		
Riverside				48	23	
Sacramento	2		55	137	1	
San Bernardino			1	8	2	1
San Diego			1	1		
San Joaquin			20	6		
Santa Clara			22	10		
Santa Cruz			4			
Shasta			1			
Stanislaus	4		16	18		
Sutter				16		
Tulare	1		4	51		
Yolo			3	2		
Totals	12	1	179	562	45	5

[^] Chronic infections are not included in county totals.

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TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE	
			Local	Imported	Local	Imported	Local	Imported
Humans Tested*	Week	14	6	0	0	0	0	0
	YTD	426	12	0	0	0	0	0
Horses Tested	Week	1	1	0	0	0	0	0
	YTD	82	1	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	96	36
	YTD	1,375	179
Tree Squirrels	Week	4	2
	YTD	56	5

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive
Chicken Sera	Week	1,133	21	0	0
	YTD	14,995	45	0	0
Mosquito Pools: RT-PCR	Week	1,283	125	0	0
	YTD	16,049	545	0	0
Mosquito Pools: RAMP	Week	38	4	N/A	N/A
	YTD	606	17	N/A	N/A

NEW POSITIVES

Humans

WNV Cases							
ID	Report Date	County ¹	Age	Sex	Clin Pres ²	Onset Date	WNV Fatality?
10-0007	08/02/10	Stanislaus	46	M	WNND	n/a	NO
10-0008	08/03/10	Sacramento	63	M	WNND	07/12/10	NO
10-0009	08/04/10	Madera	41	M	WNF	07/02/10	NO
10-0010	08/04/10	Madera	48	F	WNF	07/08/10	NO
10-0011	08/04/10	Tulare	32	F	WNND ²	06/15/10	NO
10-0012	08/05/10	Sacramento	41	M	WNND	07/14/10	NO
WNV Positive Blood Donors (Asymptomatic Infections)							
ID	Report Date	County ¹	Age	Sex			
BD10-0005	08/03/10	Madera	23	M			

¹County of residence

²Initially identified as asymptomatic infection

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Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Alameda	Alameda Co MAD	Castro Valley	94546	California Towhee	7/9/2010	WNV	Chronic	RT-PCR
Alameda	Alameda Co MAD	Oakland	94618	Western Scrub-Jay	7/22/2010	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Paradise	95969	Western Scrub-Jay	7/21/2010	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Stirling City	95978	Black-headed Grosbeak	7/22/2010	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Paradise	95969	American Robin	7/27/2010	WNV	Chronic	RT-PCR
Colusa	Colusa MAD	Colusa	95932	Starling	7/21/2010	WNV	Recent	RT-PCR
Colusa	Colusa MAD	Colusa	95932	Yellow-billed Magpie	7/26/2010	WNV	Chronic	RT-PCR
El Dorado	El Dorado Co Env Mgmt	Cameron Park	95682	American Robin	7/22/2010	WNV	Chronic	RT-PCR
Fresno	Consolidated MAD	Fresno	93710	Fox Squirrel	7/20/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93309	House Sparrow	7/22/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93312	House Finch	7/23/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93306	House Sparrow	7/26/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93314	Western Scrub-Jay	7/26/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93306	Western Scrub-Jay	7/28/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93304	American Crow	7/28/2010	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93314	Other	7/22/2010	WNV	Chronic	RT-PCR
Los Angeles	Los Angeles Co West	Los Angeles	90049	Fox Squirrel	7/22/2010	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co West	Studio City	91604	Blue-grey Gnatcatcher	7/19/2010	WNV	Chronic	RT-PCR
Madera	Madera Co MVCD	Chowchilla	93610	House Sparrow	7/27/2010	WNV	Chronic	RT-PCR
Merced	Merced Co MAD	Merced	95340	American Crow	7/20/2010	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Merced	95340	House Sparrow	7/21/2010	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Turlock	95380	House Finch	7/21/2010	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Merced	95340	American Robin	7/26/2010	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Gustine	95322	American Crow	7/27/2010	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Roseville	95661	California Towhee	7/21/2010	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Rocklin	95765	American Robin	7/25/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	American Crow	7/21/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	American Crow	7/22/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Yellow-billed Magpie	7/22/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Western Scrub-Jay	7/23/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	American Crow	7/26/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Western Scrub-Jay	7/25/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Antelope	95843	House Finch	7/27/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Western Tanager	7/27/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Rosemont	95826	American Crow	7/27/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	Western Scrub-Jay	7/28/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Antelope	95843	Western Scrub-Jay	7/28/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Galt	95632	Northern Mockingbird	7/22/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95757	American Robin	7/26/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	Western Scrub-Jay	7/25/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	Western Scrub-Jay	7/27/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95835	House Finch	7/28/2010	WNV	Chronic	RT-PCR
San Bernardino	San Bernardino VCP	Big Bear City	92314	Osprey	7/12/2010	WNV	Chronic	RT-PCR
San Bernardino	San Bernardino VCP	Fontana	92335	House Sparrow	7/22/2010	WNV	Chronic	RT-PCR
San Bernardino	San Bernardino VCP	Redlands	92374	Northern Mockingbird	7/27/2010	WNV	Chronic	RT-PCR
San Bernardino	West Valley MVCD	Chino	91710	House Sparrow	7/20/2010	WNV	Chronic	RT-PCR
San Bernardino	West Valley MVCD	Ontario	91764	Budgie	6/21/2010	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin Co MVCD	Clements	95227	Northern Mockingbird	7/21/2010	WNV	Recent	RT-PCR

