

California Arbovirus Surveillance Bulletin #39

Week 48 Friday, December 4, 2015



Weekly Update

Humans

As of December 2, a total of 641 human cases of WNV illness have been reported to the California Department of Public Health from 30 counties; 39 (6%) were fatal. At this time last year, 752 cases had been reported from 31 counties. Of the 641 case-patients, 476 (74%) had neuroinvasive illness. The median age of the individuals is 60 years (range: 5-98 years); 392 (61%) are male. Dates of symptom onset range from May 15 to November 12. In addition, a total of 65 asymptomatic WNV-positive blood donors have been reported this year from 16 counties: Butte (5), Fresno (5), Glenn (2), Kern (1), Los Angeles (17), Merced (1), Napa (1), Orange (5), Placer (1), Riverside (13), Sacramento (2), San Bernardino (6), San Diego (2), Tehama (2), Tulare (1), and Yolo (1).

Dead Birds

A total of 15 WNV positive dead birds were reported last week and this week from the following 4 counties: Los Angeles (8), Orange (3), San Diego (3), and San Mateo (1). In 2015, 1,333 birds have tested positive for WNV from 37 counties. At this time last year, 2,437 WNV positive birds had been detected in 36 counties.

Mosquito Pools

A total of 8 WNV positive mosquito pools were reported last week and this week from Los Angeles County. In 2015, 3,288 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, 3,338 WNV positive mosquito pools had been reported from 30 counties.

Sentinel Chickens

A total of 7 WNV seroconversions were reported last week from 5 flocks located in the following 2 counties: Los Angeles (1), and San Bernardino (6). In 2015, 449 WNV seroconversions have been detected among 96 flocks located in 22 counties and 9 SLEV seroconversions have been detected from 2 flocks in Riverside County. At this time last year, 440 WNV positive chickens had been reported from 96 flocks in 23 counties.

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

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YTD WNV Activity by Element and County, 2015				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		18	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	188	100	294	138
Madera	4	1	21	
Marin	1	3		
Mendocino	1			
Merced	1	3	8	23
Napa		7		
Nevada	2	10		4
Orange	81	82	540	
Placer		21	52	8
Riverside	119	82	158	22
Sacramento	3	103	164	2
San Bernardino	46	25	291	36
San Diego	38	344	42	12
San Joaquin	2	18	208	
San Mateo		23	5	
Santa Barbara		3	1	
Santa Clara	8	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	23	528	
Ventura	6	26		11
Yolo	8	61	173	6
Yuba	8	6	23	11
Totals	641	1,333	3,288	449

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2014 & 2015 YTD West Nile Virus Comparisons		
	2014	2015
Total # Dead Bird Reports	14,383	10,623
# Positive Counties	40	40
# Human Cases	752	641
# Positive Dead Birds / # Tested	2,430 / 4,025	1,333 / 3,174
# Positive Mosquito Pools / # Tested	3,338 / 31,419	3,288 / 36,382
# Seroconversions / # Tested	440 / 14,833	449 / 12,436

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	47	0	0
	YTD	641	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	46	15
	YTD	3,174	1,333

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	108	7	0	0
	YTD	12,436	449	9	0
Mosquito Pools	Week	77	8	0	0
	YTD	36,382	3,288	38	0

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	Los Angeles Co Veterinarian	Bermuda Dunes	92203	American Crow	11/16/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Culver City	90230	American Crow	12/1/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Culver City	90232	American Crow	12/2/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90024	American Crow	11/23/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90064	American Crow	11/15/2015	WNV

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Los Angeles	Los Angeles Co Veterinarian	Santa Clarita	91355	American Crow	11/18/2015	WNV
Los Angeles	Los Angeles Co Veterinarian	Venice	90291	American Crow	11/20/2015	WNV
Los Angeles	Los Angeles Co West VCD	Santa Monica	90405	American Crow	11/19/2015	WNV
Orange	Orange Co VCD	Irvine	92612	American Crow	11/18/2015	WNV
Orange	Orange Co VCD	Newport Beach	92660	American Crow	11/13/2015	WNV
Orange	Orange Co VCD	Placentia	92870	European Starling	11/18/2015	WNV
San Diego	San Diego Co VCP	Coronado	92118	American Crow	11/24/2015	WNV
San Diego	San Diego Co VCP	Escondido	92025	American Crow	11/24/2015	WNV
San Diego	San Diego Co VCP	Escondido	92027	Sharp-shinned Hawk	11/24/2015	WNV
San Mateo	San Mateo Co MAD	Atherton	94027	American Crow	11/23/2015	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Los Angeles	GRLA2194	797	Cx. quinquefasciatus	South El Monte	43	GRVD	11/19/2015	WNV
Los Angeles	GRLA3053	803	Cx. quinquefasciatus	Hacienda Heights	42	GRVD	11/19/2015	WNV
Los Angeles	GRLA2492	5959	Cx. quinquefasciatus	La Canada Flintridge	25	GRVD	11/18/2015	WNV
Los Angeles	GRLA3054	808	Cx. quinquefasciatus	Bell Gardens	50	GRVD	11/24/2015	WNV
Los Angeles	GRLA2115	809	Cx. quinquefasciatus	Bell	50	GRVD	11/24/2015	WNV
Los Angeles	GRLA3057	813	Cx. quinquefasciatus	Huntington Park	50	GRVD	11/24/2015	WNV
Los Angeles	GRLA3058	815	Cx. quinquefasciatus	Lynwood	50	GRVD	11/24/2015	WNV
Los Angeles	GRLA2918	5977	Cx. quinquefasciatus	Sunland	15	GRVD	11/25/2015	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02
Los Angeles	LACW1005	El Segundo	11/18/2015	WNV	1430	
San Bernardino	SANB0002	Redlands	11/9/2015	WNV	2001	
San Bernardino	SANB0003	Colton	11/9/2015	WNV	2013	
San Bernardino	SANB0006	Yucaipa	11/9/2015	WNV	2017	2020
San Bernardino	SANB0007	Fontana	11/10/2015	WNV	2041	2046

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 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.

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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