

California Arbovirus Surveillance Bulletin #42

Week 50 Friday, December 12, 2014

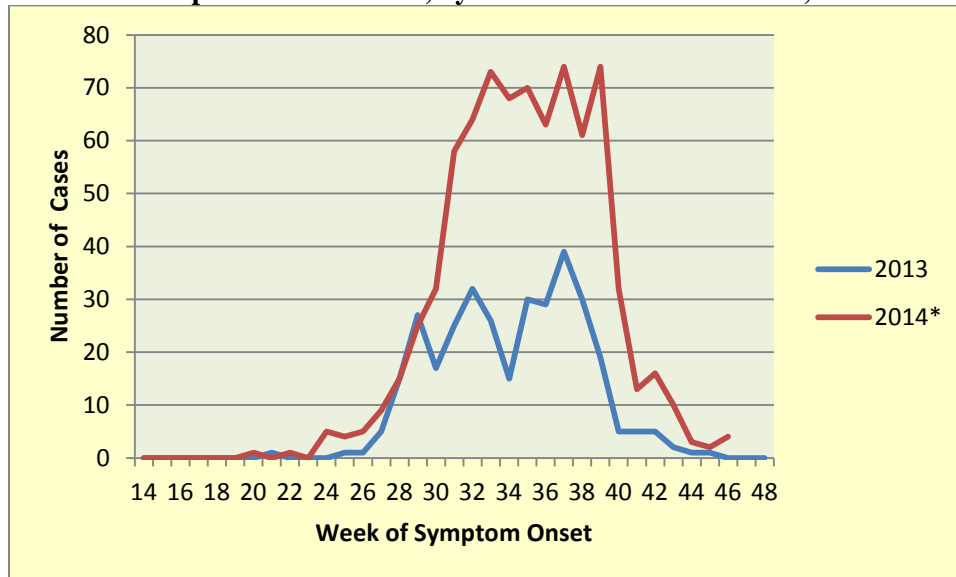


WEEKLY UPDATE

Humans

As of December 8, a total of 789 human cases of WNV disease have been reported from 31 counties. As of this date in 2013, 366 cases had been reported from 31 counties. Of the 789 case-patients, 541 (69%) had neuroinvasive illness. The median age of the 789 individuals is 59 years (range: 3 months – 94 years); 503 (64%) are male. Dates of symptom onset for individuals where data are available range from May 15 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, 85 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 (22), Orange (16), Placer (2), Riverside (1), San Bernardino (8), 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 12/8/14. Data incomplete due to reporting delays.

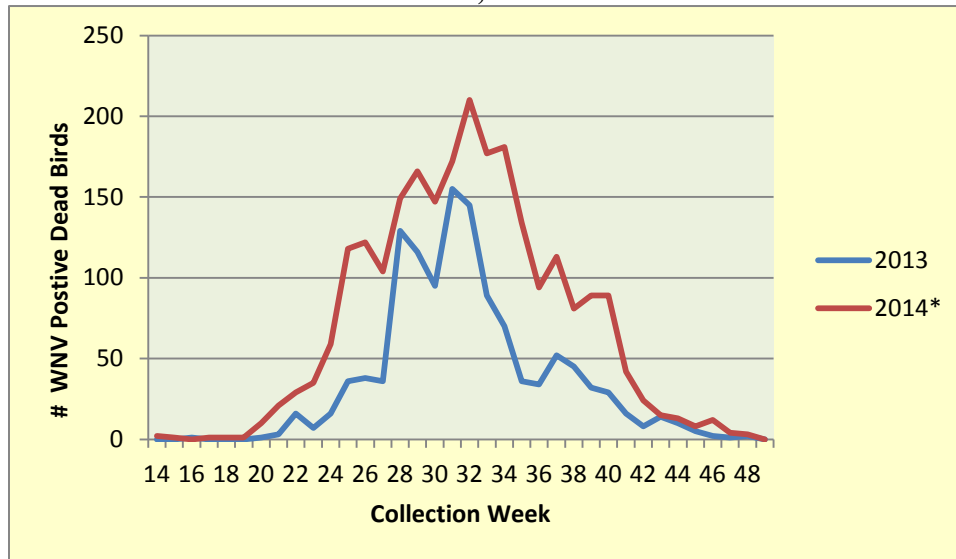
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Dead Birds

No positive dead birds were reported this week. 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***

