

California Arbovirus Surveillance Bulletin #35

Week 42 Friday, October 17, 2014

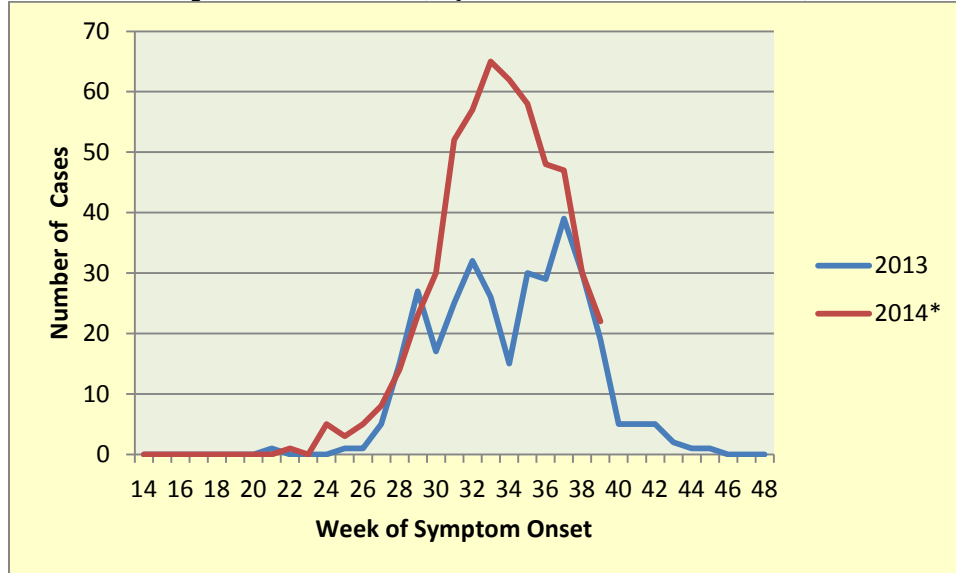


WEEKLY UPDATE

Humans

A total of 74 new cases of West Nile virus (WNV) disease were reported to the California Department of Public Health (CDPH) this week from the following 11 counties: Butte (1), Contra Costa (1), Fresno (3), Los Angeles (31), Orange (29), Riverside (1), San Diego (2), San Joaquin (1), Santa Clara (1), Tehama (1), and Tulare (3). As of October 13, a total of 562 human cases of WNV disease have been reported from 29 counties. As of this date in 2013, 272 cases had been reported from 26 counties. Of the 562 case-patients, 383 (68%) had neuroinvasive illness. The median age of the 562 individuals is 58 years (range: 3 months – 93 years); 346 (62%) are male. Dates of symptom onset for individuals where data are available range from May 27 to October 8. A total of 17 WNV-related fatalities have been reported to CDPH from eight counties: Glenn (1), Los Angeles (3), Orange (5), Sacramento (2), Shasta (1), Stanislaus (2), Sutter (2), and Tehama (1). In addition, 65 asymptomatic WNV-positive blood donors have been reported this year from 18 counties: Butte (1), Contra Costa (1), Fresno (9), Kern (3), Kings (1), Los Angeles (16), Orange (13), Placer (1), Riverside (1), San Bernardino (3), San Diego (1), San Francisco (1), San Joaquin (2), Santa Clara (3), Shasta (1), Stanislaus (4), Sutter (1), Tulare (2), and Yuba (1).

Number of reported WNV cases, by week of onset—California, 2013-2014*



*Reported to CDPH as of 10/13/14. Data incomplete due to reporting delays.

