

# California Arbovirus Surveillance Bulletin #36

Week 43 Friday, October 24, 2014

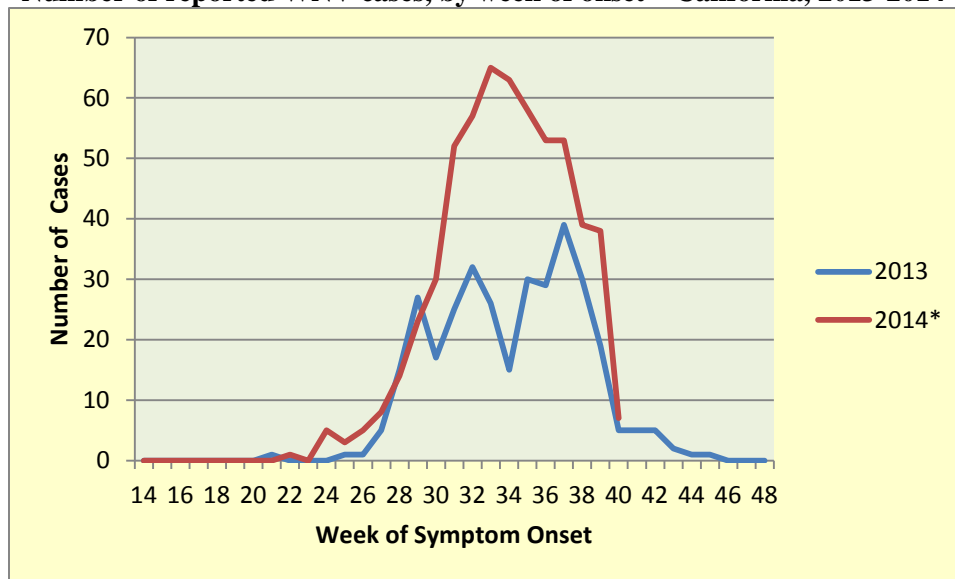


## WEEKLY UPDATE

### 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 8 counties: Colusa (1), Kern (1), Los Angeles (24), Orange (14), Placer (2), San Diego (1), Stanislaus (2), and Yolo (1). As of October 20, a total of 608 human cases of WNV disease have been reported from 29 counties. As of this date in 2013, 297 cases had been reported from 27 counties. Of the 608 case-patients, 414 (61%) had neuroinvasive illness. The median age of the 608 individuals is 58 years (range: 3 months – 93 years); 427 (63%) are male. Dates of symptom onset for individuals where data are available range from May 27 to October 8. A total of 20 WNV-related fatalities have been reported to CDPH from eight counties: Glenn (1), Los Angeles (5), Orange (5), Placer (1), Sacramento (2), Shasta (1), Stanislaus (2), Sutter (2), and Tehama (1). In addition, 65 asymptomatic WNV-positive blood donors have been reported this year from 18 counties: Butte (1), Contra Costa (1), Fresno (10), Kern (3), Kings (1), Los Angeles (17), Orange (13), Placer (1), Riverside (1), San Bernardino (4), San Diego (1), 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 10/20/14. Data incomplete due to reporting delays.

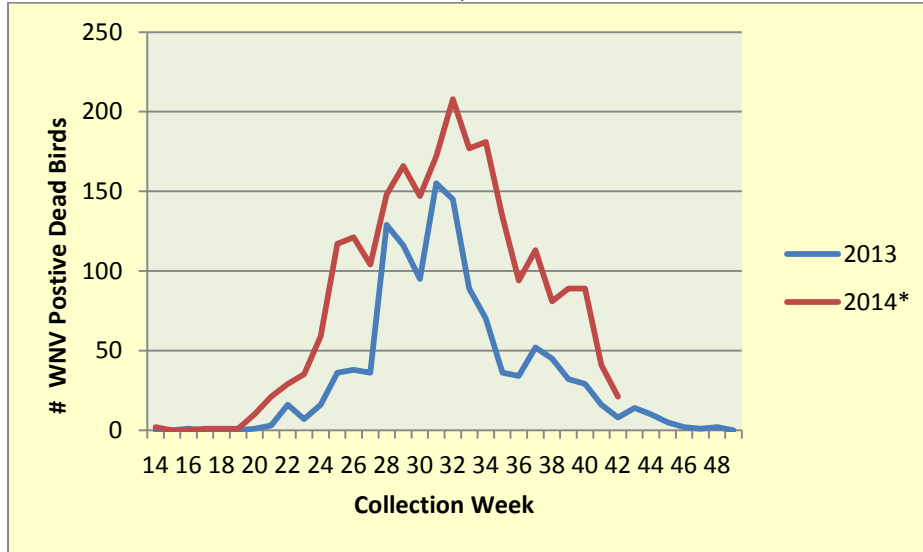
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## Dead Birds