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San Joaquin	San Joaquin Co MVCD	Manteca	95337	American Crow	7/23/2010	WNV	Recent	RT-PCR
San Joaquin	San Joaquin Co MVCD	Stockton	95206	American Robin	7/27/2010	WNV	Recent	RT-PCR
San Joaquin	San Joaquin Co MVCD	Stockton	95209	American Crow	7/14/2010	WNV	Recent	RAMP
San Joaquin	San Joaquin Co MVCD	Ripon	95366	American Crow	7/19/2010	WNV	Recent	RAMP
San Joaquin	San Joaquin Co MVCD	Lodi	95240	American Crow	7/29/2010	WNV	Recent	RAMP
San Joaquin	San Joaquin Co MVCD	Stockton	95206	American Robin	7/22/2010	WNV	Chronic	RT-PCR
Stanislaus	East Side MAD	Modesto	95357	Yellow-billed Magpie	7/22/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Ceres	95307	Western Scrub-Jay	7/21/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Ceres	95307	Western Scrub-Jay	7/21/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Ceres	95307	Yellow-billed Magpie	7/22/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Turlock	95380	Western Scrub-Jay	7/23/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Turlock	95380	American Crow	7/26/2010	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93277	Western Scrub-Jay	7/27/2010	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93292	House Sparrow	7/28/2010	WNV	Chronic	RT-PCR
Tulare	Tulare MAD	Porterville	93257	Western Scrub-Jay	7/22/2010	WNV	Recent	RT-PCR
Yuba	Sutter-Yuba MVCD	Olivehurst	95961	American Robin	7/26/2010	WNV	Chronic	RT-PCR

