

# California Arbovirus Surveillance Bulletin #39

Week 46 Friday, November 14, 2014

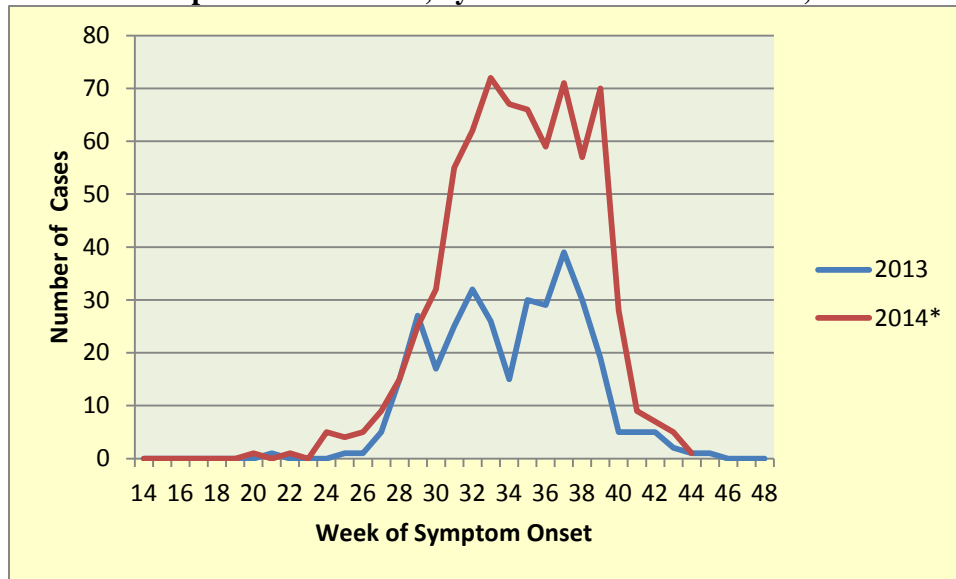


## WEEKLY UPDATE

### Humans

A total of 28 new cases of West Nile virus (WNV) disease were reported to the California Department of Public Health (CDPH) this week from the following 7 counties: Butte (1), Fresno (1), Kern (1), Los Angeles (21), Orange (2), San Bernardino (1), and Sutter (1). As of November 10, a total of 733 human cases of WNV disease have been reported from 31 counties. As of this date in 2013, 349 cases had been reported from 30 counties. Of the 733 case-patients, 499 (68%) had neuroinvasive illness. The median age of the 733 individuals is 59 years (range: 3 months – 93 years); 463 (63%) are male. Dates of symptom onset for individuals where data are available range from May 15 to October 26. A total of 24 WNV-related fatalities have been reported to CDPH from 10 counties: Glenn (1), Los Angeles (5), Orange (7), Placer (1), Sacramento (2), San Diego (1), Shasta (1), Stanislaus (2), Sutter (3), and Tehama (1). In addition, 82 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 (23), Orange (15), 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 11/10/14. Data incomplete due to reporting delays.

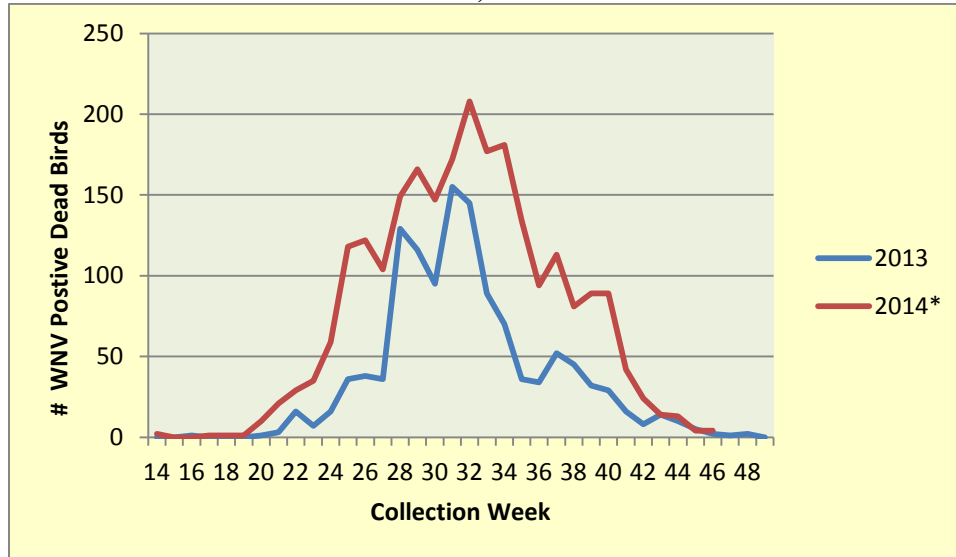
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## Dead Birds

A total of 6 WNV positive dead birds were reported this week from the following 2 counties: Orange (4) and San Diego (2). In 2014, 2,417 dead birds have tested positive for WNV from 36 counties. At this time last year, 1,227 WNV positive dead birds had been detected in 38 counties.

