

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012



### WEEKLY UPDATE

#### **Human Cases**

Four new cases of West Nile virus (WNV) were reported this week from Kern, Orange, and Stanislaus counties. As of August 2, 2012, a total of 11 human cases of West Nile virus (WNV) illness have been identified in 6 counties: Fresno (1), Kern (3), Los Angeles (1), Merced (1), Orange (1), and Stanislaus (4). Of the 11 cases, 6 (55%) had neuroinvasive illness. Dates of symptom onset for all cases ranged from May 23-July 22, 2012. One WNV-related fatality has been reported in Kern County. Seven WNV-positive blood donors have been reported this year; two individuals developed symptoms and were reclassified as cases. At this time last year, seven human WNV cases had been reported from four counties.

National Update: As of July 31, 2012, 241 human cases of WNV had been reported nationwide in 22 states. Of the 241 cases, 144 (60%) were classified as neuroinvasive disease. Four WNV-related fatalities had been reported in Arizona (1), Mississippi (1), and Texas (2).

#### **Horses**

Three new WNV equine cases were reported this week: a 3-year-old unvaccinated filly from Fresno County with onset date of 7/27/12, a 3-year-old unvaccinated filly from Glenn County with onset date of 7/22/12, and a 3-year-old unvaccinated colt from San Joaquin County with onset date of 7/23/12. All horses are recovering. In 2012, 4 horses from 4 counties have tested positive for WNV. At this time last year, no equine cases had been reported.

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

A total of 74 WNV positive dead birds were reported this week from 14 counties: Colusa (1), Contra Costa (1), Kern (2), Los Angeles (7), Merced (2), Sacramento (37), San Bernardino (4), San Joaquin (3), Santa Clara (1), Stanislaus (2), Sutter (1), Tulare (5), Ventura (1), and Yolo (7). This is the first detection of WNV activity in Colusa County and the first WNV positive dead bird reported from San Bernardino County this year. In addition, 32 dead birds and 1 tree squirrel tested positive for chronic WNV infection this week. In 2012, 567 dead birds have tested positive for recent WNV infection from 23 counties. At this time last year, 118 dead birds from 12 counties had tested positive for WNV.

#### **Mosquito Pools**

A total of 175 WNV positive mosquito pools were reported this week from 20 counties: Butte (3), Contra Costa (2), Fresno (14), Glenn (4), Imperial (1), Kern (38), Kings (5), Los Angeles (12), Madera (3), Orange (1), Placer (22), Riverside (1), Sacramento (30), San Bernardino (2), San Joaquin (14), Stanislaus (5), Sutter (3), Tulare (1), Yolo (11), and Yuba (3). These are the first WNV positive mosquito pools detected in Butte and Glenn counties this year. In 2012, 921 mosquito pools from 22 counties have tested positive for WNV. At this time last year, 394 mosquito pools had tested positive for WNV from 15 counties.

#### **Sentinel Chickens**

Eighteen WNV seroconversions were reported this week from thirteen flocks in five counties: Kern (3), Los Angeles (5), San Bernardino (6), Sacramento (2), and Yolo (2). These are the first seroconversions detected in Kern, San Bernardino, and Yolo counties this year. In 2012, 48 WNV antibody-positive chickens have been detected among nineteen flocks in nine counties. At this time last year, 34 WNV positive chickens had been detected from 3 counties.

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

2011 & 2012 YTD West Nile Virus Comparisons		
	2011	2012
Total # Dead Bird Reports	5,398	9,325
# Positive Counties	18	27
# Human Cases	7	11
# Horse Cases	0	4
# Positive Dead Birds / # Tested	118 / 1,181	567 / 2,098
# Positive Mosquito Pools / # Tested	394 / 18,887	921 / 16,102
# Seroconversions / # Tested	34 / 11,618	48 / 10,472
# Positive Squirrels / # Tested	1/51	0 / 70

