

# California Arbovirus Surveillance Bulletin # 31

Week 38 Monday, September 27, 2010

## Weekly Summary

### WEEKLY COMMENTS



#### **Humans**

Seven new human cases of West Nile virus (WNV) were reported last week from Fresno (1), Kern (3), Madera (2), and San Joaquin (1) counties. One case previously reported from Los Angeles County has been removed. To date this year, 51 WNV cases have been reported from 10 counties. Of the 51 individuals, 32 (63%) developed neuroinvasive disease. The median age for all cases for which data are available is 55 years (range: 17-89 years); 25 (49%) are male. One fatality has been reported from Fresno County. At this time last year, 61 human cases had been reported from 14 counties.

#### **Horses**

Two new horse cases of WNV were reported last week from Fresno County; neither had a history of vaccination against WNV. In 2010, 16 horses from 9 counties have tested positive for WNV infection and 4 fatalities have been reported. At this time last year, 11 horse cases of WNV had been reported from 8 counties.

#### **Dead Birds & Squirrels**

Twenty six recently-infected\* WNV positive dead birds were reported last week from the following 10 counties: Fresno (3), Los Angeles (3), Placer (1), Sacramento (7), San Bernardino (3), Santa Clara (2), Shasta (1), Stanislaus (1), Tulare (3), and Yolo (2). Twenty additional birds from twelve counties tested positive for chronic infection with WNV. Two WNV positive tree squirrels were reported last week from San Mateo County.

In 2010, 359 recently-infected\* WNV positive dead birds have been reported from 25 counties, and 16 WNV positive squirrels have been reported from 7 counties. An additional 146 chronic WNV infections have been detected in birds from 27 counties (see [www.westnile.ca.gov](http://www.westnile.ca.gov) for more details). At this time last year, 443 birds from 35 counties and 9 tree squirrels from 7 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, 58 WNV positive mosquito pools were reported from the following 14 counties: Butte (2), Contra Costa (1), Fresno (9), Kern (10), Kings (8), Los Angeles (7), Merced (3), Orange (3), Riverside (1), Sacramento (6), San Bernardino (1), San Joaquin (3), Stanislaus (3), and Tulare (1). In 2010, 1,217 mosquito pools from 23 counties have tested positive for WNV. At this time last year, 1,008 WNV positive mosquito pools had been reported from 27 counties.

#### **Sentinel Chickens**

Last week, 29 WNV seroconversions were reported in 13 flocks from the following 8 counties: Butte (4), Kern (8), Merced (2), Sacramento (1), San Bernardino (1), Stanislaus (6), Tulare (5), and Yuba (2). In 2010, 219 WNV positive chickens have been detected among 53 flocks within 19 counties. At this time last year, 306 WNV positive chickens from 19 counties had been reported.

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2009 & 2010 YTD West Nile Virus Comparisons		
	2009	2010
Total # Dead Bird Reports	13,676	9,153
# Positive Counties	41	34
# Human Cases	61	51
# Horse Cases	11	16
# Positive Dead Birds / # Tested	443 / 2,411	359 / 1,877
# Positive Mosquito Pools / # Tested	1,008 / 22,583	1,217 / 25,850
# Seroconversions / # Tested	306 / 19,653	219 / 20,874
# Positive Squirrels / # Tested	9 / 85	16 / 83

## YTD WNV Activity by Element and County, 2010

County	Humans	Horses	Dead Birds <sup>^</sup>	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			1			
Amador		1				
Butte	1		6	7	6	1
Colusa			1		4	
Contra Costa			4	4	2	
El Dorado			2			
Fresno	17	3	22	126	4	2
Glenn			3			
Imperial				10	12	
Kern	6	1	11	259	74	
Kings				62		
Lake				2		
Los Angeles			29	51	2	1
Madera	5	5	13	9	6	
Merced			14	8	6	
Mono			1			
Orange			12	17		
Placer	3		7	33	3	
Riverside				68	34	
Sacramento	5	2	102	191	5	2
San Bernardino	1		6	32	10	1
San Diego			2	1		
San Joaquin	3	1	26	42		
San Mateo						5
Santa Clara			27	10		4
Santa Cruz			4			
Shasta			3			
Solano		1			1	
Stanislaus	8	1	32	78	14	
Sutter			1	30	11	
Tehama					1	
Tulare	2	1	20	168	19	
Yolo			10	7		
Yuba				2	5	
<b>Totals</b>	<b>51</b>	<b>16</b>	<b>359</b>	<b>1,217</b>	<b>219</b>	<b>16</b>

