

California Arbovirus Surveillance Bulletin #37

Week 44 Friday, October 31, 2014

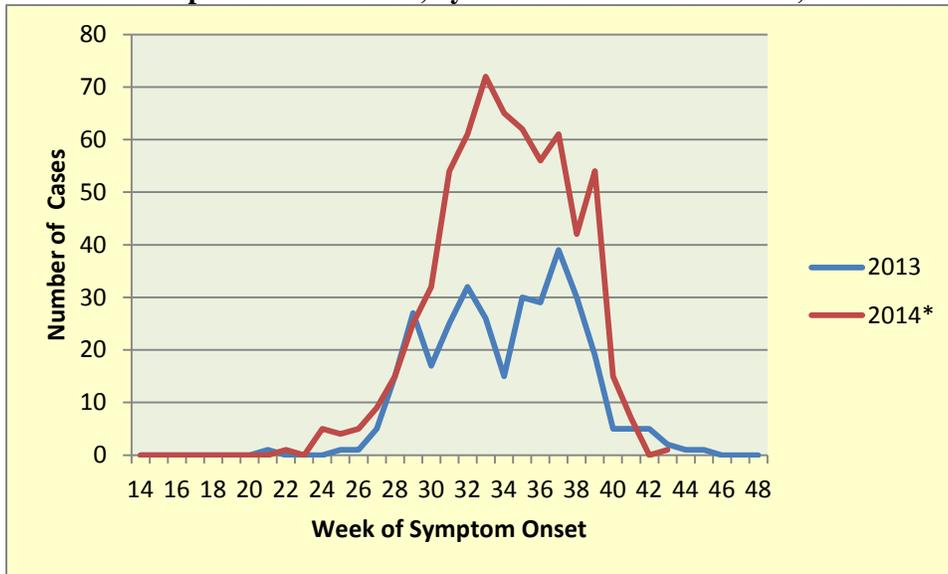


WEEKLY UPDATE

Humans

A total of 46 new cases of West Nile virus (WNV) disease were reported to the California Department of Public Health (CDPH) this week from the following 6 counties: Alameda (1), Kern (1), Los Angeles (25), Orange (16), Placer (2), and San Diego (1). As of October 27, a total of 654 human cases of WNV disease have been reported from 30 counties. As of this date in 2013, 319 cases had been reported from 27 counties. Of the 654 case-patients, 449 (69%) had neuroinvasive illness. The median age of the 654 individuals is 59 years (range: 3 months – 94 years); 413 (63%) are male. Dates of symptom onset for individuals where data are available range from May 15 to October 11. A total of 22 WNV-related fatalities have been reported to CDPH from 10 counties: Glenn (1), Los Angeles (5), Orange (6), Placer (1), Sacramento (2), San Diego (1), Shasta (1), Stanislaus (2), Sutter (2), and Tehama (1). In addition, 75 asymptomatic WNV-positive blood donors have been reported this year from 19 counties: Butte (1), Contra Costa (1), Fresno (11), Kern (3), Kings (1), Los Angeles (19), Orange (13), Placer (2), Riverside (1), San Bernardino (6), San Diego (2), 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 10/27/14. Data incomplete due to reporting delays.

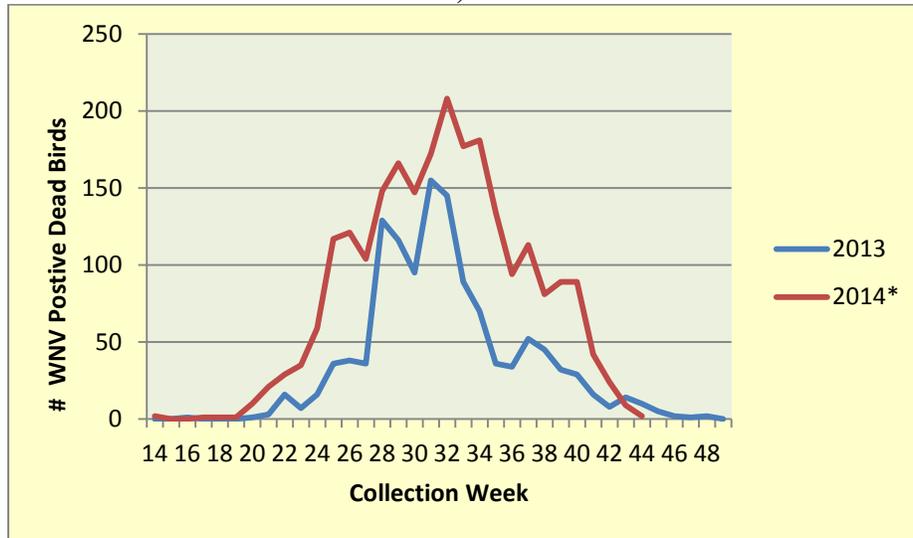
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Dead Birds