YTD WNV Activity by Element and County, 2012						
County	Humans	Horses	Dead Birds*	Mosquito Pools	Sentinel Chickens	Squirrels
Butte				3	1	
Colusa			1			
Contra Costa			9	6		
Fresno	1	1	10	69		
Glenn		1	2	4		
Imperial				3		
Kern	3		10	215	3	
Kings				7		
Los Angeles	1		26	46	7	
Madera				4		
Merced	1		12			
Orange	1		1	6		
Placer			5	43		
Riverside			2	58	12	
Sacramento			325	320	13	
San Bernardino			4	15	6	
San Joaquin		1	31	39		
San Mateo			1			
Santa Clara			10			
Santa Cruz			1			
Solano			12	1		
Stanislaus	4	1	24	25		
Sutter			2	13	1	
Tulare			39	15	3	
Ventura			9	1		
Yolo			30	20	2	
Yuba			1	8		
<b>Totals</b>	<b>11</b>	<b>4</b>	<b>567</b>	<b>921</b>	<b>48</b>	<b>0</b>

*\*Total does not include chronic infections*

# California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

## TESTING SUMMARIES

### Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	4	0	0	0	0	0
	YTD	11	0	0	0	0	0
Horse Cases	Week	3	0	0	0	0	0
	YTD	4	0	0	0	0	0

### Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	162	74
	YTD	2,098	567
Tree Squirrels	Week	1	0
	YTD	70	0

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	749	18	0	0
	YTD	14,472	48	0	0
Mosquito Pools	Week	1630	175	0	0
	YTD	16,102	921	0	0

## POSITIVES: WEEK 31

### Humans

WNV Cases							
ID	Report Date	County	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
12-0008	07/30/12	STANISLAUS	65	F	WNND	07/22/12	NO
12-0009	07/30/12	STANISLAUS	58	F	WNF	07/10/12	NO
12-0010	08/01/12	ORANGE	24	M	WNF	Week 29	NO
12-0011	08/02/12	KERN	88	F	WNND	07/04/12	YES
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
BD12-0005	08/02/12	LOS ANGELES	54	M			

