

California Arbovirus Surveillance Bulletin #1

Week 1 Friday, January 9, 2015

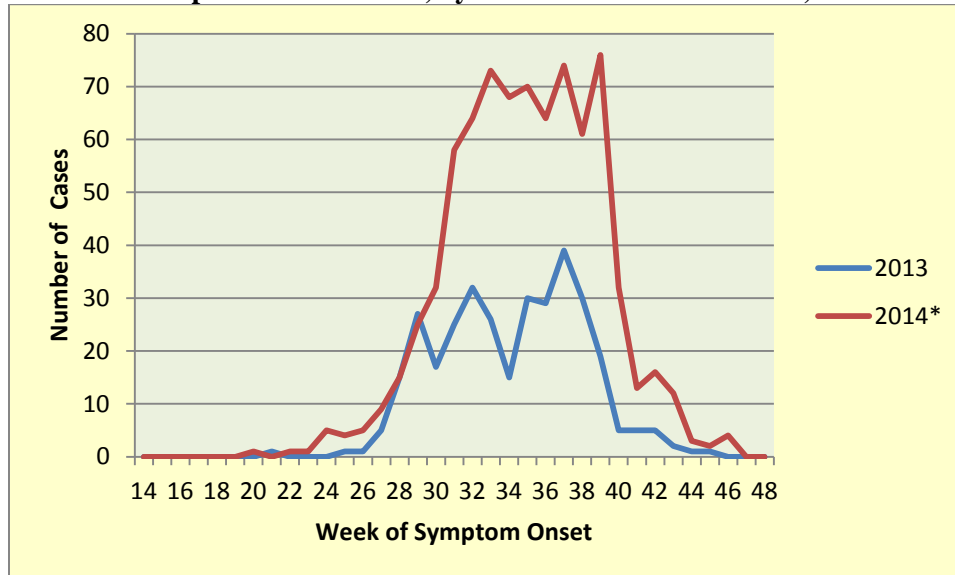


2014 Summary

Humans

In 2014, a total of 798 human cases of West Nile virus (WNV) illness have been reported to the California Department of Public Health (CDPH) from 31 counties. Of the 798 case-patients, 544 (68%) had neuroinvasive illness. The median age of the 798 individuals is 59 years (range: 3 months – 94 years); 508 (64%) are male. Dates of symptom onset for individuals where data are available range from March 14 to November 14. 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, 88 asymptomatic WNV-positive blood donors have been reported this year from 19 counties: Butte (1), Contra Costa (2), Fresno (11), Kern (3), Kings (2), Los Angeles (23), Orange (16), Placer (2), Riverside (1), San Bernardino (9), San Diego (2), San Francisco (1), San Joaquin (1), Santa Clara (4), Shasta (1), Stanislaus (5), Sutter (1), Tulare (2), and Yuba (1).

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



*Reported to CDPH as of 1/5/15. Data incomplete due to reporting delays.

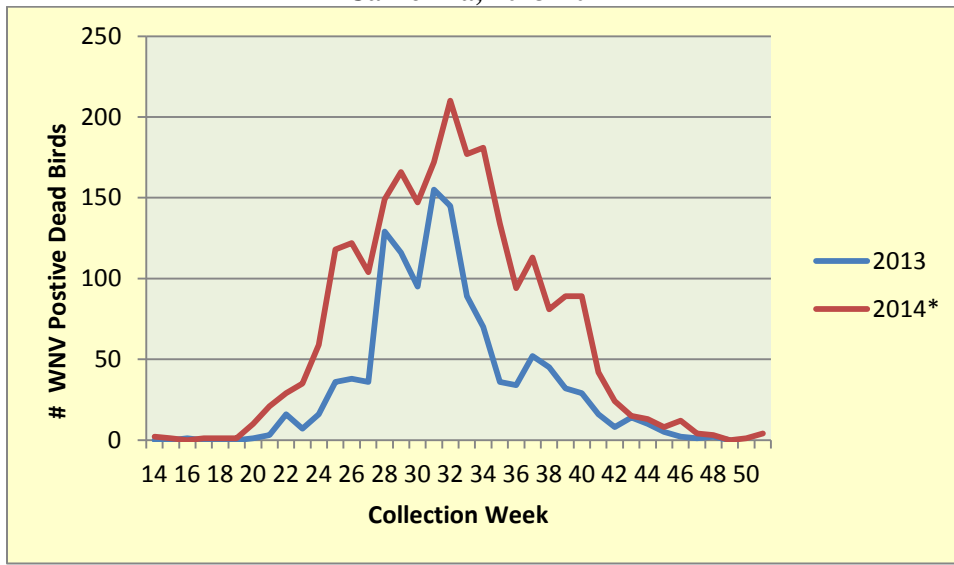
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Dead Birds

Since December 13th, five dead birds have tested positive for WNV from two counties: San Diego (4), and San Mateo (1). In 2014, 2,442 dead birds have tested positive from 36 counties. WNV positive birds were detected from January 17 – December 17.