A total of 15 WNV positive dead birds were reported this week from the following 6 counties: Alameda (1), El Dorado (1), Los Angeles (2), Orange (7), San Diego (3), and Santa Barbara (1). In 2014, 2,390 dead birds have tested positive for WNV from 36 counties. At this time last year, 1,210 WNV positive dead birds had been detected in 38 counties.

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

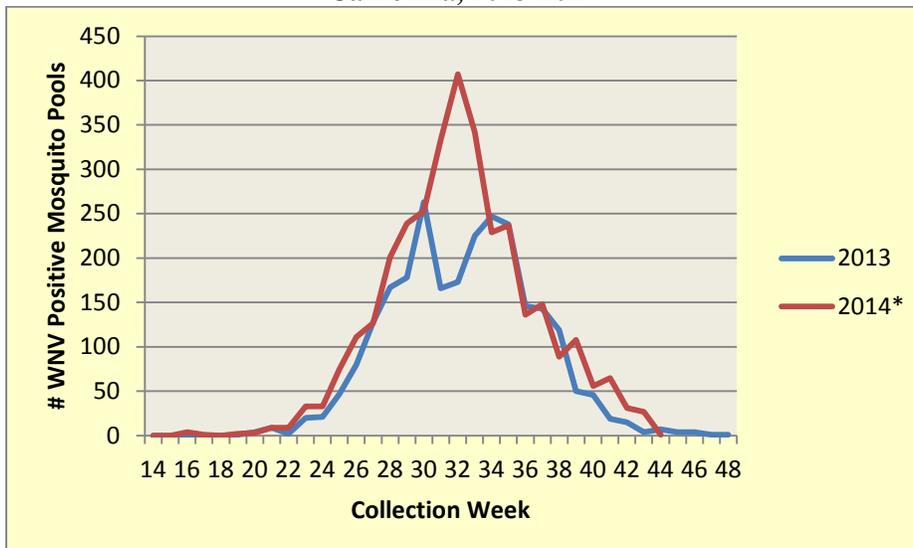


*Reported to CDPH as of 10/31/14. Data incomplete due to reporting delays.

Mosquito Pools

A total of 27 WNV positive mosquito pools were reported this week from the following 3 counties: Los Angeles (12), Orange (14), and San Joaquin (1). In 2014, 3,309 mosquito pools from 30 counties have tested positive for WNV. At this time last year, 2,511 WNV positive mosquito pools had been reported from 28 counties.

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



*Reported to CDPH as of 10/31/14. Data incomplete due to reporting delays.

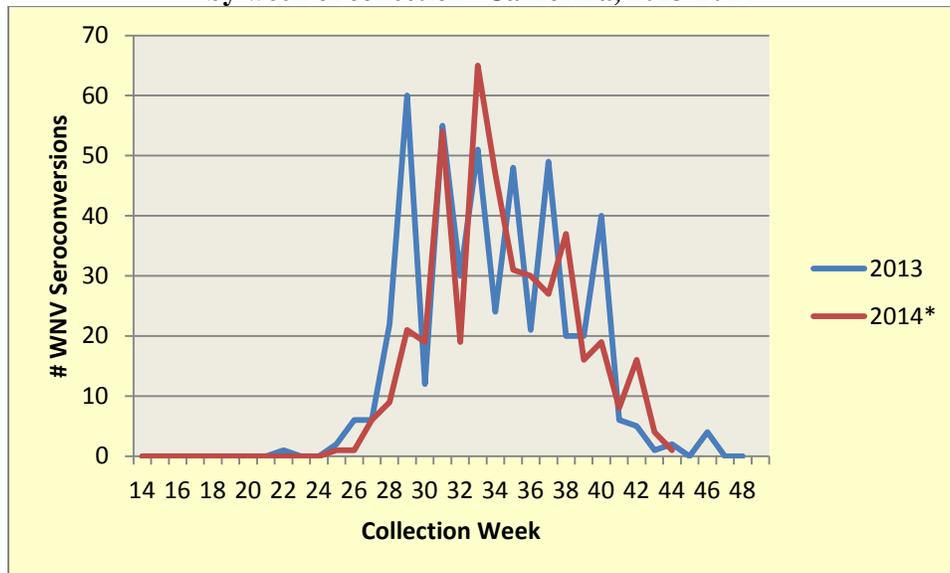
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Sentinel Chickens