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

### Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Alameda	Alameda Co MAD	Fremont	94536	House Finch	7/24/2012	WNV	Chronic	RT-PCR
Alameda	Alameda Co MAD	Pleasanton	94566	Cooper's Hawk	7/25/2012	WNV	Chronic	RT-PCR
Alameda	Alameda Co MAD	Fremont	94538	Fox Squirrel	7/25/2012	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Oroville	95965	Black-headed Grosbeak	7/23/2012	WNV	Chronic	RT-PCR
Butte	Butte Co MVCD	Oroville	95966	American Robin	7/24/2012	WNV	Chronic	RT-PCR
Colusa	Colusa MAD	Colusa	95932	American Crow	7/20/2012	WNV	Recent	RT-PCR
Contra Costa	Contra Costa MVCD	Concord	94520	Western Scrub-Jay	7/23/2012	WNV	Chronic	RT-PCR
Contra Costa	Contra Costa MVCD	Hercules	94547	Western Scrub-Jay	7/18/2012	WNV	Chronic	RT-PCR
Contra Costa	Contra Costa MVCD	El Sobrante	94803	Western Scrub-Jay	7/28/2012	WNV	Recent	RAMP
Kern	Kern MVCD	Bakersfield	93311	Western Scrub-Jay	7/19/2012	WNV	Recent	RT-PCR
Kern	Kern MVCD	Bakersfield	93311	Western Scrub-Jay	7/24/2012	WNV	Recent	RT-PCR
Kings	Kings MAD	Hanford	93230	Barn Owl	7/21/2012	WNV	Chronic	RT-PCR
Los Angeles	Greater LA VC - Sylmar	West Hills	91307	American Crow	7/18/2012	WNV	Recent	RT-PCR
Los Angeles	Greater LA VC - Sylmar	Chatsworth	91311	American Crow	7/19/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Veterinarian	Beverly Hills	90212	American Crow	7/20/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Veterinarian	Venice	90291	American Crow	7/16/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Veterinarian	Altadena	91001	Sharp-shinned Hawk	7/16/2012	WNV	Chronic	RT-PCR
Los Angeles	LA Co Veterinarian	Canoga Park	91304	American Crow	7/14/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Veterinarian	Northridge	91325	American Crow	7/21/2012	WNV	Recent	RT-PCR
Los Angeles	San Gabriel MVCD	Industry	91744	American Crow	7/31/2012	WNV	Recent	RAMP
Los Angeles	San Gabriel MVCD	San Dimas	91773	Domestic Duck	7/18/2012	WNV	Chronic	RT-PCR
Los Angeles	San Gabriel MVCD	San Dimas	91773	Domestic Duck	7/18/2012	WNV	Chronic	RT-PCR
Los Angeles	San Gabriel MVCD	West Covina	91790	Cooper's Hawk	7/18/2012	WNV	Chronic	RT-PCR
Merced	Merced Co MAD	Atwater	95301	Western Scrub-Jay	7/20/2012	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Gustine	95322	Yellow-billed Magpie	7/19/2012	WNV	Recent	RT-PCR
Monterey	N Salinas Valley MAD	Monterey	93940	Barn Owl	7/23/2012	WNV	Chronic	RT-PCR
Monterey	N Salinas Valley MAD	Monterey	93940	Brewer's Blackbird	7/20/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Cooper's Hawk	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/28/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/29/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/30/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Carmichael	95608	Western Scrub-Jay	7/29/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Fair Oaks	95628	Western Scrub-Jay	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Galt	95632	Anna's Hummingbird	7/16/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Galt	95632	Anna's Hummingbird	7/16/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Galt	95632	Western Scrub-Jay	7/28/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Galt	95632	American Crow	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Isleton	95641	American Robin	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	North Highlands	95660	European Starling	7/19/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	North Highlands	95660	American Robin	7/30/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Rio Linda	95673	Yellow-billed Magpie	7/23/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Rio Linda	95673	Western Scrub-Jay	7/25/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Rancho Murieta	95683	House Finch	7/21/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Rancho Murieta	95683	Western Scrub-Jay	8/1/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Wilton	95693	Yellow-billed Magpie	7/16/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Wilton	95693	American Robin	7/19/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Wilton	95693	American Crow	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Wilton	95693	American Crow	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Rancho Cordova	95742	European Starling	7/18/2012	WNV	Chronic	RT-PCR

