

California Arbovirus Surveillance Bulletin # 26

Week 33 Monday, August 23, 2010

Weekly Summary

WEEKLY COMMENTS



Humans

Six new human cases of West Nile virus (WNV) were reported last week from the following 5 counties: Butte (1), Fresno (2), Madera (1), Sacramento (1), and Stanislaus (1). This is the first case reported from Butte County in 2010. To date this year, 22 cases have been reported from 8 counties. Of the 22 individuals, 12 (54%) developed neuroinvasive disease. The median age of the 22 individuals is 54 years (range: 20-67 years) and 10 (45%) are male. No fatalities have been reported. At this time last year, 12 human cases had been reported from 7 counties.

Horses

No horse cases were reported last week. In 2010, 4 horses have tested positive for WNV from 3 counties and one fatality has been reported. At this time last year, 4 horse cases of WNV had been reported from 3 counties.

Dead Birds & Squirrels

Twelve recently-infected* WNV positive dead birds were reported last week from the following 9 counties: Contra Costa (2), Los Angeles (1), Sacramento (1), Santa Clara (1), Shasta (1), Stanislaus (2), Sutter (1), Tulare (2), and Yolo (1). This is the first WNV positive bird reported from Sutter County this year. An additional 6 birds from 5 counties tested positive for chronic infection with WNV. No positive tree squirrels were reported last week.

In 2010, 232 recently-infected* WNV positive dead birds have been reported from 22 counties, and 11 WNV positive squirrels have been reported from 7 counties. An additional 109 chronic WNV infections have been detected in birds from 23 counties (see www.westnile.ca.gov for more details). At this time last year, 329 birds from 33 counties and 3 tree squirrels from 3 counties 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

Last week, 101 WNV positive mosquito pools were reported from the following 11 counties: Fresno (4), Kern (15), Kings (20), Los Angeles (9), Placer (4), Riverside (3), Sacramento (5), San Bernardino (4), San Joaquin (5), Stanislaus (8), and Tulare (24). In 2010, 784 mosquito pools from 23 counties have tested positive for WNV. At this time last year, 649 WNV positive mosquito pools had been reported from 21 counties.

Sentinel Chickens

Last week, 27 WNV seroconversions were reported from 14 flocks located in Colusa (2), Fresno (1), Kern (16) Los Angeles (1), Madera (1), Riverside (1), Sacramento (1), San Bernardino (2), and Tulare (2) counties. These are the first WNV positive chickens detected in Colusa, Los Angeles, Madera, and Tulare counties this year. In 2010, 78 WNV positive chickens have been detected among 23 flocks from 12 counties. At this time last year, 98 WNV positive chickens from 15 counties had been reported.

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2009 & 2010 YTD West Nile Virus Comparisons		
	2009	2010
Total # Dead Bird Reports	11,957	7,848
# Positive Counties	35	28
# Human Cases	12	22
# Horse Cases	4	4
# Positive Dead Birds / # Tested	329 / 2,026	232 / 1,519
# Positive Mosquito Pools / # Tested	649 / 17,528	784 / 19,525
# Seroconversions / # Tested	98 / 16,256	78 / 16,738
# Positive Squirrels / # Tested	3 / 66	11 / 65

YTD WNV Activity by Element and County, 2010

County	Humans	Horses	Dead Birds [^]	Mosquito Pools	Sentinel Chickens	Squirrels
Butte	1		2	3		1
Colusa			1		2	
Contra Costa			3	1		
Fresno	4		14	94	3	2
Glenn			2			
Imperial				10	10	
Kern	2		9	158	23	
Kings				34		
Lake				1		
Los Angeles			12	25	1	1
Madera	3	2	7	6	1	
Merced			10	5		
Orange			5	9		
Placer			3	22		
Riverside				51	24	
Sacramento	3	1	75	153	3	2
San Bernardino	1		1	18	4	1
San Diego			1	1		
San Joaquin		1	21	18		
San Mateo						1
Santa Clara			23	10		3
Santa Cruz			4			
Shasta			2			
Stanislaus	7		22	30	2	
Sutter			1	19	3	
Tulare	1		9	113	2	
Yolo			5	2		
Yuba				1		
Totals	22	4	232	784	78	11