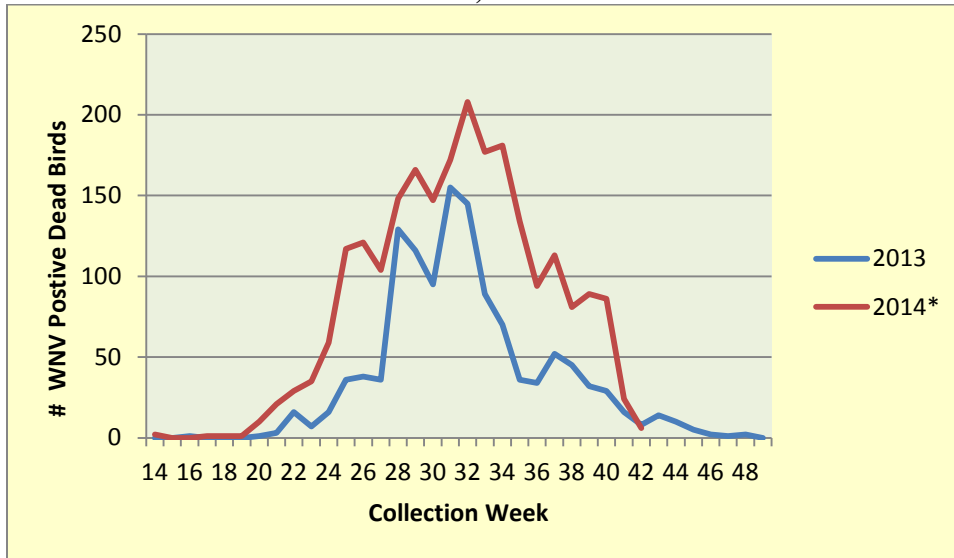
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Dead Birds

A total of 26 WNV positive dead birds were reported this week from the following counties: Contra Costa (1), Los Angeles (2), Placer (1), Sacramento (2), San Diego (4), San Joaquin (1), Santa Barbara (1), Santa Clara (9), and Sonoma (5). **This is the first indication of WNV in Santa Barbara County this year.** In 2014, 2,340 dead birds have tested positive for WNV from 36 counties. At this time last year, 1,188 WNV positive dead birds had been detected in 38 counties.

Number of reported WNV positive dead birds, by week of collection--
California, 2013-2014*

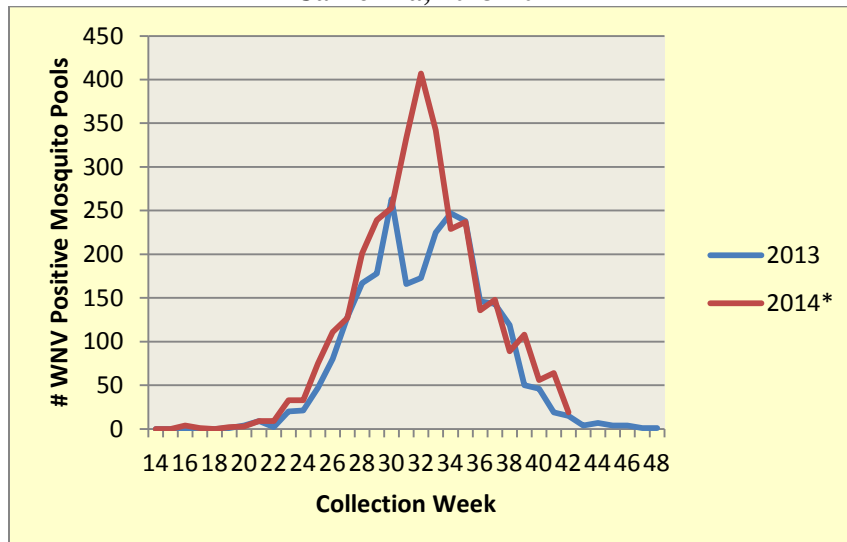


*Reported to CDPH as of 10/17/14. Data incomplete due to reporting delays.

Mosquito Pools

A total of 58 WNV positive mosquito pools were reported this week from the following 8 counties: Contra Costa (2), Fresno (2), Los Angeles (20), Orange (15), San Bernardino (2), San Diego (1), San Joaquin (13), and Stanislaus (3). In 2014, 3,268 mosquito pools from 30 counties have tested positive for WNV. At this time last year, 2,489 WNV positive mosquito pools had been reported from 28 counties.