Mosquitoes

County	Site Code	Pool #	Species	# in Pool	City	Collected	Virus	Method
Butte	BUCO0	28	Unknown	50	Oroville	7/30/2010	WNV	RTPCR
Contra Costa	CNTR3231	273	Culex pipiens	28	Oakley	8/4/2010	WNV	RAMP
Fresno	CNSL3269	451	Culex quinquefasciatus	50	Reedley	7/28/2010	WNV	RTPCR
Fresno	CNSL3202	452	Culex quinquefasciatus	50	Reedley	7/28/2010	WNV	RTPCR
Fresno	CNSL3066	453	Culex quinquefasciatus	50	Reedley	7/28/2010	WNV	RTPCR
Fresno	CNSL3068	454	Culex quinquefasciatus	29	Reedley	7/28/2010	WNV	RTPCR
Fresno	CNSL3233	455	Culex quinquefasciatus	48	Reedley	7/28/2010	WNV	RTPCR
Fresno	CNSL6214	456	Culex quinquefasciatus	50	Laton	7/28/2010	WNV	RTPCR
Fresno	CNSL2399	460	Culex tarsalis	50	Sanger	7/29/2010	WNV	RTPCR
Fresno	CNSL2117	462	Culex quinquefasciatus	50	Sanger	7/29/2010	WNV	RTPCR
Fresno	CNSL4028	463	Culex quinquefasciatus	50	Selma	7/29/2010	WNV	RTPCR
Fresno	CNSL4041	464	Culex quinquefasciatus	47	Selma	7/29/2010	WNV	RTPCR
Fresno	CNSL3046	466	Culex tarsalis	50	Reedley	7/30/2010	WNV	RTPCR
Fresno	CNSL3046	467	Culex quinquefasciatus	50	Reedley	7/30/2010	WNV	RTPCR
Fresno	CNSL6189	475	Culex quinquefasciatus	14	Laton	8/3/2010	WNV	RTPCR
Fresno	CNSL1215	504	Culex quinquefasciatus	26	Fresno	7/28/2010	WNV	RTPCR
Fresno	CNSL1739	505	Culex quinquefasciatus	25	Fresno	7/28/2010	WNV	RTPCR
Fresno	CNSL1740	509	Culex quinquefasciatus	23	Fresno	7/28/2010	WNV	RTPCR
Fresno	CNSL2239	511	Culex quinquefasciatus	23	Sanger	7/29/2010	WNV	RTPCR
Fresno	CNSL2263	515	Culex tarsalis	49	Sanger	7/29/2010	WNV	RTPCR
Fresno	CNSL1741	517	Culex quinquefasciatus	44	Clovis	7/30/2010	WNV	RTPCR
Fresno	CNSL1695	518	Culex quinquefasciatus	35	Fresno	8/3/2010	WNV	RTPCR
Fresno	CNSL1267	519	Culex quinquefasciatus	39	Clovis	8/3/2010	WNV	RTPCR
Fresno	CNSL1118	520	Culex quinquefasciatus	12	Fresno	8/3/2010	WNV	RTPCR
Fresno	FRNO14	34	Culex quinquefasciatus	50	Fresno	7/30/2010	WNV	RTPCR
Fresno	FRNO14	36	Culex quinquefasciatus	16	Fresno	8/3/2010	WNV	RTPCR
Imperial	COAV5001	2388	Culex tarsalis	50	Niland	7/27/2010	WNV	RTPCR
Kern	KERN1002	637	Culex quinquefasciatus	46	Bakersfield	7/20/2010	WNV	RTPCR
Kern	KERN36	716	Culex tarsalis	50	Bakersfield	7/27/2010	WNV	RTPCR
Kern	KERN115	721	Culex quinquefasciatus	50	Bakersfield	7/27/2010	WNV	RTPCR

