

California Arbovirus Surveillance Bulletin #41

Week 49 Friday, December 5, 2014

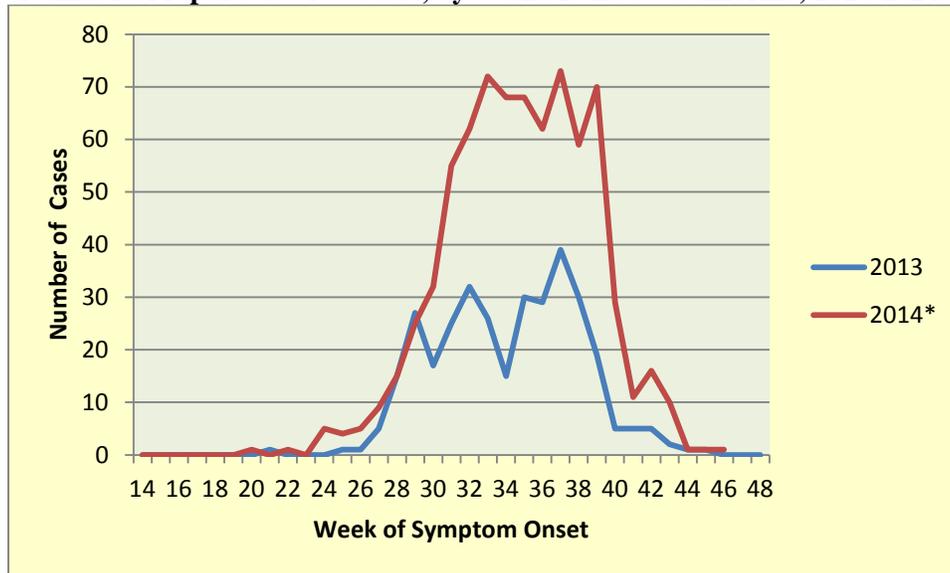


WEEKLY UPDATE

Humans

As of December 1, a total of 769 human cases of WNV disease have been reported from 31 counties. As of this date in 2013, 363 cases had been reported from 31 counties. Of the 769 case-patients, 524 (68%) had neuroinvasive illness. The median age of the 769 individuals is 59 years (range: 3 months – 94 years); 480 (62%) are male. Dates of symptom onset for individuals where data are available range from May 15 to November 10. A total of 29 WNV-related fatalities have been reported to CDPH from 11 counties: Glenn (1), Kern (1), Los Angeles (9), Orange (7), Placer (1), Sacramento (2), San Diego (1), Shasta (1), Stanislaus (2), Sutter (3), and Tehama (1). In addition, 83 asymptomatic WNV-positive blood donors have been reported this year from 19 counties: Butte (1), Contra Costa (2), Fresno (11), Kern (3), Kings (1), Los Angeles (21), Orange (16), Placer (2), Riverside (1), San Bernardino (7), San Diego (2), San Francisco (1), San Joaquin (2), Santa Clara (4), 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 12/1/14. Data incomplete due to reporting delays.

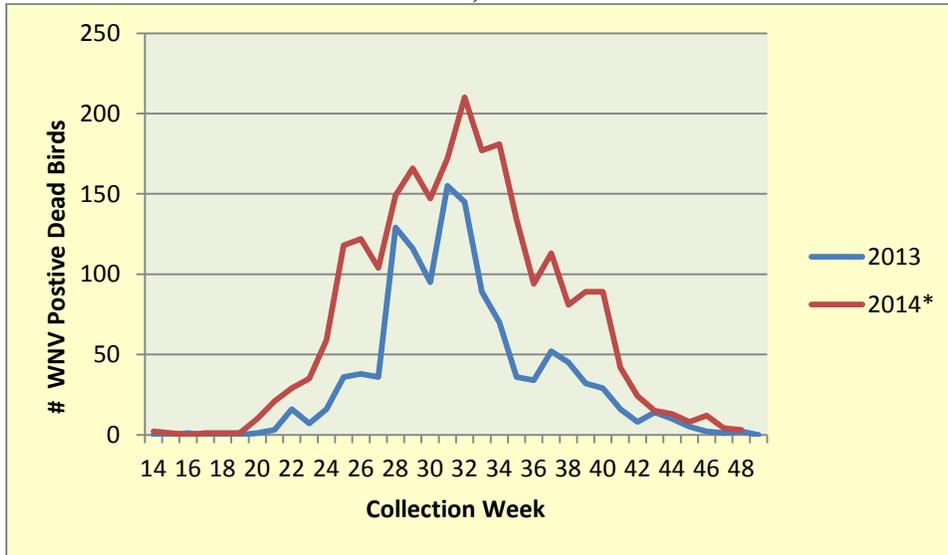
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Dead Birds