A total of 35 WNV positive dead birds were reported this week from the following 5 counties: Alameda (3), Orange (23), Sacramento (1), San Mateo (1), and Santa Clara (7). In 2014, 2,375 dead birds have tested positive for WNV from 36 counties. At this time last year, 1,200 WNV positive dead birds had been detected in 38 counties.

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

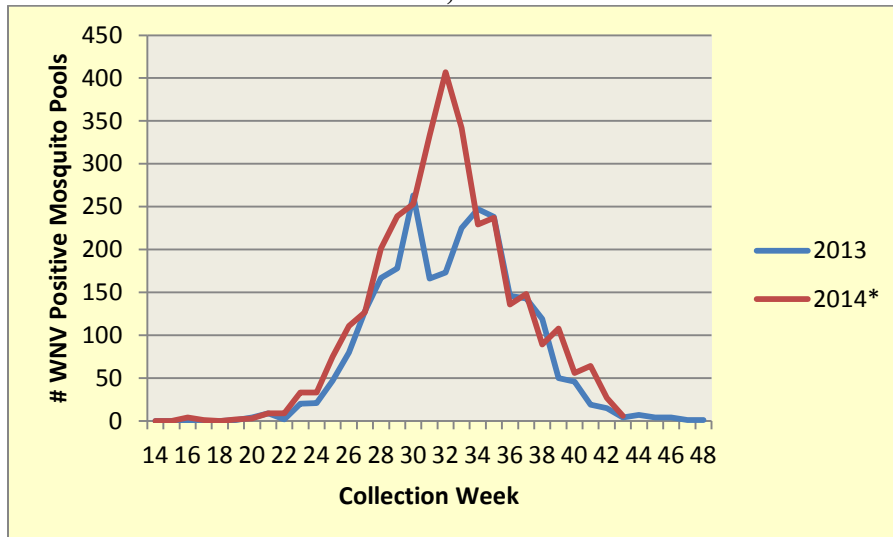


\*Reported to CDPH as of 10/24/14. Data incomplete due to reporting delays.

## Mosquito Pools

A total of 14 WNV positive mosquito pools were reported this week from the following 6 counties: Fresno (2), Los Angeles (6), Riverside (2), Sacramento (1), San Joaquin (2), and Stanislaus (1). In 2014, 3,282 mosquito pools from 30 counties have tested positive for WNV. At this time last year, 2,507 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 10/24/14. Data incomplete due to reporting delays.

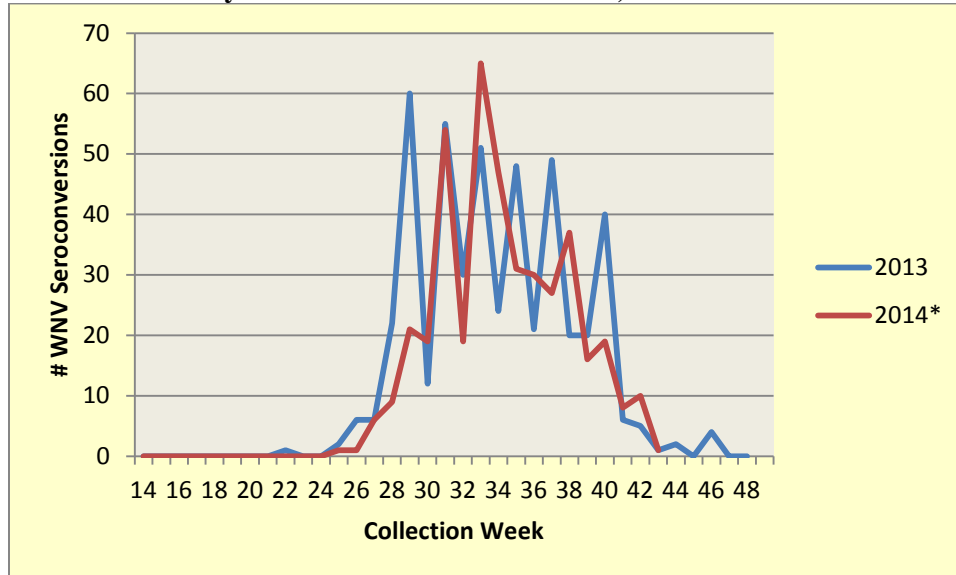
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### Sentinel Chickens