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Kern	KERN115	724	Culex tarsalis	50	Bakersfield	7/27/2010	WNV	RTPCR
Kern	KERN3014	727	Culex tarsalis	50	Bakersfield	7/27/2010	WNV	RTPCR
Kern	KERN2011	733	Culex quinquefasciatus	50	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN2011	734	Culex quinquefasciatus	50	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN2051	735	Culex quinquefasciatus	50	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN2016	737	Culex quinquefasciatus	50	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN2016	738	Culex quinquefasciatus	41	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN3028	740	Culex quinquefasciatus	42	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN3004	741	Culex quinquefasciatus	50	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN3011	742	Culex quinquefasciatus	22	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN2003	744	Culex quinquefasciatus	16	Bakersfield	7/28/2010	WNV	RTPCR
Kern	KERN33	745	Culex tarsalis	21	Arvin	7/28/2010	WNV	RTPCR
Kern	KERN2041	746	Culex quinquefasciatus	33	Arvin	7/28/2010	WNV	RTPCR
Kern	KERN3026	747	Culex quinquefasciatus	50	Arvin93203	7/28/2010	WNV	RTPCR
Kern	KERN83	751	Culex quinquefasciatus	50	Arvin	7/28/2010	WNV	RTPCR
Kern	KERN2040	761	Culex quinquefasciatus	50	Arvin	7/28/2010	WNV	RTPCR
Kern	KERN2040	762	Culex quinquefasciatus	33	Arvin	7/28/2010	WNV	RTPCR
Kern	KERN2021	769	Culex quinquefasciatus	50	Wasco	7/29/2010	WNV	RTPCR
Kern	KERN2020	774	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2020	775	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2027	776	Culex quinquefasciatus	20	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2014	777	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2024	778	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2031	779	Culex quinquefasciatus	42	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2007	780	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2028	782	Culex quinquefasciatus	50	Bakersfield	7/30/2010	WNV	RTPCR
Kern	KERN2028	783	Culex quinquefasciatus	35	Bakersfield	7/30/2010	WNV	RTPCR
Kern	WEST6232	15	Culex tarsalis	50	Tupman	8/4/2010	WNV	RTPCR
Kern	WEST6232	16	Culex tarsalis	31	Tupman	8/4/2010	WNV	RTPCR
Kern	WEST6235	17	Culex tarsalis	50	Tupman	8/4/2010	WNV	RTPCR
Kern	WEST6235	18	Culex tarsalis	33	Tupman	8/4/2010	WNV	RTPCR
Kern	WEST6231	20	Culex quinquefasciatus	50	Taft	8/4/2010	WNV	RTPCR
Kern	WEST6229	22	Culex quinquefasciatus	33	Taft	8/4/2010	WNV	RTPCR
Kern	WEST6240	23	Culex quinquefasciatus	45	South Taft	8/4/2010	WNV	RTPCR
Kings	CNSL5107	468	Culex quinquefasciatus	26	Kingsburg	8/3/2010	WNV	RTPCR
Los Angeles	GRLA2196	1199	Culex quinquefasciatus	29	South El Monte	7/30/2010	WNV	RTPCR
Los Angeles	GRLA2221	1201	Culex quinquefasciatus	45	Rowland Heights	7/30/2010	WNV	RTPCR
Los Angeles	GRLA2414	6017	Culex quinquefasciatus	50	Granada Hills	7/29/2010	WNV	RTPCR
Los Angeles	GRLA2554	6026	Culex quinquefasciatus	50	Winnetka	7/29/2010	WNV	RTPCR
Los Angeles	GRLA2995	6029	Culex quinquefasciatus	50	Woodland Hills	7/29/2010	WNV	RTPCR
Placer	PLCR17	173	Culex tarsalis	51	Sheridan	7/28/2010	WNV	RTPCR
Placer	PLCR58	191	Culex tarsalis	50	Lincoln	8/3/2010	WNV	RTPCR
Placer	PLCR1113	203	Culex tarsalis	50	Pleasant Grove	8/3/2010	WNV	RTPCR
Placer	PLCR1113	206	Culex pipiens	18	Pleasant Grove	8/3/2010	WNV	RTPCR
Placer	PLCR1113	242	Culex tarsalis	50	Pleasant Grove	8/3/2010	WNV	RTPCR
Placer	PLCR1113	249	Culex tarsalis	50	Pleasant Grove	8/3/2010	WNV	RTPCR
Placer	PLCR1113	250	Culex tarsalis	50	Pleasant Grove	8/3/2010	WNV	RTPCR
Placer	PLCR1113	252	Culex tarsalis	50	Pleasant Grove	8/3/2010	WNV	RTPCR
Riverside	COAV132	2407	Culex tarsalis	50	Mecca	8/3/2010	WNV	RTPCR
Riverside	COAV132	2415	Culex tarsalis	50	Mecca	8/3/2010	WNV	RTPCR