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

Sacramento	Sac-Yolo MVCD	Elk Grove	95757	Yellow-billed Magpie	7/24/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95757	House Sparrow	7/28/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95757	House Sparrow	7/28/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	Western Scrub-Jay	7/20/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	American Crow	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Elk Grove	95758	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95815	Nuttall's Woodpecker	7/20/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95815	Western Scrub-Jay	7/25/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95815	Northern Mockingbird	7/27/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95821	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95821	Yellow-billed Magpie	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95827	American Crow	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95827	American Robin	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95827	Western Scrub-Jay	7/26/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95834	Northern Mockingbird	7/17/2012	WNV	Chronic	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95838	Western Kingbird	7/25/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95838	Western Scrub-Jay	7/30/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95838	Yellow-billed Magpie	7/30/2012	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95838	Western Scrub-Jay	7/30/2012	WNV	Recent	RT-PCR
San Benito	San Benito EH	Hollister	95023	House Sparrow	7/20/2012	WNV	Chronic	RT-PCR
San Bernardino	San Bernardino VCP	San Bernardino	92404	American Crow	7/16/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91701	American Crow	7/17/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Rancho Cucamonga	91701	Western Scrub-Jay	7/16/2012	WNV	Recent	RT-PCR
San Bernardino	West Valley MVCD	Chino Hills	91709	Northern Mockingbird	7/23/2012	WNV	Chronic	RT-PCR
San Bernardino	West Valley MVCD	Chino	91710	American Crow	7/18/2012	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Stockton	95207	Western Scrub-Jay	7/25/2012	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Stockton	95209	Unknown	7/26/2012	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Lodi	95240	European Starling	7/23/2012	WNV	Chronic	RT-PCR
San Joaquin	San Joaquin MVCD	Lodi	95242	Western Scrub-Jay	7/25/2012	WNV	Recent	RT-PCR
San Joaquin	San Joaquin MVCD	Ripon	95366	Western Scrub-Jay	7/18/2012	WNV	Chronic	RT-PCR
San Mateo	San Mateo Co MAD	Redwood City	94061	Lesser Goldfinch	7/22/2012	WNV	Chronic	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	7/30/2012	WNV	Recent	VecTest
Santa Cruz	Santa Cruz MVCD	Boulder Creek	95006	House Sparrow	7/25/2012	WNV	Chronic	RT-PCR
Solano	Solano Co MAD	Fairfield	94533	American Crow	7/24/2012	WNV	Chronic	RT-PCR
Sonoma	Marin-Sonoma MVCD	Rohnert Park	94928	American Crow	7/21/2012	WNV	Chronic	RT-PCR
Sonoma	Marin-Sonoma MVCD	Petaluma	94952	Anna's Hummingbird	7/23/2012	WNV	Chronic	RT-PCR
Sonoma	Marin-Sonoma MVCD	Petaluma	94952	Turkey Vulture	7/20/2012	WNV	Chronic	RT-PCR
Stanislaus	East Side MAD	Modesto	95355	American Crow	7/23/2012	WNV	Recent	RT-PCR
Stanislaus	Turlock MAD	Hughson	95326	American Crow	8/2/2012	WNV	Recent	VecTest
Sutter	Sutter-Yuba MVCD	Pleasant Grove	95668	American Crow	7/18/2012	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93277	American Crow	7/30/2012	WNV	Recent	RAMP
Tulare	Delta VCD	Visalia	93291	Western Scrub-Jay	7/21/2012	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93291	Western Scrub-Jay	7/22/2012	WNV	Recent	RT-PCR
Tulare	Delta VCD	Visalia	93291	American Crow	7/31/2012	WNV	Recent	RAMP
Tulare	Delta VCD	Visalia	93292	American Crow	7/19/2012	WNV	Recent	RT-PCR
Ventura	Ventura Co EHD	Simi Valley	93065	American Crow	7/25/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	American Crow	7/25/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	Yellow-billed Magpie	7/27/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	American Crow	7/25/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95616	American Crow	7/20/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Davis	95618	American Crow	7/24/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Woodland	95695	Western Scrub-Jay	7/27/2012	WNV	Recent	RT-PCR
Yolo	Sac-Yolo MVCD	Woodland	95776	American Crow	7/26/2012	WNV	Recent	RT-PCR