A total of 10 new WNV seroconversions were reported this week from 8 flocks located in the following 6 counties: Colusa (1), Contra Costa (1), Los Angeles (5), Riverside (1), San Diego (1), and Sutter (1). In 2014, 433 WNV positive chickens have been reported from 95 flocks located in 23 counties. At this time last year, 478 WNV seroconversions had been reported from 111 flocks in 26 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	1	96	16	1
Butte	22	22	40	37
Colusa	5	4	1	9
Contra Costa	4	44	25	15
El Dorado		6		
Fresno	33	9	138	
Glenn	12	4	8	9
Humboldt		2		
Imperial	2			
Kern	10	3	111	
Kings	3	3	150	
Lake	1	18	71	5
Los Angeles	184	99	336	140
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	10
Napa		12		
Nevada				2
Orange	232	416	488	
Placer	7	40	77	
Riverside	9	1	91	40
Sacramento	10	294	487	10
San Bernardino	13	17	97	32
San Diego	6	26	1	2
San Joaquin	8	53	239	
San Mateo		19	15	
Santa Barbara		2		
Santa Clara	9	904	30	5
Santa Cruz		1		
Shasta	2	6	33	12
Solano	1	33	11	23
Sonoma		37	9	3
Stanislaus	35	47	176	12
Sutter	4	19	52	31
Tehama	5			13
Tulare	17	40	311	4
Ventura		7		
Yolo	10	71	221	9
Yuba	4	16	24	9
Totals	654	2,390	3,309	433

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,162	14,039
# Positive Counties	42	40
# Human Cases	319	654
# Positive Dead Birds / # Tested	1,210 / 3,165	2,390 / 3,905
# Positive Mosquito Pools / # Tested	2,511 / 30,021	3,309 / 30,569
# Seroconversions / # Tested	478 / 16,062	433 / 14,204

TESTING SUMMARIES

Humans

Human Cases	Week	WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
		46	0	0	0	0	0
	YTD	654	0	0	0	0	0

Dead Birds

Dead Birds	Week	Number Tested	WNV Positive
		49	15
		YTD 3,905	2,390

Chickens & Mosquitoes

Chicken Sera	Week	Number Tested	WNV Positive	SLEV Positive	WEEV Positive
		308	10	0	0
		YTD 14,204	433	0	0
Mosquito Pools	Week	718	27	0	0
		YTD 30,569	3,309	0	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Alameda	Alameda Co MAD	Livermore	94551	American Crow	10/28/2014	WNV	RAMP
El Dorado	El Dorado Co Env Mgmt	Placerville	95667	Western Scrub-Jay	10/8/2014	WNV	RT-PCR
Los Angeles	Los Angeles Co West VCD	Culver City	90230	American Crow	10/15/2014	WNV	RT-PCR
Los Angeles	Los Angeles Co West VCD	Torrance	90505	American Crow	10/15/2014	WNV	RT-PCR
Orange	Orange Co VCD	Anaheim	92808	American Crow	10/20/2014	WNV	RT-PCR
Orange	Orange Co VCD	Buena Park	90620	American Crow	10/20/2014	WNV	RT-PCR
Orange	Orange Co VCD	Cypress	90630	American Crow	10/22/2014	WNV	RT-PCR
Orange	Orange Co VCD	Fullerton	92835	House Finch	10/22/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92646	American Crow	10/20/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92604	American Crow	10/18/2014	WNV	RT-PCR
Orange	Orange Co VCD	La Palma	90623	American Crow	10/19/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Fallbrook	92028	American Crow	10/27/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Lemon Grove	91945	Western Scrub-Jay	10/24/2014	WNV	RT-PCR

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San Diego	San Diego Co VCP	San Diego	92128	Cooper's Hawk	10/24/2014	WNV	RT-PCR
Santa Barbara	MVCD of Santa Barbara Co	Solvang	93463	American Crow	10/20/2014	WNV	RT-PCR