Number of reported WNV positive mosquito pools, by week of collection--
California, 2013-2014*



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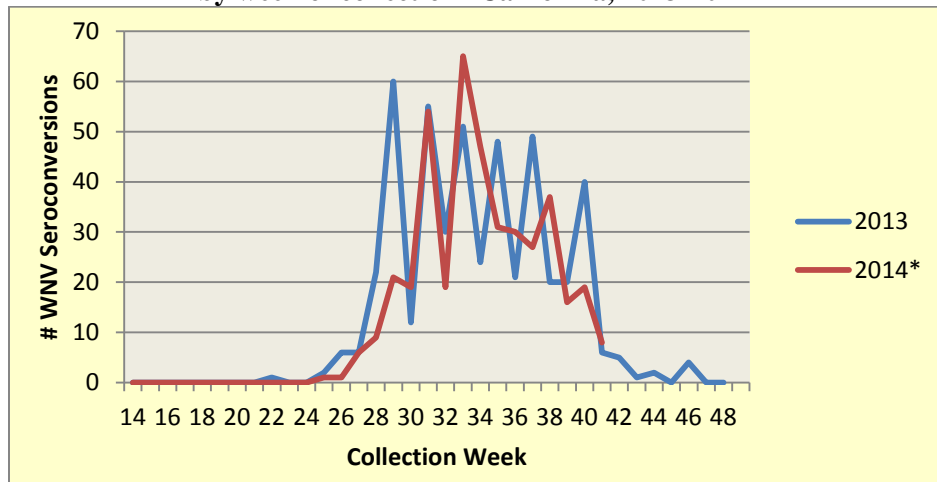
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Sentinel Chickens

A total of 17 new WNV seroconversions were reported this week from 10 flocks located in the following 4 counties: Los Angeles (11), Nevada (2), Shasta (3), and Sutter (1). **This is the first detection of WNV activity in Nevada County this year.** In 2014, 412 WNV positive chickens have been reported from 93 flocks located in 23 counties. At this time last year, 463 WNV seroconversions had been reported from 107 flocks in 25 counties.

Number of reported WNV sentinel chicken seroconversions,
by week of collection--California, 2013-2014*



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YTD Activity by Element and County, 2014				
County	Humans*	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		92	16	1
Butte	22	22	40	37
Colusa	4	4	1	8
Contra Costa	4	44	25	14
El Dorado		5		
Fresno	33	9	136	
Glenn	12	4	8	9
Humboldt		2		
Imperial	2			
Kern	8	3	111	
Kings	3	3	150	
Lake	1	18	71	5
Los Angeles	136	97	318	135
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	10
Napa		12		
Nevada				2
Orange	201	386	474	
Placer	3	40	77	
Riverside	9	1	89	32
Sacramento	10	293	486	9
San Bernardino	13	17	97	29
San Diego	4	23	1	1
San Joaquin	8	53	236	
San Mateo		18	15	
Santa Barbara		1		
Santa Clara	9	897	30	5
Santa Cruz		1		
Shasta	2	6	33	12
Solano	1	33	11	23
Sonoma		37	9	3
Stanislaus	33	47	175	12
Sutter	4	19	52	30
Tehama	5			13
Tulare	17	40	311	4
Ventura		7		
Yolo	9	71	221	9
Yuba	4	16	24	9
Totals	562	2,340	3,268	412

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	13,831	13,630
# Positive Counties	41	40
# Human Cases	272	562
# Positive Dead Birds / # Tested	1,188 / 3,096	2,340 / 3,798
# Positive Mosquito Pools / # Tested	2,489 / 29,009	3,268 / 29,127
# Seroconversions / # Tested	463 / 15,208	412 / 13,518

TESTING SUMMARIES

Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	74	0	0	0	0	0
	YTD	562	0	0	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	59	26
	YTD	3,798	2,340

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	308	17	0	0
	YTD	13,518	412	0	0
Mosquito Pools	Week	774	58	0	0
	YTD	29,127	3,268	0	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Contra Costa	Contra Costa MVCD	Danville	94526	American Crow	10/12/2014	WNV	RAMP
Los Angeles	Los Angeles Co West VCD	Culver City	90232	American Crow	10/10/2014	WNV	RT-PCR
Los Angeles	Los Angeles Co West VCD	Los Angeles	90064	American Crow	10/10/2014	WNV	RT-PCR
Placer	Placer MVCD	Colfax	95713	Western Scrub-Jay	10/2/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Rio Linda	95673	Yellow-billed Magpie	10/10/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	American Crow	10/10/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Chula Vista	91911	American Crow	10/9/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	National City	91950	American Crow	10/3/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Poway	92064	Common Raven	10/3/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Santee	92071	American Crow	10/6/2014	WNV	RT-PCR
San Joaquin	San Joaquin Co MVCD	Stockton	95219	American Crow	10/14/2014	WNV	RT-PCR
Santa Barbara	MVCD of Santa Barbara Co	Santa Ynez	93460	Western Scrub-Jay	10/13/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Altos	94022	American Crow	10/2/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Altos	94024	Western Scrub-Jay	10/8/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Gatos	95030	American Crow	10/9/2014	WNV	RT-PCR