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Riverside	COAV130	2420	Culex tarsalis	12	Mecca	8/3/2010	WNV	RTPCR
Riverside	COAV5	2424	Culex tarsalis	12	Mecca	8/3/2010	WNV	RTPCR
Riverside	COAV34	2434	Culex tarsalis	36	Mecca	8/3/2010	WNV	RTPCR
Riverside	COAV121	2440	Culex tarsalis	50	Mecca	8/3/2010	WNV	RTPCR
Riverside	COAV45	2444	Culex tarsalis	39	Mecca	8/3/2010	WNV	RTPCR
Sacramento	SAYO203015	3385	Culex tarsalis	6	Rio Linda	7/31/2010	WNV	RTPCR
Sacramento	SAYO214013	3403	Culex pipiens	1	Carmichael	7/31/2010	WNV	RTPCR
Sacramento	SAYO213025	3415	Culex pipiens	50	Sacramento	7/31/2010	WNV	RTPCR
Sacramento	SAYO204031	3428	Culex pipiens	3	Citrus Heights	7/31/2010	WNV	RTPCR
Sacramento	SAYO204009	3437	Culex pipiens	16	Citrus Heights	7/31/2010	WNV	RTPCR
Sacramento	SAYO204013	3448	Culex tarsalis	15	Citrus Heights	7/31/2010	WNV	RTPCR
Sacramento	SAYO224001	3466	Culex pipiens	4	Rancho Cordova	8/3/2010	WNV	RTPCR
Sacramento	SAYO214006	3473	Culex pipiens	4	Rancho Cordova	8/3/2010	WNV	RTPCR
Sacramento	SAYO224008	3481	Culex pipiens	50	Rancho Cordova	8/3/2010	WNV	RTPCR
Sacramento	SAYO203011	3505	Culex pipiens	50	Antelope	8/3/2010	WNV	RTPCR
Sacramento	SAYO214011	3554	Culex tarsalis	1	Fair Oaks	8/3/2010	WNV	RTPCR
Sacramento	SAYO234008	3589	Culex pipiens	10	Wilton	8/3/2010	WNV	RTPCR
Sacramento	SAYO213024	3664	Culex pipiens	7	Carmichael	8/5/2010	WNV	RTPCR
Sacramento	SAYO213017	3670	Culex pipiens	9	Sacramento	8/5/2010	WNV	RTPCR
San Bernardino	WVAL2022	633	Culex quinquefasciatus	45	Fwy CA 60	7/26/2010	WNV	RTPCR
San Bernardino	WVAL5004	585	Culex quinquefasciatus	32	Rancho Cucamonga	7/19/2010	WNV	RTPCR
Stanislaus	EAST1024	10101	Culex pipiens	50	Modesto	8/3/2010	WNV	RAMP
Stanislaus	EAST1064	10106	Culex pipiens	33	salida	8/3/2010	WNV	RAMP
Stanislaus	EAST1060	10108	Culex pipiens	35	Salida	8/3/2010	WNV	RAMP
Stanislaus	TRLK619	401	Culex tarsalis	10	Turlock	7/30/2010	WNV	RTPCR
Stanislaus	TRLK619	404	Culex pipiens	33	Turlock	7/30/2010	WNV	RTPCR
Stanislaus	TRLK410	408	Culex pipiens	33	Ceres	7/30/2010	WNV	RTPCR
Stanislaus	TRLK613	443	Culex tarsalis	49	Hickman	8/3/2010	WNV	RTPCR
Sutter	SUYA16	240	Culex tarsalis	50	Trowbridge	8/2/2010	WNV	RTPCR
Sutter	SUYA44	246	Culex tarsalis	50	Pleasant Grove	8/2/2010	WNV	RTPCR
Sutter	SUYA31	254	Culex tarsalis	50	Rio Oso	8/3/2010	WNV	RTPCR
Sutter	SUYA31	256	Culex tarsalis	33	Rio Oso	8/3/2010	WNV	RTPCR
Tulare	DLTA6532	574	Culex quinquefasciatus	50	Culter	7/29/2010	WNV	RTPCR
Tulare	DLTA6534	579	Culex tarsalis	42	Cutler	7/29/2010	WNV	RTPCR
Tulare	DLTA7503	582	Culex tarsalis	50	Yetter	7/29/2010	WNV	RTPCR
Tulare	DLTA7505	585	Culex tarsalis	30	Visalia	7/29/2010	WNV	RTPCR
Tulare	DLTA8529	588	Culex quinquefasciatus	34	Visalia	7/30/2010	WNV	RTPCR
Tulare	DLTA8529	589	Culex quinquefasciatus	50	Visalia	7/30/2010	WNV	RTPCR
Tulare	DLTA8529	593	Culex quinquefasciatus	41	Visalia	7/30/2010	WNV	RTPCR
Tulare	DLTA9609	594	Culex quinquefasciatus	28	Exeter	7/30/2010	WNV	RTPCR
Tulare	DLTA9609	595	Culex quinquefasciatus	24	Exeter	7/30/2010	WNV	RTPCR
Tulare	DLTA9616	596	Culex quinquefasciatus	41	Exeter	7/30/2010	WNV	RTPCR
Tulare	DLTA7529	599	Culex quinquefasciatus	50	Visalia	7/30/2010	WNV	RTPCR
Tulare	DLTA7529	606	Culex quinquefasciatus	50	Visalia	7/30/2010	WNV	RTPCR
Tulare	DLTA8509	611	Culex quinquefasciatus	50	Ivanhoe	7/30/2010	WNV	RTPCR
Tulare	DLTA8509	612	Culex tarsalis	18	Ivanhoe	7/30/2010	WNV	RTPCR
Tulare	DLTA8509	613	Culex quinquefasciatus	50	Ivanhoe	7/30/2010	WNV	RTPCR
Tulare	TLRE57	32	Culex pipiens	43	Tulare	8/4/2010	WNV	RTPCR
Yolo	DAVI5124	56	Culex tarsalis	50	Woodland	7/28/2010	WNV	RTPCR