A total of 11 new WNV seroconversions were reported this week from 8 flocks located in the following 3 counties: Riverside (7), Sacramento (1), and San Bernardino (3). In 2014, 423 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\***



*\*Reported to CDPH as of 10/24/14. Data incomplete due to reporting delays.*

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<b>YTD Activity by Element and County, 2014</b>				
County	Humans*	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		95	16	1
Butte	22	22	40	37
Colusa	5	4	1	8
Contra Costa	4	44	25	14
El Dorado		5		
Fresno	33	9	138	
Glenn	12	4	8	9
Humboldt		2		
Imperial	2			
Kern	9	3	111	
Kings	3	3	150	
Lake	1	18	71	5
Los Angeles	159	97	324	135
Madera	3	5	37	
Marin		6	3	
Mendocino	1			
Merced	1	8	11	10
Napa		12		
Nevada				2
Orange	216	409	474	
Placer	5	40	77	
Riverside	9	1	91	39
Sacramento	10	294	487	10
San Bernardino	13	17	97	32
San Diego	5	23	1	1
San Joaquin	8	53	238	
San Mateo		19	15	
Santa Barbara		1		
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	30
Tehama	5			13
Tulare	17	40	311	4
Ventura		7		
Yolo	10	71	221	9
Yuba	4	16	24	9
<b>Totals</b>	<b>608</b>	<b>2,375</b>	<b>3,282</b>	<b>423</b>

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2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	14,033	13,848
# Positive Counties	41	40
# Human Cases	297	608
# Positive Dead Birds / # Tested	1,200 / 3,134	2,375 / 3,856
# Positive Mosquito Pools / # Tested	2,507 / 29,699	3,282 / 29,851
# Seroconversions / # Tested	478 / 15,720	423 / 13,896

## TESTING SUMMARIES

### Humans

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	46	0	0	0	0	0
	YTD	608	0	0	0	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	58	35
	YTD	3,856	2,375

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	378	11	0	0
	YTD	13,896	423	0	0
Mosquito Pools	Week	724	14	0	0
	YTD	29,851	3,282	0	0

## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Alameda	Alameda Co MAD	Livermore	94550	American Crow	10/17/2014	WNV	RAMP
Alameda	Alameda Co MAD	Pleasanton	94566	American Crow	10/16/2014	WNV	RAMP
Alameda	Alameda Co MAD	Pleasanton	94566	American Crow	10/17/2014	WNV	RAMP
Orange	Orange Co VCD	Anaheim	92805	American Crow	10/8/2014	WNV	RT-PCR
Orange	Orange Co VCD	Anaheim	92805	American Crow	10/8/2014	WNV	RT-PCR
Orange	Orange Co VCD	Costa Mesa	92626	American Crow	10/15/2014	WNV	RT-PCR
Orange	Orange Co VCD	Cypress	90630	American Crow	10/10/2014	WNV	RT-PCR
Orange	Orange Co VCD	Fountain Valley	92708	American Crow	10/9/2014	WNV	RT-PCR
Orange	Orange Co VCD	Fullerton	92833	American Crow	10/17/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92646	American Crow	10/15/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92647	American Crow	10/8/2014	WNV	RT-PCR
Orange	Orange Co VCD	Huntington Beach	92649	American Crow	10/14/2014	WNV	RT-PCR