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

### Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Butte	BUCO0000	49	Oroville	Unknown	50	NA	7/27/2012	WNV	RTPCR
Butte	BUCO0000	53	Oroville	Unknown	50	NA	7/27/2012	WNV	RTPCR
Butte	BUCO0000	55	Oroville	Unknown	50	NA	7/27/2012	WNV	RTPCR
Contra Costa	CNTR1688	217	Brentwood	Cx. pipiens	9	CO2	7/27/2012	WNV	RAMP
Contra Costa	CNTR1688	235	Brentwood	Cx. pipiens	32	CO2	8/1/2012	WNV	RAMP
Fresno	CNSL1452	430	Fresno	Cx. quinquefasciatus	48	GRVD	7/27/2012	WNV	RTPCR
Fresno	CNSL1695	424	Fresno	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Fresno	CNSL1759	429	Fresno	Cx. quinquefasciatus	37	GRVD	7/27/2012	WNV	RTPCR
Fresno	CNSL2074	426	Sanger	Cx. quinquefasciatus	50	GRVD	7/25/2012	WNV	RTPCR
Fresno	CNSL2117	638	Sanger	Cx. quinquefasciatus	46	GRVD	7/27/2012	WNV	RTPCR
Fresno	CNSL2242	436	Sanger	Cx. stigmatosoma	13	CO2	7/27/2012	WNV	RTPCR
Fresno	CNSL2250	427	Sanger	Cx. quinquefasciatus	43	CO2	7/25/2012	WNV	RTPCR
Fresno	CNSL2386	442	Sanger	Cx. quinquefasciatus	46	CO2	7/31/2012	WNV	RTPCR
Fresno	CNSL2391	635	Sanger	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Fresno	CNSL2397	438	Del Rey	Cx. quinquefasciatus	33	GRVD	7/31/2012	WNV	RTPCR
Fresno	CNSL2424	433	Sanger	Cx. quinquefasciatus	30	GRVD	7/27/2012	WNV	RTPCR
Fresno	CNSL3281	639	Reedley	Cx. quinquefasciatus	50	CO2	7/27/2012	WNV	RTPCR
Fresno	FRNO14	42	Fresno	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Fresno	FRNO19	43	Fresno	Cx. quinquefasciatus	50	CO2	7/31/2012	WNV	RTPCR
Glenn	GLEN0000	10	Willows	Unknown	50	NA	8/2/2012	WNV	RTPCR
Glenn	GLEN0000	22	Willows	Unknown	50	NA	8/2/2012	WNV	RTPCR
Glenn	GLEN0000	23	Willows	Unknown	50	NA	8/2/2012	WNV	RTPCR
Glenn	GLEN0000	26	Willows	Unknown	50	NA	8/2/2012	WNV	RTPCR
Imperial	COAV5001	1927	Niland	Cx. tarsalis	20	CO2	7/24/2012	WNV	RTPCR
Kern	KERN1002	1105	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/23/2012	WNV	RTPCR
Kern	KERN1005	1106	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/23/2012	WNV	RTPCR
Kern	KERN111	1171	Arvin	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kern	KERN114	1183	Bakersfield	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kern	KERN115	1126	Bakersfield	Cx. tarsalis	36	CO2	7/23/2012	WNV	RTPCR
Kern	KERN1156	1180	Arvin	Cx. quinquefasciatus	50	CO2	7/25/2012	WNV	RTPCR
Kern	KERN1156	1181	Arvin	Cx. quinquefasciatus	15	CO2	7/25/2012	WNV	RTPCR
Kern	KERN121	1213	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN121	1214	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN121	1215	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN15	1146	Pumpkin Center	Cx. quinquefasciatus	50	CO2	7/24/2012	WNV	RTPCR
Kern	KERN2002	1206	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2002	1207	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2002	1208	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2007	1210	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