[^] 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	11	6	0	0	0	0	0
	YTD	459	22	0	0	0	0	0
Horses Tested	Week	4	0	0	0	0	0	0
	YTD	110	4	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	38	12
	YTD	1,519	232
Tree Squirrels	Week	1	0
	YTD	65	11

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive
Chicken Sera	Week	984	27	0	0
	YTD	16,738	78	0	0
Mosquito Pools: RT-PCR	Week	1,422	101	0	0
	YTD	18,827	767	0	0
Mosquito Pools: RAMP	Week	37	0	N/A	N/A
	YTD	698	17	N/A	N/A

NEW POSITIVES

Humans

WNV Cases							
ID	Report Date	County ¹	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
10-0017	08/17/10	Madera	63	M	WNND	07/23/10	NO
10-0018	08/17/10	Sacramento	61	M	WNF	07/07/10	NO
10-0019	08/18/10	Stanislaus	20	M	WNND	n/a	NO
10-0020	08/18/10	Fresno	66	F	WNF	07/24/10	NO
10-0021	08/18/10	Butte	>18	F	WNND	08/07/10	NO
10-0022	08/19/10	Fresno	32	M	WNF	07/25/10	NO

¹County of residence

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Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Contra Costa	Contra Costa MVCD	Oakley	94561	Western Scrub-Jay	8/12/2010	WNV	Recent	RAMP
Contra Costa	Contra Costa MVCD	Brentwood	94513	American Crow	8/17/2010	WNV	Recent	RAMP
Los Angeles	Greater LA Co VCD - SFS	Cerritos	90703	American Crow	8/4/2010	WNV	Recent	RT-PCR
Modoc	Modoc Co Health Dept	Alturas	96101	Steller's Jay	8/9/2010	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Tahoe City	96145	Steller's Jay	8/1/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elverta	95626	American Crow	8/10/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	Yellow-billed Magpie	8/5/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95819	House Finch	8/5/2010	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Gatos	95032	Western Screech Owl	8/4/2010	WNV	Recent	RT-PCR
Shasta	Shasta MVCD	Palo Cedro	96073	Brewer's Blackbird	8/10/2010	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Riverbank	95367	House Finch	8/4/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Turlock	95380	American Crow	8/5/2010	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Oakdale	95361	Western Scrub-Jay	8/6/2010	WNV	Chronic	RT-PCR
Sutter	Sutter-Yuba MVCD	Rio Oso	95674	Brewer's Blackbird	8/10/2010	WNV	Recent	RT-PCR
Tulare	Tulare MAD	Porterville	93257	Western Scrub-Jay	8/5/2010	WNV	Recent	RT-PCR
Tulare	Tulare County Animal Control	Terra Bella	93270	Western Scrub-Jay	7/29/2010	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	8/9/2010	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95616	Western Scrub-Jay	8/9/2010	WNV	Chronic	RT-PCR