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Santa Clara	Santa Clara Co VCD	Morgan Hill	95037	American Crow	10/6/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	10/6/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95123	American Crow	10/9/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	10/2/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	10/8/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	10/6/2014	WNV	RT-PCR
Sonoma	Marin-Sonoma MVCD	Petaluma	94952	American Crow	10/12/2014	WNV	RT-PCR
Sonoma	Marin-Sonoma MVCD	Santa Rosa	95401	Western Scrub-Jay	10/9/2014	WNV	RT-PCR
Sonoma	Marin-Sonoma MVCD	Santa Rosa	95403	American Crow	10/9/2014	WNV	RT-PCR
Sonoma	Marin-Sonoma MVCD	Santa Rosa	95403	American Crow	10/14/2014	WNV	RT-PCR
Sonoma	Marin-Sonoma MVCD	Windsor	95492	American Crow	10/14/2014	WNV	RT-PCR

Mosquitoes

County	Site Code	Pool #	City	Species	# in Pool	Trap	Collected	Virus	Method
Contra Costa	CNTR3502	564	Pittsburg	Cx. tarsalis	50	CO2	10/13/2014	WNV	RTPCR
Contra Costa	CNTR8142	558	Knightsen	Cx. tarsalis	38	CO2	10/13/2014	WNV	RTPCR
Fresno	FRWS5103	312	Tranquility	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
Fresno	FRWS5201	304	Cantua	Cx. tarsalis	48	CO2	10/8/2014	WNV	RTPCR
Los Angeles	GRLA2093	760	South Gate	Cx. quinquefasciatus	49	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA2100	750	Norwalk	Cx. quinquefasciatus	25	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA2133	729	Wilmington	Cx. quinquefasciatus	15	GRVD	10/6/2014	WNV	RTPCR
Los Angeles	GRLA2247	741	Pico Rivera	Cx. quinquefasciatus	50	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA2346	738	Montebello	Cx. quinquefasciatus	26	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA2511	5843	Los Angeles	Cx. quinquefasciatus	50	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA2574	5828	Sherman Oaks	Cx. quinquefasciatus	43	GRVD	10/7/2014	WNV	RTPCR
Los Angeles	GRLA2651	5829	Encino	Cx. quinquefasciatus	17	GRVD	10/7/2014	WNV	RTPCR
Los Angeles	GRLA2937	5848	Burbank	Cx. quinquefasciatus	50	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA3047	764	Downey	Cx. quinquefasciatus	50	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3048	740	Pico Rivera	Cx. quinquefasciatus	46	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	GRLA3054	752	Bell Gardens	Cx. quinquefasciatus	50	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3055	754	Maywood	Cx. quinquefasciatus	49	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3056	755	Cudahy	Cx. quinquefasciatus	50	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3057	757	Huntington Park	Cx. quinquefasciatus	50	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3058	759	Lynwood	Cx. quinquefasciatus	50	GRVD	10/9/2014	WNV	RTPCR
Los Angeles	GRLA3067	735	Gardena	Cx. quinquefasciatus	50	GRVD	10/6/2014	WNV	RTPCR
Los Angeles	GRLA3078	5842	Los Feliz	Cx. quinquefasciatus	40	GRVD	10/8/2014	WNV	RTPCR
Los Angeles	LACW1009	166	Los Angeles	Cx. quinquefasciatus	36	GRVD	10/7/2014	WNV	RTPCR
Los Angeles	SGVA898	332	San Gabriel	Cx. quinquefasciatus	28	GRVD	10/10/2014	WNV	RAMP
Orange	ORCO1005	2270	Buena Park	Cx. quinquefasciatus	50	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO1009	2354	Garden Grove	Cx. quinquefasciatus	41	GRVD	10/9/2014	WNV	RTPCR
Orange	ORCO1011	2349	La Habra	Cx. quinquefasciatus	25	CO2	10/9/2014	WNV	RTPCR
Orange	ORCO1021	2241	Tustin	Cx. quinquefasciatus	50	GRVD	10/7/2014	WNV	RTPCR
Orange	ORCO169	2277	Orange	Cx. quinquefasciatus	25	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO18	2346	Lake Forest	Cx. tarsalis	7	CO2	10/9/2014	WNV	RTPCR
Orange	ORCO2	2255	Fullerton	Cx. quinquefasciatus	18	GRVD	10/7/2014	WNV	RTPCR
Orange	ORCO217	2313	Santa Ana	Cx. quinquefasciatus	16	GRVD	10/9/2014	WNV	RTPCR
Orange	ORCO218	2315	Anaheim	Cx. quinquefasciatus	39	GRVD	10/9/2014	WNV	RTPCR