<sup>^</sup> 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	9	7	0	0	0	0	0
	YTD	540	51	0	0	0	0	0
Horses Tested	Week	11	2	0	0	0	0	0
	YTD	148	16	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	68	26
	YTD	1,877	359
Tree Squirrels	Week	3	2
	YTD	83	16

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive
Chicken Sera	Week	689	29	0	0
	YTD	20,874	219	0	0
Mosquito Pools: RT-PCR	Week	1,349	57	0	0
	YTD	24,880	1,198	0	0
Mosquito Pools: RAMP	Week	95	1	N/A	N/A
	YTD	970	19	N/A	N/A

## NEW POSITIVES

### Humans

WNV Cases							
ID	Report Date	County <sup>1</sup>	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
10-0046	9/17/10	Madera	68	M	WNND	8/29/10	No
10-0047	9/17/10	Madera	56	F	WNF	8/08/10	No
10-0048	9/17/10	Kern	68	M	WNF	9/12/10	No
10-0049	9/21/10	Kern	40	M	WNND	n/a	No
10-0050	9/21/10	Kern	29	F	WNND	8/4/10	No
10-0051	9/21/10	Fresno	56	M	WNND	9/13/10	No
10-0052	9/23/10	San Joaquin	89	M	WNND	8/18/10	No