A total of 7 WNV positive dead birds were reported this week from the following four counties: Orange (4), San Diego (1), San Mateo, (1), and Santa Clara (1). In 2014, 2,437 dead birds have tested positive for WNV from 36 counties. At this time last year, 1,238 WNV positive dead birds had been detected in 38 counties.

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

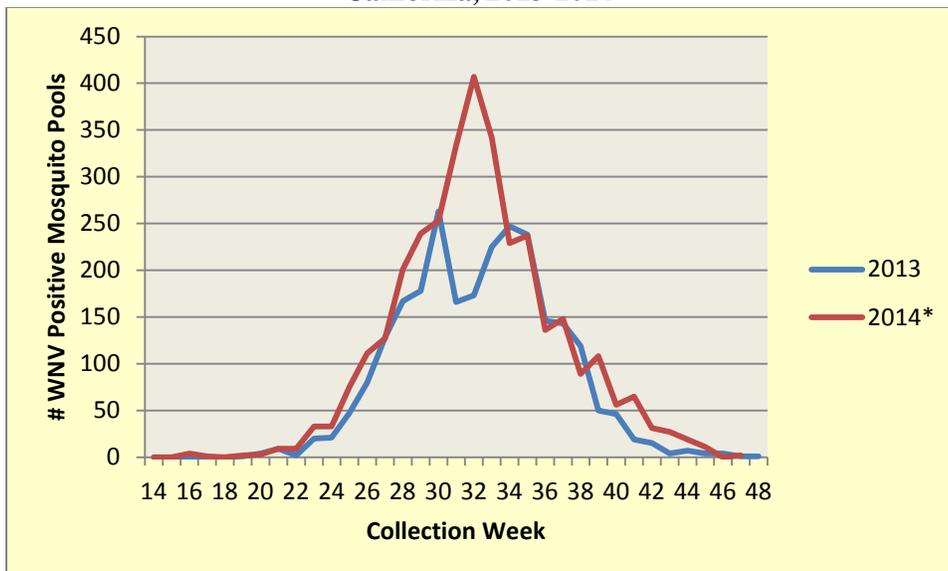


*Reported to CDPH as of 12/5/14.

Mosquito Pools

Two new WNV positive mosquito pools have been reported from Los Angeles County. In 2014, 3,340 mosquito pools from 30 counties have tested positive for WNV. At this time last year, 2,528 WNV positive mosquito pools had been reported from 27 counties.

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



*Reported to CDPH as of 12/5/14.

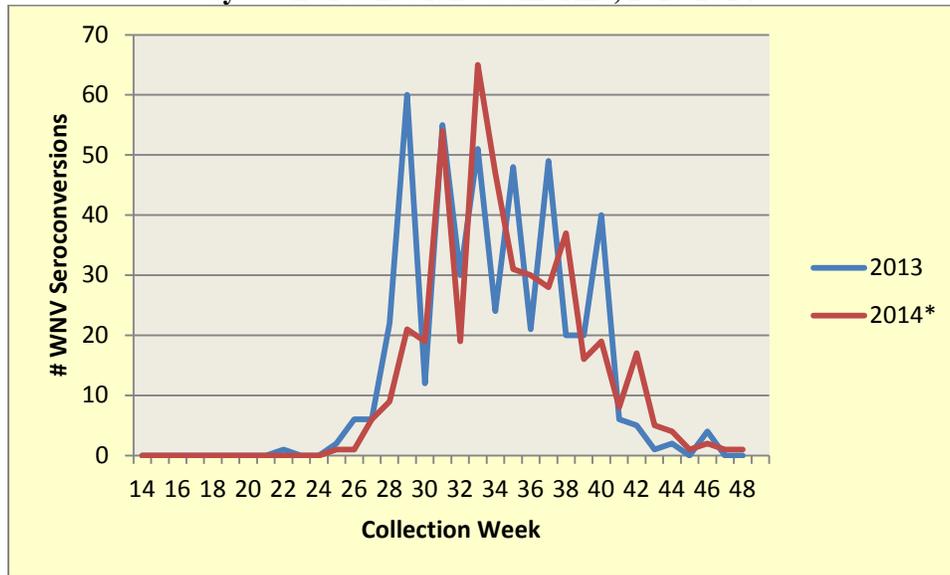
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Sentinel Chickens

