

## California Arbovirus Surveillance Bulletin #37

Week 45 Friday, November 13, 2015



### Weekly Update

#### **Humans**

**A total of 58 new human cases of West Nile virus (WNV) illness were reported this week from the following 6 counties: Los Angeles (29), Orange (16), Riverside (7), San Bernardino (1), San Diego (4), and Ventura (1).** As of November 11, a total of 570 human cases of WNV illness have been reported to the California Department of Public Health from 30 counties; 34 (6%) were fatal. At this time last year, 705 cases had been reported from 31 counties. Of the 570 case-patients, 422 (74%) had neuroinvasive illness. The median age of the individuals is 60 years (range: 5-98 years); 350 (61%) are male. Dates of symptom onset range from May 15 to October 27. In addition, a total of 62 asymptomatic WNV-positive blood donors have been reported this year in 16 local health jurisdictions: Butte (5), Fresno (5), Glenn (2), Kern (1), Los Angeles (15), Merced (1), Napa (1), Orange (4), Placer (1), Riverside (13), Sacramento (2), San Bernardino (6), San Diego (2), Tehama (2), Tulare (1), and Yolo (1).

#### **Dead Birds**

A total of 40 WNV positive dead birds were reported this week from the following 4 counties: Los Angeles (11), San Diego (26), San Mateo (1), and Santa Clara (2). In 2015, 1,294 birds have tested positive for WNV from 37 counties. At this time last year, 2,411 WNV positive birds had been detected in 36 counties.

#### **Mosquito Pools**

A total of 14 WNV positive mosquito pools were reported this week from Los Angeles County. In 2015, 3,274 mosquito pools have tested positive for WNV from 29 counties, and 38 mosquito pools have tested positive for St. Louis encephalitis virus (SLEV) from one county (Riverside). At this time last year, 3,322 WNV mosquito pools had been reported from 30 counties.

#### **Sentinel Chickens**

A total of 7 WNV seroconversions were reported this week from 6 flocks located in the following 3 counties: Merced (2), San Bernardino (3), and San Diego (2). In 2015, 430 WNV seroconversions have been detected among 94 flocks located in 22 counties and 8 SLEV seroconversions have been detected from 2 flocks in Riverside County. At this time last year, 436 WNV positive chickens had been reported from 96 flocks in 23 counties.

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*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)

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<b>YTD WNV Activity by Element and County, 2015</b>				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		16	15	
Butte	53	38	94	37
Colusa	1	3		10
Contra Costa	1	11	8	18
El Dorado		4		
Fresno	7	3	108	
Glenn	19	4	21	10
Humboldt		2		
Kern	11	1	135	
Kings		3	144	
Lake	2	5	31	4
Los Angeles	148	86	280	127
Madera	4	1	21	
Marin	1	3		
Mendocino	1			
Merced	1	3	8	23
Napa		7		
Nevada	2	10		4
Orange	73	76	540	
Placer		21	52	8
Riverside	109	82	158	22
Sacramento	2	103	164	2
San Bernardino	41	25	291	30
San Diego	33	329	42	11
San Joaquin	2	18	208	
San Mateo		22	5	
Santa Barbara		3	1	
Santa Clara	7	231	20	5
Shasta	3	16	48	22
Siskiyou	1			
Solano	1	10	6	7
Sonoma		11	12	
Stanislaus	12	14	84	9
Sutter	2	16	54	36
Tehama	5			18
Trinity		2		
Tulare	7	22	528	
Ventura	6	26		10
Yolo	7	61	173	6
Yuba	8	6	23	11
<b>Totals</b>	<b>570</b>	<b>1,294</b>	<b>3,274</b>	<b>430</b>

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2014 & 2015 YTD West Nile Virus Comparisons		
	2014	2015
Total # Dead Bird Reports	14,168	10,374
# Positive Counties	40	40
# Human Cases	705	570
# Positive Dead Birds / # Tested	2,411 / 3,967	1,294 / 3,091
# Positive Mosquito Pools / # Tested	3,322 / 31,038	3,274 / 36,090
# Seroconversions / # Tested	436 / 14,490	430 / 12,032

### TESTING SUMMARIES

#### Humans

		WNV	SLE	WEE
Human Cases	Week	58	0	0
	YTD	570	0	0

#### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	62	40
	YTD	3,091	1,294

#### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	90	7	0	0
	YTD	12,032	430	8	0
Mosquito Pools	Week	84	14	0	0
	YTD	36,090	3,274	38	0