Mosquitoes

County	Site Code	Pool #	City	Species	# in Pool	Trap	Collected	Virus	Method
Los Angeles	GRLA2033	5905	Tujunga	Cx. quinquefasciatus	50	GRVD	10/23/2014	WNV	RTPCR
Los Angeles	GRLA2329	788	Whittier	Cx. quinquefasciatus	45	GRVD	10/21/2014	WNV	RTPCR
Los Angeles	GRLA2359	792	Pico Rivera	Cx. quinquefasciatus	38	GRVD	10/21/2014	WNV	RTPCR
Los Angeles	GRLA2511	5898	Los Angeles	Cx. quinquefasciatus	50	GRVD	10/23/2014	WNV	RTPCR
Los Angeles	GRLA2574	5888	Sherman Oaks	Cx. quinquefasciatus	41	GRVD	10/22/2014	WNV	RTPCR
Los Angeles	GRLA3046	812	Bellflower	Cx. quinquefasciatus	45	GRVD	10/22/2014	WNV	RTPCR
Los Angeles	GRLA3057	807	Huntington Park	Cx. quinquefasciatus	50	GRVD	10/22/2014	WNV	RTPCR
Los Angeles	GRLA3061	815	Los Angeles	Cx. quinquefasciatus	50	GRVD	10/23/2014	WNV	RTPCR
Los Angeles	GRLA3065	822	Los Angeles	Cx. quinquefasciatus	50	GRVD	10/23/2014	WNV	RTPCR
Los Angeles	GRLA3067	830	Gardena	Cx. quinquefasciatus	43	GRVD	10/24/2014	WNV	RTPCR
Los Angeles	GRLA3077	5896	Silver Lake	Cx. quinquefasciatus	43	GRVD	10/23/2014	WNV	RTPCR
Los Angeles	LACW1009	172	Los Angeles	Cx. quinquefasciatus	39	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO1008	2491	Fullerton	Cx. quinquefasciatus	49	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO1008	2493	Fullerton	Cx. quinquefasciatus	39	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO1008	2517	Fullerton	Cx. quinquefasciatus	23	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO1009	2543	Garden Grove	Cx. quinquefasciatus	50	GRVD	10/22/2014	WNV	RTPCR
Orange	ORCO1010	2361	Huntington Beach	Cx. quinquefasciatus	24	GRVD	10/10/2014	WNV	RTPCR
Orange	ORCO168	2490	Santa Ana	Cx. quinquefasciatus	37	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO169	2387	Orange	Cx. quinquefasciatus	40	GRVD	10/15/2014	WNV	RTPCR
Orange	ORCO169	2489	Orange	Cx. quinquefasciatus	26	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO199	2436	Costa Mesa	Cx. quinquefasciatus	10	GRVD	10/16/2014	WNV	RTPCR
Orange	ORCO217	2454	Santa Ana	Cx. quinquefasciatus	30	GRVD	10/16/2014	WNV	RTPCR
Orange	ORCO218	2477	Anaheim	Cx. quinquefasciatus	14	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO3	2503	Garden Grove	Cx. quinquefasciatus	50	GRVD	10/21/2014	WNV	RTPCR
Orange	ORCO60	2578	Laguna Woods	Cx. quinquefasciatus	50	GRVD	10/23/2014	WNV	RTPCR
Orange	ORCO82	2385	Cypress	Cx. quinquefasciatus	47	GRVD	10/15/2014	WNV	RTPCR
San Joaquin	SJCM8009	2205	Stockton	Cx. erythrothorax	15	CO2	10/28/2014	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Colusa	CLSA0001	Colusa	10/21/2014	WNV	1289		
Contra Costa	CNTR8152	Knightsen	10/20/2014	WNV	1308		
Los Angeles	LACW1002	Torrance	10/15/2014	WNV	1607		
Los Angeles	LACW1003	Redondo Beach	10/16/2014	WNV	1617		
Los Angeles	LACW1073	Los Angeles	10/15/2014	WNV	1704	1706	1708
Riverside	COAV0131	Oasis	10/27/2014	WNV	1218		
San Diego	SAND0016	Carlsbad	10/13/2014	WNV	2136		
Sutter	SUYA0084	Yuba City	10/22/2014	WNV	2202		

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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.