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

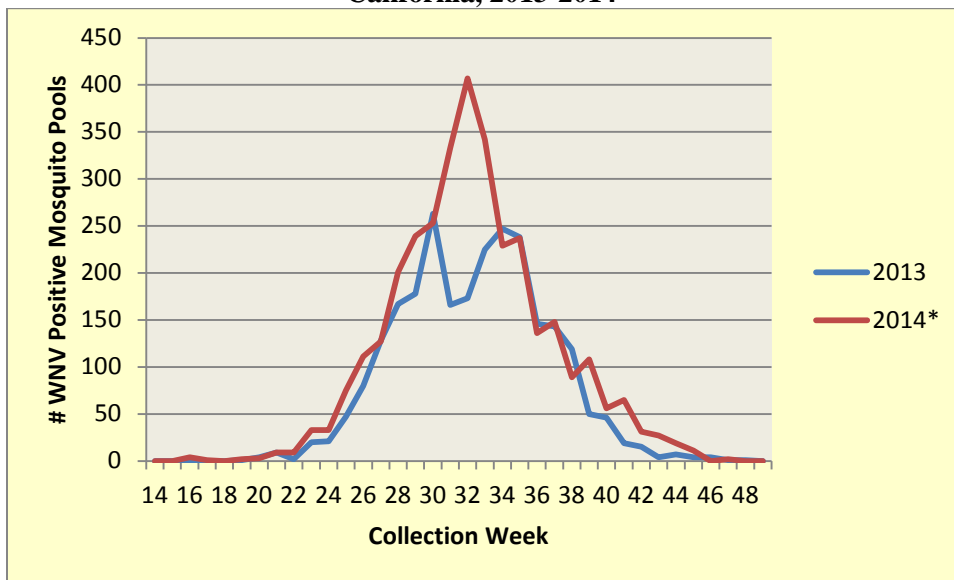


*Reported to CDPH as of 1/9/15.

Mosquito Pools

In 2014, WNV was detected in 3,340 mosquito pools from 30 counties. WNV positive mosquitoes were collected from April 15 – November 18.

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



*Reported to CDPH as of 1/9/15.

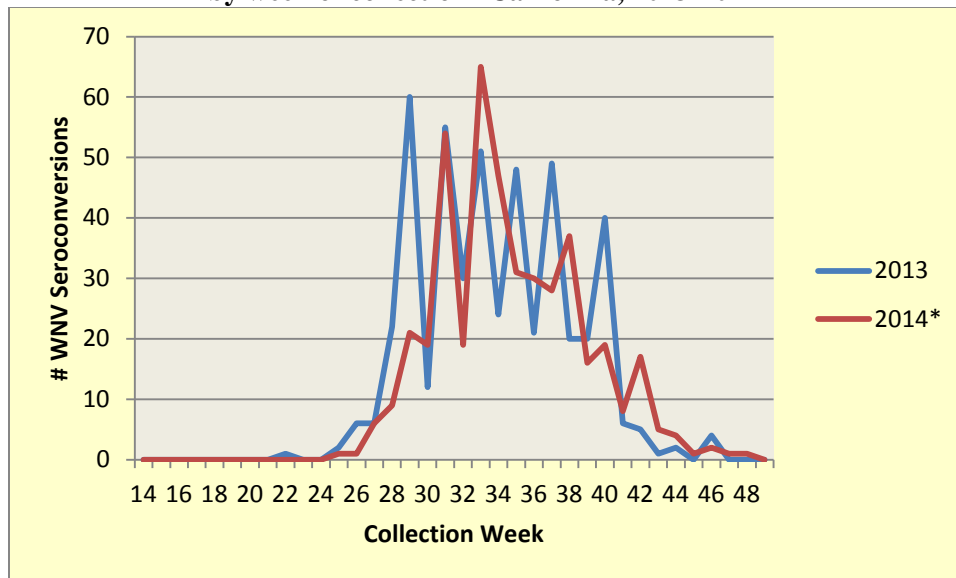
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Sentinel Chickens

In 2014, 443 seroconversions to WNV were detected among 97 flocks in 23 counties. Seroconversions occurred from May 12 – November 24.

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	25	22	40	37
Colusa	5	4	1	9
Contra Costa	5	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	251	99	356	146
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	11
Napa		12		
Nevada				2
Orange	266	431	499	
Placer	7	40	77	
Riverside	11	1	91	43
Sacramento	10	294	487	10
San Bernardino	21	17	97	32
San Diego	11	39	1	2
San Joaquin	9	53	239	
San Mateo		21	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	38	47	176	12
Sutter	7	19	52	31
Tehama	4			13
Tulare	19	40	311	4
Ventura	1	7		
Yolo	10	71	221	9
Yuba	5	16	24	9
Totals	798	2,442	3,340	443

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,651	14,701
# Positive Counties	43	40
# Human Cases	368	798
# Positive Dead Birds / # Tested	1,251 / 3,306	2,442 / 4,083
# Positive Mosquito Pools / # Tested	2,528 / 30,774	3,340 / 31,553
# Seroconversions / # Tested	484 / 16,919	443 / 15,023

TESTING SUMMARIES

Humans

Human Cases		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
		Week	9	0	0	0	0
YTD	798	0	0	0	0	0	

Dead Birds

Dead Birds		Number Tested	WNV Positive	
		Week	21	5
		YTD	4,083	2,442

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive		
		Chicken Sera	Week	49	0	0	0
		YTD	15,023	443	0	0	
Mosquito Pools	Week	55	0	0	0		
YTD	31,553	3,340	0	0			

New Positives

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
San Diego	San Diego Co VCP	San Diego	92124	Cooper's Hawk	12/12/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Oceanside	92054	Hawk	12/15/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	San Diego	92119	Common Raven	12/16/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	San Diego	92111	Western Scrub-Jay	12/16/2014	WNV	RT-PCR
San Mateo	San Mateo Co MAD	Burlingame	94010	American Crow	12/17/2014	WNV	RT-PCR

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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.