### NEW POSITIVES

#### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Los Angeles Co Veterinarian	Culver City	90232	American Crow	11/4/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Lake View Terrace	91342	American Crow	11/4/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90048	American Crow	11/9/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90064	American Crow	11/3/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	American Crow	11/4/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	American Crow	11/10/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Playa Del Rey	90293	American Crow	11/2/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Playa Vista	90293	American Crow	11/4/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90403	American Crow	11/6/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90404	American Crow	11/4/2015	WNV

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Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90404	American Crow	11/5/2015	WNV
San Diego	San Diego Co VCP	Alpine	91901	Western Scrub-Jay	11/13/2015	WNV
San Diego	San Diego Co VCP	Bonita	91902	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	Carlsbad	92008	Western Scrub-Jay	11/9/2015	WNV
San Diego	San Diego Co VCP	Carlsbad	92009	American Crow	11/12/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	11/6/2015	WNV
San Diego	San Diego Co VCP	Chula Vista	91910	American Crow	11/6/2015	WNV
San Diego	San Diego Co VCP	Escondido	92026	American Crow	11/13/2015	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	Escondido	92029	American Crow	11/9/2015	WNV
San Diego	San Diego Co VCP	Escondido	92125	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	Poway	92064	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	Poway	92064	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	Western Scrub-Jay	11/2/2015	WNV
San Diego	San Diego Co VCP	San Diego	92107	American Crow	11/13/2015	WNV
San Diego	San Diego Co VCP	San Diego	92110	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	San Diego	92113	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	San Diego	92124	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	San Diego	92124	American Crow	11/3/2015	WNV
San Diego	San Diego Co VCP	San Diego	92127	American Crow	11/9/2015	WNV
San Diego	San Diego Co VCP	San Diego	92128	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	San Diego	92131	American Crow	11/6/2015	WNV
San Diego	San Diego Co VCP	Santee	92071	American Crow	11/2/2015	WNV
San Diego	San Diego Co VCP	Santee	92071	American Crow	11/9/2015	WNV
San Diego	San Diego Co VCP	Spring Valley	91977	American Crow	11/10/2015	WNV
San Mateo	San Mateo Co MAD	Menlo Park	94025	American Crow	10/27/2015	WNV
Santa Clara	Santa Clara Co VCD	Mountain View	94040	American Crow	10/28/2015	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95129	American Crow	11/2/2015	WNV

## Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected
Los Angeles	GRLA2097	772	Cx. quinquefasciatus	La Mirada	34	GRVD	11/5/2015
Los Angeles	GRLA2166	768	Cx. quinquefasciatus	Montebello	50	GRVD	11/5/2015
Los Angeles	GRLA2247	770	Cx. quinquefasciatus	Pico Rivera	50	GRVD	11/5/2015
Los Angeles	GRLA2268	777	Cx. quinquefasciatus	Cerritos	50	GRVD	11/5/2015
Los Angeles	GRLA2278	783	Cx. quinquefasciatus	Long Beach	50	GRVD	11/6/2015
Los Angeles	GRLA2419	5945	Cx. quinquefasciatus	Panorama City	18	GRVD	11/5/2015
Los Angeles	GRLA2500	5934	Cx. quinquefasciatus	Los Angeles	43	GRVD	11/4/2015
Los Angeles	GRLA2503	5935	Cx. quinquefasciatus	Los Angeles	28	GRVD	11/4/2015
Los Angeles	GRLA2511	5937	Cx. quinquefasciatus	Los Angeles	33	GRVD	11/4/2015
Los Angeles	GRLA2512	5938	Cx. quinquefasciatus	Los Angeles	50	GRVD	11/4/2015
Los Angeles	GRLA2574	5942	Cx. quinquefasciatus	Sherman Oaks	34	GRVD	11/5/2015
Los Angeles	GRLA3009	5947	Cx. quinquefasciatus	Santa Clarita	26	GRVD	11/6/2015
Los Angeles	GRLA3040	773	Cx. quinquefasciatus	La Mirada	38	GRVD	11/5/2015
Los Angeles	GRLA3051	780	Cx. quinquefasciatus	Signal Hill	50	GRVD	11/6/2015

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### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02
Merced	MERC201501	Le Grand	11/5/2015	WNV	1843	1845
San Bernardino	SANB0006	Yucaipa	10/27/2015	WNV	2022	
San Bernardino	SANB0007	Fontana	10/26/2015	WNV	2042	
San Bernardino	SANB0008	Upland	10/26/2015	WNV	2051	
San Diego	SAND0450	El Cajon	10/27/2015	WNV	1996	
San Diego	SAND0057	Sorrento Valley	10/27/2015	WNV	1988	

### 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 RNA preservation 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. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

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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, and St. Louis encephalitis viruses by EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

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#### Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory 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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