<sup>1</sup>County of residence

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## Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Alameda	Alameda Co MAD	Pleasanton	94566	House Sparrow	9/13/2010	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Paradise	95969	Northern Flicker	9/10/2010	WNV	Chronic	RT-PCR
El Dorado	El Dorado Vector Control	South Lake Tahoe	96150	Western Kingbird	9/14/2010	WNV	Chronic	RT-PCR
Fresno	Fresno MVCD	Fresno	93722	Western Scrub-Jay	9/10/2010	WNV	Recent	RT-PCR
Fresno	Fresno MVCD	Fresno	93711	Western Tanager	9/14/2010	WNV	Recent	RT-PCR
Fresno	Fresno MVCD	Fresno	93711	Yellow Warbler	9/14/2010	WNV	Chronic	RT-PCR
Fresno	Fresno Westside MAD	Tranquillity	93668	Common Raven	9/14/2010	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Granada Hills	91344	American Crow	9/10/2010	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Covina	91722	American Crow	9/12/2010	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Bellflower	90706	American Crow	9/12/2010	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co Vet	Whittier	90604	Anna's Hummingbird	9/8/2010	WNV	Chronic	RT-PCR
Los Angeles	Los Angeles Co Vet	Whittier	90606	American Crow	9/8/2010	WNV	Chronic	RT-PCR
Los Angeles	Los Angeles Co Vet	Los Angeles	90035	Black Phoebe	9/9/2010	WNV	Chronic	RT-PCR
Los Angeles	Los Angeles Co Vet	Glendora	91741	Western Kingbird	9/13/2010	WNV	Chronic	RT-PCR
Merced	Merced Co MAD	Atwater	95301	Northern Mockingbird	9/14/2010	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Rocklin	95677	Yellow-billed Magpie	9/8/2010	WNV	Recent	RT-PCR
Placer	Placer MVCD	Roseville	95747	Acorn Woodpecker	9/9/2010	WNV	Chronic	RT-PCR
Placer	Placer MVCD	Weimar	95736	Northern Flicker	9/9/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	American Crow	9/11/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95819	Western Scrub-Jay	9/12/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95825	Western Scrub-Jay	9/13/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	American Crow	9/13/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	American Crow	9/13/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	American Crow	9/13/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Wilton	95693	American Crow	9/14/2010	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	European Starling	9/9/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95828	House Finch	9/13/2010	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Anna's Hummingbird	9/15/2010	WNV	Chronic	RT-PCR
San Bernardino	West Valley MVCD	Chino	91710	American Crow	9/9/2010	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91701	American Crow	9/13/2010	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91739	American Crow	9/14/2010	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91730	Mourning Dove	9/9/2010	WNV	Chronic	RT-PCR
San Francisco	Presidio Trust	San Francisco	94129	Yellow Warbler	9/13/2010	WNV	Chronic	RT-PCR
San Francisco	San Francisco EH Dept	San Francisco	94110	House Finch	9/8/2010	WNV	Chronic	RT-PCR
San Mateo	San Mateo Co. MAD	Burlingame	94010	Eastern Gray Squirrel	9/14/2010	WNV	Recent	RT-PCR
San Mateo	San Mateo Co. MAD	San Carlos	94070	Eastern Gray Squirrel	9/14/2010	WNV	Recent	RT-PCR
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	9/12/2010	WNV	Recent	VecTest
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	9/17/2010	WNV	Recent	VecTest
Shasta	Shasta MVCD	Redding	96003	Great Egret	9/13/2010	WNV	Recent	RT-PCR
Shasta	Shasta MVCD	Redding	96001	House Finch	9/9/2010	WNV	Chronic	RT-PCR
Stanislaus	East Side MAD	Modesto	95356	Mourning Dove	9/14/2010	WNV	Chronic	RT-PCR
Stanislaus	Turlock MAD	Turlock	95382	Mourning Dove	9/9/2010	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Turlock	95382	Northern Mockingbird	9/14/2010	WNV	Chronic	RT-PCR
Tulare	Delta VCD	Visalia	93277	House Sparrow	9/8/2010	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	9/8/2010	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93292	Gouldian Finch	9/15/2010	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	Woodland	95695	Western Scrub-Jay	9/12/2010	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	West Sacramento	95691	Western Scrub-Jay	9/13/2010	WNV	Recent	RT-PCR