Three WNV seroconversions have been reported from 3 flocks in Los Angeles (2) and Riverside (1) counties. In 2014, 443 WNV positive chickens have been reported from 97 flocks located in 23 counties. At this time last year, 484 WNV seroconversions had been reported from 112 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	24	22	40	37
Colusa	5	4	1	9
Contra Costa	4	44	25	15
El Dorado		7		
Fresno	42	9	138	
Glenn	12	4	8	9
Humboldt		2		
Imperial	2			
Kern	13	3	111	
Kings	3	3	150	
Lake	1	18	71	5
Los Angeles	237	99	356	146
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	11
Napa		12		
Nevada				2
Orange	264	431	499	
Placer	7	40	77	
Riverside	11	1	91	43
Sacramento	10	294	487	10
San Bernardino	17	17	97	32
San Diego	9	35	1	2
San Joaquin	8	53	239	
San Mateo		20	15	
Santa Barbara		2		
Santa Clara	11	925	30	5
Santa Cruz		1		
Shasta	2	6	33	12
Solano	1	33	11	23
Sonoma		37	9	3
Stanislaus	36	47	176	12
Sutter	7	19	52	31
Tehama	4			13
Tulare	18	40	311	4
Ventura	1	7		
Yolo	10	71	221	9
Yuba	4	16	24	9
Totals	769	2,437	3,340	443

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,560	14,494
# Positive Counties	43	40
# Human Cases	363	769
# Positive Dead Birds / # Tested	1,238 / 3,243	2,437 / 4,059
# Positive Mosquito Pools / # Tested	2,528 / 30,734	3,340 / 31,455
# Seroconversions / # Tested	484 / 16,919	443 / 14,974

TESTING SUMMARIES

Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	17	0	0	0	0	0
	YTD	769	0	0	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	26	7
	YTD	4,059	2,437

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	141	3	0	0
	YTD	14,974	443	0	0
Mosquito Pools	Week	36	2	0	0
	YTD	31,455	3,340	0	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Orange	Orange Co VCD	Fountain Valley	92708	American Crow	11/17/2014	WNV	RT-PCR
Orange	Orange Co VCD	Fountain Valley	92708	American Crow	11/24/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92646	American Crow	11/24/2014	WNV	RT-PCR
Orange	Orange Co VCD	Ladera Ranch	92694	American Crow	11/18/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Spring Valley	91977	Cooper's Hawk	11/18/2014	WNV	RT-PCR
San Mateo	San Mateo Co MAD	Menlo Park	94025	American Crow	11/25/2014	WNV	RAMP
Santa Clara	Santa Clara Co VCD	Santa Clara	95051	American Crow	11/21/2014	WNV	RT-PCR

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Mosquitoes

County	Site Code	Pool #	City	Species	# in Pool	Trap	Collected	Virus	Method
Los Angeles	GRLA2323	914	Los Angeles	Cx. quinquefasciatus	33	GRVD	11/18/2014	WNV	RTPCR
Los Angeles	GRLA3074	918	Lincoln Heights	Cx. quinquefasciatus	25	GRVD	11/18/2014	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Los Angeles	LACW1073	Los Angeles	11/10/2014	WNV	1705
Los Angeles	LACW1024	Calabasas	11/20/2014	WNV	1680
Riverside	COAV0035	Mecca	11/24/2014	WNV	1232

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.westmilemaps.usgs.gov