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

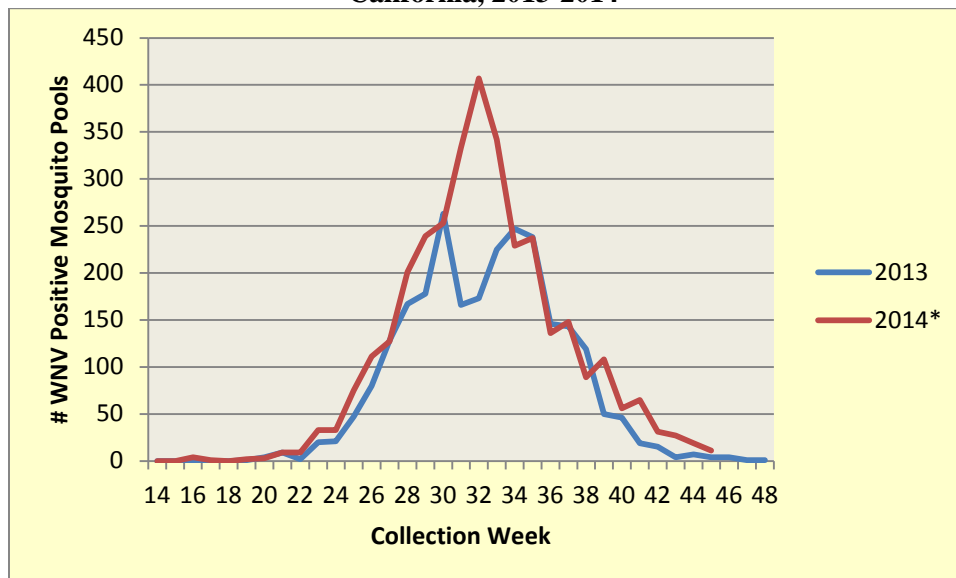


\*Reported to CDPH as of 11/14/14. Data incomplete due to reporting delays.

## Mosquito Pools

A total of 16 WNV positive mosquito pools were reported this week from the following 2 counties: Los Angeles (10) and Orange (6). In 2014, 3,338 mosquito pools from 30 counties have tested positive for WNV. At this time last year, 2,520 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 11/14/14. Data incomplete due to reporting delays.

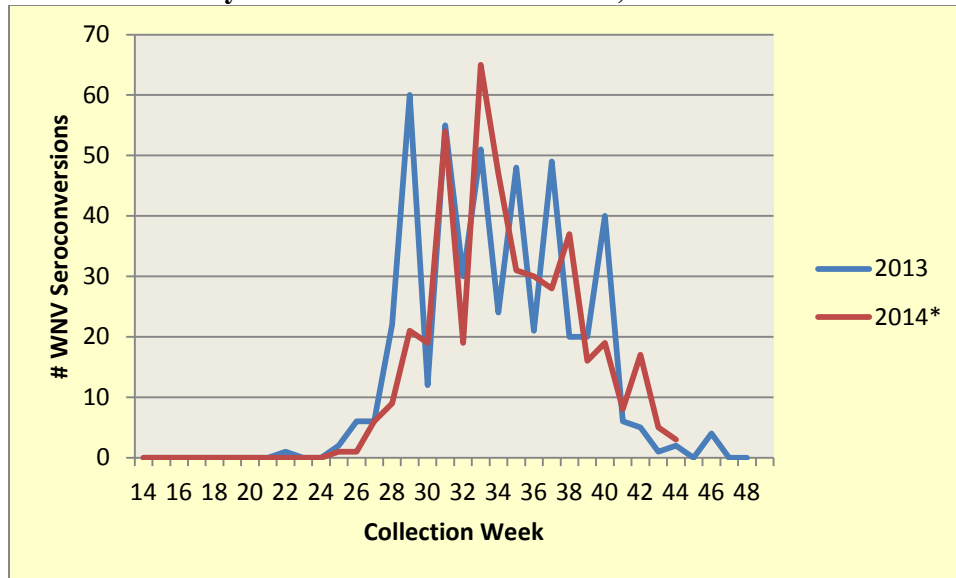
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### Sentinel Chickens