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## Mosquitoes

County	Site Code	Pool #	Species	# in pool	City	Collected	Virus	Method
Butte	BUCO0	101	Unknown	50	Oroville	9/17/2010	WNV	RTPCR
Butte	BUCO0	102	Unknown	50	Oroville	9/17/2010	WNV	RTPCR
Contra Costa	CNTR13404	429	Culex pipiens	8	Antioch	9/22/2010	WNV	RAMP
Fresno	CNSL1752	565	Culex quinquefasciatus	28	Fresno	9/10/2010	WNV	RTPCR
Fresno	CNSL1756	572	Culex quinquefasciatus	38	Fresno	9/16/2010	WNV	RTPCR
Fresno	CNSL3124	643	Culex quinquefasciatus	39	Dinuba	9/8/2010	WNV	RTPCR
Fresno	CNSL3184	651	Culex quinquefasciatus	50	Reedley	9/15/2010	WNV	RTPCR
Fresno	CNSL6189	649	Culex quinquefasciatus	50	Laton	9/14/2010	WNV	RTPCR
Fresno	CNSL6189	650	Culex tarsalis	33	Laton	9/14/2010	WNV	RTPCR
Fresno	FRWS410001	178	Culex quinquefasciatus	50	Kerman	9/21/2010	WNV	RTPCR
Fresno	FRWS5110	172	Culex tarsalis	26	Tranquillity	9/21/2010	WNV	RTPCR
Fresno	FRWS5302	175	Culex tarsalis	38	Helm	9/21/2010	WNV	RTPCR
Kern	KERN2014	1229	Culex quinquefasciatus	39	Bakersfield	9/17/2010	WNV	RTPCR
Kern	KERN2029	1214	Culex quinquefasciatus	32	Bakersfield	9/16/2010	WNV	RTPCR
Kern	KERN3016	1245	Culex quinquefasciatus	50	Bakersfield	9/17/2010	WNV	RTPCR
Kern	KERN3019	1242	Culex quinquefasciatus	50	Bakersfield	9/17/2010	WNV	RTPCR
Kern	KERN3027	1183	Culex quinquefasciatus	38	Arvin	9/14/2010	WNV	RTPCR
Kern	KERN3030	1221	Culex quinquefasciatus	50	Shafter	9/16/2010	WNV	RTPCR
Kern	KERN3030	1222	Culex quinquefasciatus	50	Shafter	9/16/2010	WNV	RTPCR
Kern	KERN31	1197	Culex tarsalis	31	Arvin	9/15/2010	WNV	RTPCR
Kern	KERN40	1192	Culex tarsalis	50	Lost Hills	9/14/2010	WNV	RTPCR
Kern	KERN45	1210	Culex quinquefasciatus	50	Buttonwillow	9/15/2010	WNV	RTPCR
Kings	KNGS3025	684	Culex tarsalis	50	Goshen	9/15/2010	WNV	RTPCR
Kings	KNGS3025	685	Culex tarsalis	49	Goshen	9/15/2010	WNV	RTPCR
Kings	KNGS3030	710	Culex tarsalis	50	Lemoore	9/15/2010	WNV	RTPCR
Kings	KNGS3043	727	Culex pipiens	38	Lemoore	9/21/2010	WNV	RTPCR
Kings	KNGS3049	733	Culex erythrothorax	35	Lemoore	9/22/2010	WNV	RTPCR
Kings	KNGS3051	696	Culex tarsalis	50	Lemoore	9/15/2010	WNV	RTPCR
Kings	KNGS3051	698	Culex pipiens	50	Lemoore	9/15/2010	WNV	RTPCR
Kings	KNGS3062	726	Culex pipiens	45	Lemoore	9/21/2010	WNV	RTPCR
Los Angeles	GRLA2222	1554	Culex quinquefasciatus	50	Rowland Heights	9/16/2010	WNV	RTPCR
Los Angeles	GRLA2247	1503	Culex quinquefasciatus	50	Pico Rivera	9/10/2010	WNV	RTPCR
Los Angeles	GRLA2555	6311	Culex quinquefasciatus	50	Encino	9/14/2010	WNV	RTPCR
Los Angeles	GRLA2557	6314	Culex quinquefasciatus	50	Reseda	9/14/2010	WNV	RTPCR
Los Angeles	GRLA2952	1536	Culex quinquefasciatus	13	LA County	9/15/2010	WNV	RTPCR
Los Angeles	GRLA2954	1532	Culex quinquefasciatus	37	Cerritos	9/15/2010	WNV	RTPCR
Los Angeles	GRLA3045	1537	Culex quinquefasciatus	21	Whittier	9/15/2010	WNV	RTPCR
Merced	MERC402	88	Culex pipiens	33	Hilmar	9/15/2010	WNV	RTPCR
Merced	MERC506	61	Culex pipiens	50	Livingston	9/15/2010	WNV	RTPCR
Merced	TRLK9751	986	Culex tarsalis	50	Newman	9/21/2010	WNV	RTPCR
Orange	ORCO3	1455	Culex quinquefasciatus	21	Garden Grove	9/8/2010	WNV	RTPCR
Orange	ORCO33	1458	Culex quinquefasciatus	29	Westminster	9/8/2010	WNV	RTPCR
Orange	ORCO50	1454	Culex quinquefasciatus	5	Buena Park	9/8/2010	WNV	RTPCR
Riverside	NWST9401	10200	Culex stigmatosoma	43	Corona	9/7/2010	WNV	RTPCR
Sacramento	SAYO213001	5227	Culex tarsalis	3	Sacramento	9/17/2010	WNV	RTPCR
Sacramento	SAYO232012	5218	Culex tarsalis	10	Elk Grove	9/17/2010	WNV	RTPCR
Sacramento	SAYO233009	5302	Culex tarsalis	44	Elk Grove	9/21/2010	WNV	RTPCR
Sacramento	SAYO233010	5289	Culex tarsalis	31	Sacramento	9/21/2010	WNV	RTPCR
Sacramento	SAYO234002	5263	Culex pipiens	26	Elk Grove	9/17/2010	WNV	RTPCR
Sacramento	SAYO235001	5371	Culex tarsalis	8	Wilton	9/21/2010	WNV	RTPCR
San Bernardino	WVAL2022	852	Culex quinquefasciatus	39	Fwy CA 60	9/13/2010	WNV	RTPCR
San Joaquin	SJCM8008	714	Culex tarsalis	40	Manteca	9/16/2010	WNV	RTPCR
San Joaquin	SJCM8010	727	Culex tarsalis	50	Ripon	9/21/2010	WNV	RTPCR