Mosquitoes

County	Site Code	Pool #	# in Pool	Species	Collected	City	Virus	Test Method
Fresno	CNSL1182	540	36	Culex tarsalis	8/13/2010	Fresno	WNV	RTPCR
Fresno	CNSL2405	534	40	Culex quinquefasciatus	8/11/2010	Sanger	WNV	RTPCR
Fresno	CNSL5061	536	50	Culex tarsalis	8/12/2010	Parlier	WNV	RTPCR
Fresno	CNSL6128	609	50	Culex tarsalis	8/17/2010	Riverdale	WNV	RTPCR
Kern	AFSB0	105	50	Unknown	8/18/2010	Bakersfield	WNV	RTPCR
Kern	AFSB0	106	50	Unknown	8/18/2010	Bakersfield	WNV	RTPCR
Kern	KERN115	843	50	Culex tarsalis	8/10/2010	Bakersfield	WNV	RTPCR
Kern	KERN2002	886	14	Culex quinquefasciatus	8/13/2010	Bakersfield	WNV	RTPCR
Kern	KERN2005	859	16	Culex quinquefasciatus	8/10/2010	Bakersfield	WNV	RTPCR
Kern	KERN2010	885	14	Culex quinquefasciatus	8/13/2010	Bakersfield	WNV	RTPCR
Kern	KERN2020	884	48	Culex quinquefasciatus	8/13/2010	Bakersfield	WNV	RTPCR
Kern	KERN2021	880	34	Culex quinquefasciatus	8/12/2010	Wasco	WNV	RTPCR
Kern	KERN3014	841	50	Culex quinquefasciatus	8/10/2010	Bakersfield	WNV	RTPCR
Kern	KERN3019	888	50	Culex quinquefasciatus	8/13/2010	Bakersfield	WNV	RTPCR
Kern	KERN3027	845	50	Culex quinquefasciatus	8/10/2010	Arvin	WNV	RTPCR
Kern	KERN3032	849	36	Culex quinquefasciatus	8/10/2010		WNV	RTPCR
Kern	KERN33	869	50	Culex quinquefasciatus	8/11/2010	Arvin	WNV	RTPCR
Kern	KERN42	844	50	Culex tarsalis	8/10/2010	Bakersfield	WNV	RTPCR
Kern	KERN83	875	50	Culex tarsalis	8/11/2010	Arvin	WNV	RTPCR
Kings	KNGS3002	469	50	Culex tarsalis	8/13/2010	Lemoore NAS	WNV	RTPCR
Kings	KNGS3018	421	50	Culex tarsalis	8/11/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	423	50	Culex tarsalis	8/11/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	425	50	Culex tarsalis	8/11/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	443	50	Culex tarsalis	8/12/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	444	50	Culex tarsalis	8/12/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	445	50	Culex tarsalis	8/12/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	446	24	Culex tarsalis	8/12/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	453	50	Culex tarsalis	8/13/2010	Lemoore	WNV	RTPCR