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Orange	ORCO228	2288	Westminster	Cx. quinquefasciatus	21	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO228	2301	Westminster	Cx. quinquefasciatus	8	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO33	2282	Westminster	Cx. quinquefasciatus	29	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO33	2283	Westminster	Cx. quinquefasciatus	28	GRVD	10/8/2014	WNV	RTPCR
Orange	ORCO36	2264	Cypress	Cx. quinquefasciatus	50	GRVD	10/7/2014	WNV	RTPCR
Orange	ORCO58	2320	Laguna Niguel	Cx. quinquefasciatus	24	GRVD	10/9/2014	WNV	RTPCR
San Bernardino	WVAL2021	1238	Fwy CA 71	Cx. quinquefasciatus	31	GRVD	10/7/2014	WNV	RTPCR
San Bernardino	WVAL6004	1226	Ontario	Cx. quinquefasciatus	24	GRVD	10/2/2014	WNV	RTPCR
San Diego	SAND430	83	San Diego	Cx. quinquefasciatus	40	GRVD	8/28/2014	WNV	RTPCR
San Joaquin	SJCM7027	2052	Lodi	Cx. pipiens	1	GRVD	10/16/2014	WNV	RTPCR
San Joaquin	SJCM8004	1962	Lodi	Cx. pipiens	9	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8008	2029	Manteca	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8008	2033	Manteca	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8009	2015	Stockton	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8020	1944	Acampo	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8027	2023	McDonald Isl. bridge	Cx. pipiens	6	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8056	1999	Manteca	Cx. pipiens	54	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8056	2001	Manteca	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8079	1979	Manteca	Cx. tarsalis	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8083	1984	Escalon	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8083	1986	Escalon	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR
San Joaquin	SJCM8111	2038	Stockton	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR
Stanislaus	TRLK407	1377	Turlock	Cx. pipiens	34	CO2	10/14/2014	WNV	RTPCR
Stanislaus	TRLK432	1386	Turlock	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR
Stanislaus	TRLK432	1392	Turlock	Cx. pipiens	50	CO2	10/14/2014	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Los Angeles	LACW1002	Torrance	10/2/2014	WNV	1608	1610	
Los Angeles	LACW1003	Redondo Beach	10/1/2014	WNV	1613	1614	1712
Los Angeles	LACW1004	Lawndale	9/30/2014	WNV	1619		
Los Angeles	LACW1009	Los Angeles	9/30/2014	WNV	1643	1644	1647
Los Angeles	LACW1026	Beverly Hills	10/7/2014	WNV	1691		
Los Angeles	LACW1073	Los Angeles	9/29/2014	WNV	1703		
Nevada	NEVA0004	Auburn	10/8/2014	WNV	1591	1592	
Shasta	SHAS5038		4/19/20	WNV	2159	2164	
Shasta	SHAS9702	Millville	10/8/2014	WNV	2169		
Sutter	SUYA0084	Yuba City	10/9/2014	WNV	2201		

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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.

Dead Birds

Oral swab samples from corvids are collected onto RNase cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, western equine encephalomyelitis (WEEV), and St. Louis encephalitis (SLEV) viruses by EIA and IFA. Positive samples are confirmed by western-blot or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for WEEV, SLEV, and WNV viral RNA using a Taqman multiplex RT-PCR. CVEC will cease confirmation testing on PCR-positive pools of *Cx. tarsalis* and *Cx. quinquefasciatus* but will continue to confirm multiplex PCR-positive results for other mosquito species using singleplex RT-PCR.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Tina Feiszli by phone (510) 412-6253 or email: tina.feiszli@cdph.ca.gov.

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