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San Joaquin	SJCM8161	746	Culex tarsalis	36	Ripon	9/21/2010	WNV	RTPCR
Stanislaus	TRLK424	964	Culex pipiens	50	Patterson	9/21/2010	WNV	RTPCR
Stanislaus	TRLK9737	940	Culex pipiens	40	Grayson	9/21/2010	WNV	RTPCR
Stanislaus	TRLK9743	968	Culex pipiens	50	Crows Landing	9/21/2010	WNV	RTPCR
Tulare	TLRE0	91	Unknown	50	Tulare	9/23/2010	WNV	RTPCR

## Sentinel Chickens

County	Site Code	City	Date Bled**	Virus	Band 01	Band 02	Band 03	Band 04	Band 05
Butte	BUCO0002	Oroville	9/14/2010	WNV	1121				
Butte	BUCO0004	Gridley	9/14/2010	WNV	1144	1152			
Butte	BUCO0007	Chico	9/14/2010	WNV	1182				
Kern	DLNO0035		9/16/2010	WNV	1477	1480	1481	1484	
Kern	DLNO0060	Delano	9/16/2010	WNV	1502	1503	1505	1506	
Merced	MERC0502	Hilmar	9/10/2010	WNV	2241	2242			
Sacramento	SAYO242013	Hood	9/13/2010	WNV	2605				
San Bernardino	SANB0004	San Bernardino	9/6/2010	WNV	2785				
Stanislaus	TRLK0402	Denair	9/16/2010	WNV	3397				
Stanislaus	TRLK9701	Grayson	9/16/2010	WNV	3406	3409	3412	3414	
Stanislaus	TRLK9703	Crows Landing	9/16/2010	WNV	3418				
Tulare	DLNO0021	Earlimart	9/16/2010	WNV	1486	1488	1491	1492	1495
Yuba	SUYA0010	Olivehurst	9/16/2010	WNV	3281	3289			

*\*\*Date bled is equivalent to the probable date of seroconversion. The filter paper bleed date is reported as the date bled when whole blood is requested & tested for confirmation.*

## NATIONAL COMMENTS

As of September 22, 2010, 470 human cases of WNV had been reported nationwide in 32 states: Alabama (3), Arizona (88), Arkansas (3), California (45), Colorado (38), Connecticut (8), Florida (6), Georgia (9), Illinois (5), Indiana (4), Iowa (3), Kansas (5), Louisiana (15), Maryland (7), Massachusetts (3), Michigan (12), Minnesota (3), Mississippi (5), Missouri (4), Nebraska (29), Nevada (2), New Jersey (11), New Mexico (7), New York (80), North Dakota (8), Ohio (2), Pennsylvania (8), South Dakota (20), Texas (31), Virginia (2), Wisconsin (1), and Wyoming (3). Of the 470 cases, 266 (57%) had neuroinvasive disease. A total of 19 WNV-related fatalities have been reported in Arizona (6), California (1), Florida (2), Michigan (1), Nebraska (1), New Jersey (1), New York (3), Texas (3), and Virginia (1).

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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 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.

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### **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.

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### **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.

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### **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.

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*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](mailto:tina.feiszli@cdph.ca.gov)*

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

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