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Kings	KNGS3018	454	50	Culex tarsalis	8/13/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	458	50	Culex tarsalis	8/13/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	493	50	Culex tarsalis	8/17/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	512	50	Culex tarsalis	8/18/2010	Lemoore	WNV	RTPCR
Kings	KNGS3018	513	50	Culex tarsalis	8/18/2010	Lemoore	WNV	RTPCR
Kings	KNGS3025	430	50	Culex pipiens	8/11/2010	Hanford	WNV	RTPCR
Kings	KNGS3025	432	30	Culex pipiens	8/11/2010	Hanford	WNV	RTPCR
Kings	KNGS3030	450	26	Culex pipiens	8/13/2010	Lemoore	WNV	RTPCR
Kings	KNGS3035	481	5	Culex tarsalis	8/17/2010	Hanford	WNV	RTPCR
Kings	KNGS3046	433	19	Culex pipiens	8/11/2010	Hanford	WNV	RTPCR
Kings	KNGS3051	381	11	Culex tarsalis	8/13/2010	Lemoore	WNV	RTPCR
Los Angeles	GRLA2097	1312	43	Culex quinquefasciatus	8/12/2010	La Mirada	WNV	RTPCR
Los Angeles	GRLA2100	1303	12	Culex quinquefasciatus	8/12/2010	Norwalk	WNV	RTPCR
Los Angeles	GRLA2221	1295	32	Culex quinquefasciatus	8/12/2010	Rowland Heights	WNV	RTPCR
Los Angeles	GRLA2277	1306	50	Culex quinquefasciatus	8/12/2010	Long Beach	WNV	RTPCR
Los Angeles	GRLA2383	1315	47	Culex quinquefasciatus	8/12/2010	Whittier	WNV	RTPCR
Los Angeles	GRLA2554	6178	50	Culex quinquefasciatus	8/12/2010	Winnetka	WNV	RTPCR
Los Angeles	GRLA2614	6133	50	Culex quinquefasciatus	8/11/2010	Newhall	WNV	RTPCR
Los Angeles	GRLA2655	6170	50	Culex quinquefasciatus	8/12/2010	Encino	WNV	RTPCR
Los Angeles	GRLA2995	6180	50	Culex quinquefasciatus	8/12/2010	Woodland Hills	WNV	RTPCR
Placer	PLCR1024	375	50	Culex tarsalis	8/11/2010	Sheridan	WNV	RTPCR
Placer	PLCR1113	488	50	Culex tarsalis	8/17/2010	Pleasant Grove	WNV	RTPCR
Placer	PLCR288	354	4	Culex thriambus	8/10/2010	Lincoln	WNV	RTPCR
Placer	PLCR58	431	50	Culex tarsalis	8/17/2010	LINCOLN	WNV	RTPCR
Riverside	COAV121	2484	50	Culex tarsalis	8/17/2010	Mecca	WNV	RTPCR
Riverside	COAV121	2486	50	Culex tarsalis	8/17/2010	Mecca	WNV	RTPCR
Riverside	COAV130	2463	32	Culex tarsalis	8/9/2010	Mecca	WNV	RTPCR
Sacramento	SAYO212013	4185	43	Culex tarsalis	8/17/2010	Sacramento; CA	WNV	RTPCR
Sacramento	SAYO212013	4186	44	Culex pipiens	8/17/2010	Sacramento; CA	WNV	RTPCR
Sacramento	SAYO233009	4088	50	Culex tarsalis	8/17/2010	Elk Grove	WNV	RTPCR
Sacramento	SAYO234008	4111	50	Culex tarsalis	8/17/2010	Wilton	WNV	RTPCR
Sacramento	SJCM8126	434	12	Culex tarsalis	8/5/2010	Clements	WNV	RTPCR
San Bernardino	WVAL2005	762	39	Culex tarsalis	8/17/2010	Chino	WNV	RTPCR
San Bernardino	WVAL5004	703	28	Culex quinquefasciatus	8/9/2010	Rancho Cucamonga	WNV	RTPCR
San Bernardino	WVAL5007	704	47	Culex quinquefasciatus	8/9/2010	Rancho Cucamonga	WNV	RTPCR
San Bernardino	WVAL6012	712	50	Culex quinquefasciatus	8/9/2010	Ontario	WNV	RTPCR
San Joaquin	SJCM8026	460	10	Culex pipiens	8/10/2010	Stockton	WNV	RTPCR
San Joaquin	SJCM8056	486	35	Aedes vexans	8/17/2010	Manteca	WNV	RTPCR
San Joaquin	SJCM8083	432	10	Culex pipiens	8/5/2010	Escalon	WNV	RTPCR
San Joaquin	SJCM8161	489	50	Culex pipiens	8/17/2010	Ripon	WNV	RTPCR
San Joaquin	SJCM9906	469	18	Culex pipiens	8/10/2010	French Camp	WNV	RTPCR
Stanislaus	TRLK408	556	47	Culex pipiens	8/17/2010	Turlock	WNV	RTPCR
Stanislaus	TRLK410	604	8	Culex pipiens	8/17/2010	Ceres	WNV	RTPCR
Stanislaus	TRLK432	564	50	Culex pipiens	8/17/2010	Turlock	WNV	RTPCR
Stanislaus	TRLK524	540	50	Culex pipiens	8/17/2010	Keyes	WNV	RTPCR
Stanislaus	TRLK524	542	50	Culex pipiens	8/17/2010	Keyes	WNV	RTPCR
Stanislaus	TRLK530	549	50	Culex pipiens	8/17/2010	Turlock	WNV	RTPCR
Stanislaus	TRLK535	545	50	Culex pipiens	8/17/2010	Keyes	WNV	RTPCR
Stanislaus	TRLK535	546	50	Culex pipiens	8/17/2010	Keyes	WNV	RTPCR
Tulare	DLTA6407	763	37	Culex quinquefasciatus	8/17/2010	Dinuba	WNV	RTPCR
Tulare	DLTA6418	762	28	Culex quinquefasciatus	8/17/2010	Dinuba	WNV	RTPCR
Tulare	DLTA6420	766	50	Culex quinquefasciatus	8/17/2010	Dinuba	WNV	RTPCR
Tulare	DLTA6420	768	50	Culex quinquefasciatus	8/17/2010	Dinuba	WNV	RTPCR
Tulare	DLTA8428	744	25	Culex quinquefasciatus	8/12/2010	Goshen	WNV	RTPCR