Kern	KERN2007	1212	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2011	1142	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Kern	KERN2012	1127	Bakersfield	Cx. quinquefasciatus	29	CO2	7/23/2012	WNV	RTPCR
Kern	KERN2014	1199	Bakersfield	Cx. quinquefasciatus	33	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2015	1148	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN2016	1141	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Kern	KERN2018	1139	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Kern	KERN2018	1140	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Kern	KERN2020	1202	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2022	1159	Shafter	Cx. quinquefasciatus	48	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN2025	1218	Bakersfield	Cx. quinquefasciatus	37	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2027	1205	Bakersfield	Cx. quinquefasciatus	42	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2028	1201	Bakersfield	Cx. quinquefasciatus	27	GRVD	7/26/2012	WNV	RTPCR
Kern	KERN2030	1143	Bakersfield	Cx. quinquefasciatus	50	GRVD	7/24/2012	WNV	RTPCR
Kern	KERN2034	1108	Bakersfield	Cx. quinquefasciatus	29	GRVD	7/23/2012	WNV	RTPCR
Kern	KERN2039	1152	Bakersfield	Cx. quinquefasciatus	12	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN2049	1153	Lamont	Cx. quinquefasciatus	50	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN2049	1154	Lamont	Cx. quinquefasciatus	50	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN2051	1151	Bakersfield	Cx. quinquefasciatus	33	GRVD	7/25/2012	WNV	RTPCR
Kern	KERN3004	1160	Bakersfield	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kern	KERN3004	1161	Bakersfield	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kern	KERN32	1121	Arvin	Cx. tarsalis	14	CO2	7/23/2012	WNV	RTPCR
Kern	KERN83	1179	Arvin	Cx. quinquefasciatus	50	CO2	7/25/2012	WNV	RTPCR
Kings	KNGS3005	204	Lemoore NAS	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kings	KNGS3027	240	Lemoore	Cx. tarsalis	50	CO2	7/28/2012	WNV	RTPCR
Kings	KNGS3030	198	Lemoore	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kings	KNGS3060	221	Lemoore	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Kings	KNGS4010	188	Hanford	Cx. tarsalis	50	CO2	7/24/2012	WNV	RTPCR
Los Angeles	GRLA2097	746	La Mirada	Cx. quinquefasciatus	49	GRVD	7/24/2012	WNV	RTPCR
Los Angeles	GRLA2097	747	La Mirada	Cx. quinquefasciatus	12	GRVD	7/24/2012	WNV	RTPCR
Los Angeles	GRLA2222	763	Rowland Heights	Cx. stigmatosoma	15	GRVD	7/25/2012	WNV	RTPCR
Los Angeles	GRLA2228	754	Diamond Bar	Cx. quinquefasciatus	23	GRVD	7/24/2012	WNV	RTPCR
Los Angeles	GRLA2500	5781	Los Angeles	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA2554	5803	Winnetka	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA2554	5804	Winnetka	Cx. quinquefasciatus	19	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA2592	5788	San Marino	Cx. quinquefasciatus	50	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA2962	5808	Chatsworth	Cx. quinquefasciatus	40	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA2962	5809	Chatsworth	Cx. quinquefasciatus	18	GRVD	7/26/2012	WNV	RTPCR
Los Angeles	GRLA3052	755	La Habra Heights	Cx. quinquefasciatus	50	GRVD	7/25/2012	WNV	RTPCR
Los Angeles	GRLA3052	756	La Habra Heights	Cx. quinquefasciatus	46	GRVD	7/25/2012	WNV	RTPCR

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

Madera	MADR1076	64	La Vina	Cx. quinquefasciatus	50	CO2	7/24/2012	WNV	RTPCR
Madera	MADR1076	65	La Vina	Cx. quinquefasciatus	50	CO2	7/24/2012	WNV	RTPCR
Madera	MADR1076	67	La Vina	Cx. quinquefasciatus	50	NA	7/25/2012	WNV	RTPCR
Orange	ORCO52	789	Anaheim	Cx. quinquefasciatus	16	GRVD	7/24/2012	WNV	RTPCR
Placer	PLCR1003	946	Lincoln	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1003	947	Lincoln	Cx. tarsalis	36	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1025	1001	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR1025	1002	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR1025	1003	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR1025	1004	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR1025	1007	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR1070	894	Roseville	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1070	896	Roseville	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1070	899	Roseville	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1070	902	Roseville	Cx. tarsalis	44	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR1114	918	Lincoln	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR139	908	Roseville	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR17	950	Sheridan	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR17	951	Sheridan	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR17	952	Sheridan	Cx. tarsalis	27	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR516	936	Roseville	Cx. tarsalis	43	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR58	906	Lincoln	Cx. tarsalis	37	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR79	938	Roseville	Cx. tarsalis	31	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR79	939	Roseville	Cx. pipiens	12	CO2	7/30/2012	WNV	RTPCR
Placer	PLCR88	985	Lincoln	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Placer	PLCR95	954	Lincoln	Cx. tarsalis	50	CO2	7/30/2012	WNV	RTPCR
Riverside	COAV204	1956	Indio	Cx. tarsalis	50	CO2	7/25/2012	WNV	RTPCR
Sacramento	SAYO202006	3446	Sacramento	Cx. tarsalis	32	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO203012	3605	Antelope	Cx. pipiens	27	GRVD	8/2/2012	WNV	RTPCR
Sacramento	SAYO203014	3600	Antelope	Cx. tarsalis	3	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO204004	3391	Citrus Heights	Cx. tarsalis	4	CO2	7/27/2012	WNV	RTPCR
Sacramento	SAYO204031	3592	Citrus Heights	Cx. pipiens	32	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO213035	3652	Sacramento	Cx. pipiens	50	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO213038	3386	Sacramento	Cx. tarsalis	1	GRVD	7/27/2012	WNV	RTPCR
Sacramento	SAYO213038	3387	Sacramento	Cx. pipiens	2	CO2	7/27/2012	WNV	RTPCR
Sacramento	SAYO213038	3388	Sacramento	Cx. pipiens	6	GRVD	7/27/2012	WNV	RTPCR
Sacramento	SAYO213042	3653	North Highlands	Cx. tarsalis	14	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO215015	3410	Folsom	Cx. pipiens	12	GRVD	7/31/2012	WNV	RTPCR
Sacramento	SAYO223040	3668	Sacramento	Cx. tarsalis	11	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO224010	3670	Sacramento	Cx. tarsalis	8	CO2	8/2/2012	WNV	RTPCR
Sacramento	SAYO224010	3671	Sacramento	Cx. pipiens	17	CO2	8/2/2012	WNV	RTPCR



## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

Sacramento	SAYO224010	3672	Sacramento	Cx. pipiens	15	GRVD	8/2/2012	WNV	RTPCR
Sacramento	SAYO234007	3406	Elk Grove	Cx. tarsalis	14	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234007	3407	Elk Grove	Cx. pipiens	13	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234007	3408	Elk Grove	Cx. pipiens	5	GRVD	7/31/2012	WNV	RTPCR
Sacramento	SAYO234009	3411	Elk Grove	Cx. tarsalis	37	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234009	3412	Elk Grove	Cx. tarsalis	3	GRVD	7/31/2012	WNV	RTPCR
Sacramento	SAYO234009	3413	Elk Grove	Cx. pipiens	16	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234012	3423	Elk Grove	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234012	3424	Elk Grove	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO234012	3425	Elk Grove	Cx. tarsalis	16	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO243025	3443	Elk Grove	Cx. tarsalis	38	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO243025	3444	Elk Grove	Cx. pipiens	46	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO254010	3714	Galt	Cx. pipiens	8	GRVD	8/2/2012	WNV	RTPCR
Sacramento	SAYO254021	3678	Galt	Cx. pipiens	8	GRVD	8/2/2012	WNV	RTPCR
Sacramento	SAYO261012	3414	Isleton	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Sacramento	SAYO261012	3415	Isleton	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
San Bernardino	WVAL5004	286	Rancho Cucamonga	Cx. quinquefasciatus	36	GRVD	7/31/2012	WNV	RTPCR
San Bernardino	WVAL5008	281	Rancho Cucamonga	Cx. quinquefasciatus	22	GRVD	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8005	521	Stockton	Cx. pipiens	15	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8018	525	Stockton	Cx. tarsalis	50	CO2	8/1/2012	WNV	RTPCR
San Joaquin	SJCM8018	526	Stockton	Cx. tarsalis	50	CO2	8/1/2012	WNV	RTPCR
San Joaquin	SJCM8018	527	Stockton	Cx. tarsalis	50	CO2	8/1/2012	WNV	RTPCR
San Joaquin	SJCM8018	528	Stockton	Cx. tarsalis	50	CO2	8/1/2012	WNV	RTPCR
San Joaquin	SJCM8018	529	Stockton	Cx. tarsalis	15	CO2	8/1/2012	WNV	RTPCR
San Joaquin	SJCM8018	546	Stockton	Cx. tarsalis	50	CO2	8/2/2012	WNV	RTPCR
San Joaquin	SJCM8026	509	Stockton	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8027	520	McDonald Isl. Bridge	Cx. pipiens	51	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8045	544	Thornton	Cx. tarsalis	6	CO2	8/2/2012	WNV	RTPCR
San Joaquin	SJCM8076	518	Stockton	Cx. tarsalis	8	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8100	498	Tracy	Cx. tarsalis	9	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8111	522	Stockton	Cx. tarsalis	36	CO2	7/31/2012	WNV	RTPCR
San Joaquin	SJCM8160	506	Lodi	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Stanislaus	TRLK307	426	Grayson	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Stanislaus	TRLK322	436	Modesto	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Stanislaus	TRLK549	418	Newman	Cx. tarsalis	17	CO2	7/31/2012	WNV	RTPCR
Stanislaus	TRLK9737	492	Grayson	Cx. tarsalis	33	CO2	7/31/2012	WNV	RTPCR
Stanislaus	TRLK9769	485	Grayson	Cx. tarsalis	21	CO2	7/31/2012	WNV	RTPCR
Sutter	SUYA14	247	Sutter	Cx. tarsalis	50	REST	7/31/2012	WNV	RTPCR
Sutter	SUYA14	248	Sutter	Cx. tarsalis	50	REST	7/31/2012	WNV	RTPCR
Sutter	SUYA84	251	Yuba City	Cx. tarsalis	29	CO2	7/30/2012	WNV	RTPCR
Tulare	TLRE27	27	Tulare	Cx. pipiens	24	CO2	7/31/2012	WNV	RTPCR