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Orange	Orange Co VCD	Irvine	92604	American Crow	10/3/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92604	American Crow	10/3/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92606	American Crow	10/8/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92612	American Crow	10/6/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92612	American Crow	10/9/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92614	American Crow	10/4/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92614	American Crow	10/5/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92614	American Crow	10/7/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92614	American Crow	10/7/2014	WNV	RT-PCR
Orange	Orange Co VCD	Irvine	92614	American Crow	10/15/2014	WNV	RT-PCR
Orange	Orange Co VCD	Mission Viejo	92692	American Crow	10/14/2014	WNV	RT-PCR
Orange	Orange Co VCD	Newport Beach	92660	American Crow	10/9/2014	WNV	RT-PCR
Orange	Orange Co VCD	Orange	92869	American Crow	10/17/2014	WNV	RT-PCR
Orange	Orange Co VCD	Santa Ana	92705	House Finch	10/6/2014	WNV	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95825	American Crow	10/12/2014	WNV	RT-PCR
San Mateo	San Mateo Co MAD	Pacifica	94044	American Crow	10/10/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Cupertino	95014	American Crow	10/17/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Altos	94024	American Crow	10/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Gatos	95032	Western Scrub-Jay	10/8/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Los Gatos	95032	Western Scrub-Jay	10/10/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Morgan Hill	95037	Western Scrub-Jay	10/10/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	10/15/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	10/15/2014	WNV	RT-PCR

### Mosquitoes

County	Site Code	Pool #	City	Species	# in Pool	Trap	Collected	Virus	Method
Fresno	FRWS300011	320	Firebaugh	Cx. quinquefasciatus	50	CO2	10/16/2014	WNV	RTPCR
Fresno	FRWS5103	328	Tranquility	Cx. tarsalis	50	CO2	10/21/2014	WNV	RTPCR
Los Angeles	GRLA2325	776	Los Angeles	Cx. quinquefasciatus	20	GRVD	10/15/2014	WNV	RTPCR
Los Angeles	GRLA2636	5861	Van Nuys	Cx. quinquefasciatus	33	GRVD	10/15/2014	WNV	RTPCR
Los Angeles	GRLA2890	786	Lakewood	Cx. quinquefasciatus	38	GRVD	10/16/2014	WNV	RTPCR
Los Angeles	GRLA3070	773	Commerce	Cx. quinquefasciatus	50	GRVD	10/15/2014	WNV	RTPCR
Los Angeles	GRLA3074	780	Lincoln Heights	Cx. quinquefasciatus	25	GRVD	10/15/2014	WNV	RTPCR
Los Angeles	GRLA3075	781	El Sereno	Cx. quinquefasciatus	32	GRVD	10/15/2014	WNV	RTPCR
Riverside	COAV200	1570	Mecca	Cx. tarsalis	50	CO2	10/16/2014	WNV	RTPCR
Riverside	COAV54	1705	Mecca	Cx. tarsalis	50	CO2	10/21/2014	WNV	RTPCR
Sacramento	SAYO215018	7390	Folsom	Cx. pipiens	11	GRVD	10/21/2014	WNV	RTPCR
San Joaquin	SJCM8056	2079	Manteca	Cx. tarsalis	39	CO2	10/21/2014	WNV	RTPCR
San Joaquin	SJCM8056	2080	Manteca	Cx. pipiens	26	CO2	10/21/2014	WNV	RTPCR
Stanislaus	TRLK9768	1418	Grayson	Cx. pipiens	38	CO2	10/21/2014	WNV	RTPCR

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### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02
Riverside	COAV0131	Oasis	10/14/2014	WNV	1217	
Riverside	COAV0201	Thermal	10/14/2014	WNV	1181	1183
Riverside	COAV0035	Mecca	10/14/2014	WNV	1239	
Riverside	NWST9227	Riverside	10/13/2014	WNV	2297	
Riverside	RIVR0008	Murrieta	10/15/2014	WNV	1875	1877
Sacramento	SAYO202019	Rio Linda	10/20/2014	WNV	2641	
San Bernardino	SANB0002	Redlands	10/14/2014	WNV	2109	
San Bernardino	SANB0007	Fontana	10/15/2014	WNV	2052	2055

## 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.

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### 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.

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### 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.

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### 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)*