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Tulare	DLTA8436	736	48	Culex quinquefasciatus	8/11/2010	Visalia	WNV	RTPCR
Tulare	DLTA8501	805	27	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8501	806	44	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8511	783	50	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8511	784	50	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8511	786	50	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8512	796	50	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8512	801	33	Culex quinquefasciatus	8/18/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8527	770	50	Culex quinquefasciatus	8/17/2010	Visalia	WNV	RTPCR
Tulare	DLTA8530	794	22	Culex quinquefasciatus	8/18/2010	Visalia	WNV	RTPCR
Tulare	DLTA8532	748	44	Culex quinquefasciatus	8/13/2010	Visalia	WNV	RTPCR
Tulare	DLTA8532	749	48	Culex quinquefasciatus	8/13/2010	Visalia	WNV	RTPCR
Tulare	DLTA8621	755	50	Culex quinquefasciatus	8/13/2010	Ivanhoe	WNV	RTPCR
Tulare	DLTA8621	756	41	Culex quinquefasciatus	8/13/2010	Ivanhoe	WNV	RTPCR
Tulare	TLRE55	50	50	Culex pipiens	8/18/2010	Tulare	WNV	RTPCR
Tulare	TLRE0	42	50	Unknown	8/13/2010	Tulare	WNV	RTPCR
Tulare	TLRE0	44	50	Unknown	8/13/2010	Tulare	WNV	RTPCR
Tulare	TLRE0	51	50	Unknown	8/19/2010	Tulare	WNV	RTPCR
Tulare	TLRE0	52	50	Unknown	8/19/2010	Tulare	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04	Band 05
Colusa	CLSA0001	Colusa	8/3/2010	WNV	1402	1406			
Fresno	FRWS5101	The Mendota Airport	8/10/2010	WNV	1606				
Kern	KERN0107	Arvin	8/9/2010	WNV	1774	1778	1780		
Kern	KERN0114	Bakersfield	7/26/2010	WNV	1802	1807			
Kern	KERN0114	Bakersfield	8/9/2010	WNV	1801	1803	1808		
Kern	KERN0115	Bakersfield	8/9/2010	WNV	1812	1815	1817	1820	1871
Kern	KERN0116	Bakersfield	7/26/2010	WNV	1823				
Kern	KERN0117	Bakersfield	8/9/2010	WNV	1835	1840			
Los Angeles	ANTV5662	Lancaster	8/11/2010	WNV	1038				
Madera	MADR0000	Madera	8/9/2010	WNV	2103				
Riverside	COAV0131	Oasis	8/9/2010	WNV	1279				
Sacramento	SAYO245013	Wilton	8/9/2010	WNV	2618				
San Bernardino	SANB0011	Rialto	8/9/2010	WNV	2842				
San Bernardino	SANB0007	Fontana	8/9/2010	WNV	2808				
Tulare	DLTA8530	Visalia	8/9/2010	WNV	1524	1525			

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NATIONAL COMMENTS

As of August 17, 2010, 115 human cases of WNV had been reported nationwide in 16 states: Alabama (1), Arizona (54), California (16), Colorado (7), Florida (1), Georgia (4), Kansas (2), Minnesota (2), Mississippi (1), Missouri (1), Nebraska (6), New York (8), North Dakota (3), South Dakota (5), Texas (3), and Wyoming (1). Of the 115 cases, 59 (51%) had neuroinvasive disease. Three 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.

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