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Sentinel Chickens

County	Site Code	Date Bled	City	Virus	Band 01	Band 02	Band 03	Band 04
Fresno	FRNO0012	7/26/2010	Fresno	WNV	1598	1599		
Imperial	COAV5001	7/26/2010	Niland	WNV	1313	1314		
Kern	KERN0107	7/26/2010	Arvin	WNV	1771	1777		
Kern	KERN0114	7/26/2010	Bakersfield	WNV	1804			
Kern	KERN0115	7/26/2010	Bakersfield	WNV	1813	1816	1819	
Riverside	COAV0035	7/26/2010	Mecca	WNV	1249	1250		
Riverside	COAV0122	7/26/2010	Mecca	WNV	1264	1266		
Riverside	COAV0131	7/26/2010	Oasis	WNV	1272	1273	1275	1325
Sacramento	SAYO242013	8/2/2010	Hood	WNV	2599			
San Bernardino	SANB0007	7/26/2010	Fontana	WNV	2811	2815		

NATIONAL COMMENTS

As of August 3, 2010, 45 human cases of WNV had been reported nationwide in 12 states: Alabama (1), Arizona (19), California (6), Colorado (4), Georgia (3), Kansas (2), Mississippi (1), Missouri (1), Nebraska (2), North Dakota (2), South Dakota (3), and Texas (1). Of the 45 cases, 21 (47%) had neuroinvasive disease. Two WNV-related fatalities have been reported in Arizona.

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 by plaque reduction neutralization test (PRNT).

*Human denominator data only includes specimens tested at VRDL and does not include additional negative specimens that are tested by local agencies only.

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. The WNV Dead Bird Surveillance Coordinator, Erin Parker, can be reached directly at (510) 412-6254.

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

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Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for WEE, SLE, 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