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

Yolo	SAYO103007	3576	Dunnigan	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO115010	3448	Knights Landing	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO115010	3449	Knights Landing	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO115010	3452	Knights Landing	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO135006	3581	Woodland	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO135006	3582	Woodland	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO135006	3584	Woodland	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO136010	3550	Woodland	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO146006	3462	Davis	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO146006	3463	Davis	Cx. tarsalis	50	CO2	7/31/2012	WNV	RTPCR
Yolo	SAYO146006	3467	Davis	Cx. pipiens	3	GRVD	7/31/2012	WNV	RTPCR
Yuba	SUYA7	240	Marysville	Cx. tarsalis	40	REST	7/30/2012	WNV	RTPCR
Yuba	SUYA71	227	Olivehurst	Cx. tarsalis	50	CO2	7/26/2012	WNV	RTPCR
Yuba	SUYA71	236	Olivehurst	Cx. tarsalis	50	CO2	7/26/2012	WNV	RTPCR

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Kern	AFSB000107	Bakersfield	7/23/2012	WNV	2048		
Kern	AFSB000109	Bakersfield	7/23/2012	WNV	2020	2066	
Los Angeles	ANTV007263	Lancaster	7/25/2012	WNV	1203		
Los Angeles	ANTV008652	Palmdale	7/25/2012	WNV	1237		
Los Angeles	GRLA002465	Los Angeles	7/23/2012	WNV	3510		
Los Angeles	LACW001010	Los Angeles (Miracle Mile)	7/16/2012	WNV	1103		
Los Angeles	LACW001007	Baldwin Hills	7/26/2012	WNV	1088		
San Bernardino	SANB000003	Colton	7/23/2012	WNV	1325		
San Bernardino	SANB000008	Upland	7/23/2012	WNV	1372	1373	
San Bernardino	SANB000011	Rialto	7/23/2012	WNV	1378	1383	1384
Sacramento	SAYO233001	Elk Grove	7/30/2012	WNV	2303		
Sacramento	SAYO245019	Wilton	7/30/2012	WNV	2326		
Yolo	SAYO125023	Woodland	7/30/2012	WNV	2367	2369	

## California Arbovirus Surveillance Bulletin #24

Week 31 Friday, August 3, 2012

### 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.

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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.

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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 (WEEV), and St. Louis encephalitis (SLEV) 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 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.

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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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