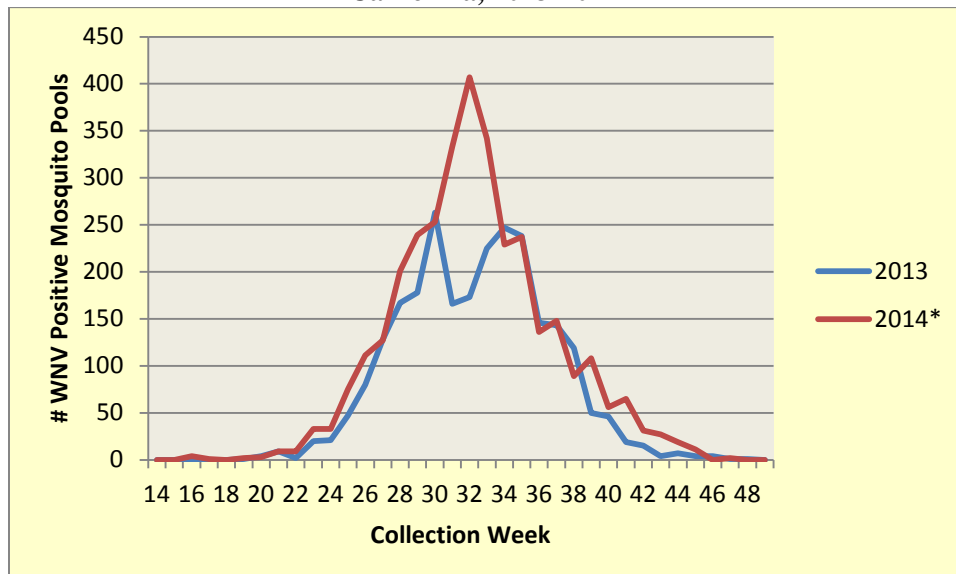


*Reported to CDPH as of 12/12/14.

Mosquito Pools

No positive mosquito pools were reported this week. 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 12/12/14.

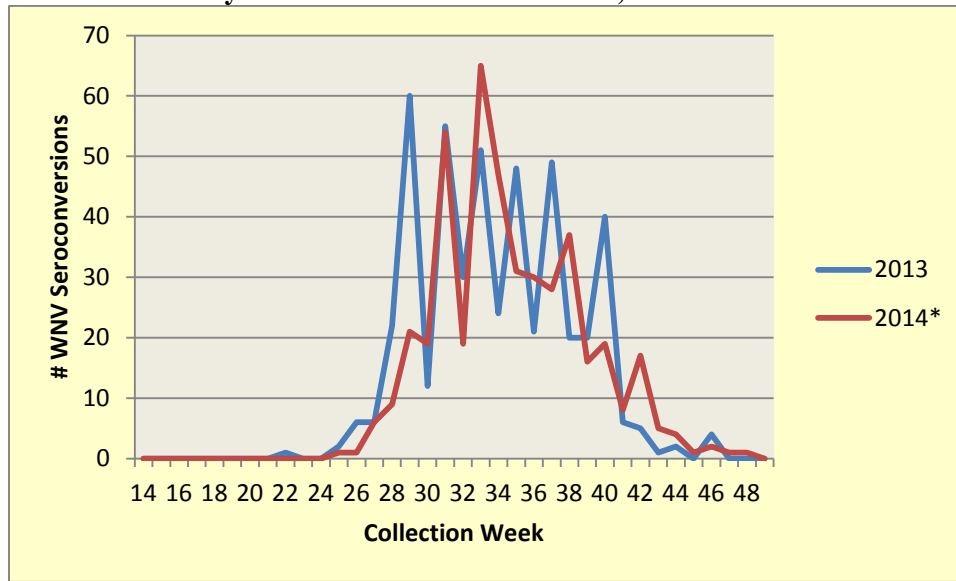
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Sentinel Chickens

No new seroconversions were reported this week. 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*



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

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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	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	248	99	356	146
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	11
Napa		12		
Nevada				2
Orange	265	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	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	37	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	789	2,437	3,340	443

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,560	14,542
# Positive Counties	43	40
# Human Cases	366	789
# Positive Dead Birds / # Tested	1,238 / 3,243	2,437 / 4,062
# Positive Mosquito Pools / # Tested	2,528 / 30,734	3,340 / 31,498
# Seroconversions / # Tested	484 / 16,919	443 / 14,974

TESTING SUMMARIES

Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	20	0	0	0	0	0
	YTD	789	0	0	0	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	3	0
	YTD	4,062	2,437

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	0	0	0	0
	YTD	14,974	443	0	0
Mosquito Pools	Week	43	0	0	0
	YTD	31,498	3,340	0	0

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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.westmile.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