One WNV seroconversion was reported this week from a flock in Merced County. In 2014, 437 WNV positive chickens have been reported from 96 flocks located in 23 counties. At this time last year, 480 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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<b>YTD Activity by Element and County, 2014</b>				
County	Humans*	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda	1	96	16	1
Butte	23	22	40	37
Colusa	5	4	1	9
Contra Costa	4	44	25	15
El Dorado		7		
Fresno	34	9	138	
Glenn	12	4	8	9
Humboldt		2		
Imperial	2			
Kern	11	3	111	
Kings	3	3	150	
Lake	1	18	71	5
Los Angeles	221	99	354	142
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	11
Napa		12		
Nevada				2
Orange	259	426	499	
Placer	7	40	77	
Riverside	11	1	91	41
Sacramento	10	294	487	10
San Bernardino	15	17	97	32
San Diego	9	30	1	2
San Joaquin	8	53	239	
San Mateo		19	15	
Santa Barbara		2		
Santa Clara	11	916	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	6	19	52	31
Tehama	5			13
Tulare	17	40	311	4
Ventura	1	7		
Yolo	10	71	221	9
Yuba	4	16	24	9
<b>Totals</b>	<b>733</b>	<b>2,417</b>	<b>3,338</b>	<b>437</b>

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,358	14,302
# Positive Counties	43	40
# Human Cases	349	733
# Positive Dead Birds / # Tested	1,227 / 3,202	2,417 / 3,995
# Positive Mosquito Pools / # Tested	2,520 / 30,249	3,338 / 31,260
# Seroconversions / # Tested	480 / 16,561	437 / 14,641

### TESTING SUMMARIES

#### Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	28	0	0	0	0	0
	YTD	733	0	0	0	0	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	28	6
	YTD	3,995	2,417

#### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	151	1	0	0
	YTD	14,641	437	0	0
Mosquito Pools	Week	222	16	0	0
	YTD	31,260	3,338	0	0

### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Orange	Orange Co VCD	Costa Mesa	92626	American Crow	11/6/2014	WNV	RT-PCR
Orange	Orange Co VCD	Fountain Valley	92708	American Crow	11/12/2014	WNV	RT-PCR
Orange	Orange Co VCD	Garden Grove	92845	American Crow	11/10/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92649	American Crow	11/10/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	Del Mar	92014	Red-shouldered Hawk	11/10/2014	WNV	RT-PCR
San Diego	San Diego Co VCP	San Diego	92119	American Crow	11/7/2014	WNV	RT-PCR

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### Mosquitoes

County	Site Code	Pool #	City	Species	# in Pool	Trap	Collected	Virus	Method
Los Angeles	GRLA2081	890	Lynwood	Cx. quinquefasciatus	50	GRVD	11/6/2014	WNV	RTPCR
Los Angeles	GRLA2300	878	Los Angeles	Cx. quinquefasciatus	34	GRVD	11/5/2014	WNV	RTPCR
Los Angeles	GRLA2414	5964	Granada Hills	Cx. quinquefasciatus	48	GRVD	11/4/2014	WNV	RTPCR
Los Angeles	GRLA2552	5980	Glendale	Cx. quinquefasciatus	50	GRVD	11/6/2014	WNV	RTPCR
Los Angeles	GRLA2651	5961	Encino	Cx. quinquefasciatus	23	GRVD	11/4/2014	WNV	RTPCR
Los Angeles	GRLA3046	894	Bellflower	Cx. quinquefasciatus	32	GRVD	11/6/2014	WNV	RTPCR
Los Angeles	GRLA3055	887	Maywood	Cx. quinquefasciatus	15	GRVD	11/6/2014	WNV	RTPCR
Los Angeles	GRLA3056	888	Cudahy	Cx. quinquefasciatus	50	GRVD	11/6/2014	WNV	RTPCR
Los Angeles	GRLA3132	5970	Los Angeles	Cx. quinquefasciatus	28	GRVD	11/5/2014	WNV	RTPCR
Los Angeles	SGVA898	369	San Gabriel	Cx. quinquefasciatus	25	GRVD	11/7/2014	WNV	RAMP
Orange	ORCO1010	2714	Huntington Beach	Cx. quinquefasciatus	33	GRVD	10/31/2014	WNV	RTPCR
Orange	ORCO1015	2704	Orange	Cx. quinquefasciatus	45	GRVD	10/31/2014	WNV	RTPCR
Orange	ORCO1025	2707	Costa Mesa	Cx. quinquefasciatus	31	GRVD	10/31/2014	WNV	RTPCR
Orange	ORCO218	2703	Anaheim	Cx. quinquefasciatus	42	GRVD	10/31/2014	WNV	RTPCR
Orange	ORCO218	2781	Anaheim	Cx. quinquefasciatus	28	GRVD	11/5/2014	WNV	RTPCR
Orange	ORCO33	2701	Westminster	Cx. quinquefasciatus	32	GRVD	10/30/2014	WNV	RTPCR

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01
Merced	MERC0003	Gustine	10/30/2014	WNV	1773

## 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.

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*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](mailto:tina.feiszli@cdph.ca.gov).*

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