

California Arbovirus Surveillance Bulletin #38

Week 47 Friday, November 22, 2013



WEEKLY UPDATE

Human Cases

West Nile virus

A total of 8 new cases of West Nile virus (WNV) illness were reported this week from the following four counties: Kern (3), Los Angeles (3), Sacramento (1), and Tehama (1). **This is the first human WNV case reported from Tehama County this year.** As of November 19, 2013, a total of 357 cases of WNV illness have been reported in 31 counties. Of the 357 case-patients, 236 (66%) had neuroinvasive illness. The median age of the 357 individuals for whom data are available is 56 years (range: 1 - 93 years); 225 (63%) are male. Dates of symptom onset range from May 22 to October 25, 2013. 13 WNV-related fatalities have been reported in Glenn (1), Kern (1), Los Angeles (7), Sacramento (1), San Joaquin (1), San Bernardino (1), and Yuba (1) counties. A total of 59 WNV-positive blood donors have been reported this year; 10 developed symptoms and were classified as case-patients. At this time last year, 434 cases had been reported from 31 counties.

National Comments: As of November 19, 2013, 2,271 cases had been reported nationwide from 46 states. Of these, 1,140 (50%) were classified as neuroinvasive disease, and 100 (4%) died.

Horses

No new equine cases were reported this week. In 2013, 13 horses from seven counties have tested positive for WNV; five have died as a result of their infection. At this time last year, 22 horses had tested positive for WNV from 13 counties.

Dead Birds & Squirrels

A total of 5 WNV positive birds were reported this week from the following 3 counties: Los Angeles (2), Orange (1), and San Diego (2). In 2013, 1,235 dead birds have tested positive for WNV from 38 counties and 8 dead squirrels have tested positive for WNV from 6 counties. At this time last year, 1,639 dead birds and 22 squirrels tested positive for recent WNV infection from 39 and 6 counties, respectively.

Mosquito Pools

Seven WNV positive mosquito pools were reported this week from Los Angeles (2), Orange (1), and San Bernardino (4) counties. In 2013, 2,527 mosquito pools from 27 counties have tested positive for WNV. At this time last year, 2,848 mosquito pools from 28 counties had tested positive for WNV.

Sentinel Chickens

Three new seroconversions were reported this week from a flock located in Los Angeles County. In 2013, 483 WNV antibody-positive chickens have been detected among 111 flocks in 26 counties. At this time last year, 534 WNV antibody-positive chickens had been detected among 111 flocks in 22 counties.

California Arbovirus Surveillance Bulletin #38

Week 47 Friday, November 22, 2013

YTD WNV Activity by Element and County, 2013						
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			20			
Butte	23		42	33	57	
Colusa	2		1		8	
Contra Costa	5	1	68	13	7	1
El Dorado	1					
Fresno	6		11	66		
Glenn	9		8	16	9	
Humboldt			1			
Kern	25	2	2	181	12	
Kings	1		12	78		
Lake			10	62	6	
Los Angeles	146		312	417	151	3
Madera	3		7	16	2	
Marin	2		6		1	
Mendocino			2			
Merced			38	8	21	
Napa	1		2			
Nevada			6		2	
Orange	9		40	48		1
Placer	5	3	39	89	13	
Riverside	35	1	22	81	43	
Sacramento	10	3	179	384	6	
San Benito		1			1	
San Bernardino	13		37	248	29	1
San Diego			9			
San Francisco	1					
San Joaquin	7		34	163		
San Luis Obispo			1	1		
Santa Barbara	1					
Santa Clara	2		74	25	2	
Santa Cruz			1	1		
Shasta	1		38	15	21	1
Siskiyou	1					
Solano	1		13	1	12	
Sonoma			36	5	2	
Stanislaus	16	2	13	158	8	
Sutter	10		16	61	35	
Tehama	1		3		8	
Trinity			1			
Tulare	4		6	97	5	
Ventura	2		8			1
Yolo	6		106	246	11	
Yuba	8		11	14	11	
Totals	357	13	1,235	2,527	483	8

California Arbovirus Surveillance Bulletin #38

Week 47 Friday, November 22, 2013

2012 & 2013 YTD West Nile Virus Comparisons		
	2012	2013
Total # Dead Bird Reports	20,423	14,434
# Positive Counties	42	43
# Human Cases	434	357
# Horse Cases	22	13
# Positive Dead Birds / # Tested	1,639 / 4,311	1,235 / 3,216
# Positive Mosquito Pools / # Tested	2,848 / 32,783	2,527 / 30,602
# Seroconversions / # Tested	534 / 22,508	483 / 16,862
# Positive Squirrels / # Tested	22 / 180	8 / 97

TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	8	0	0	0	0	0
	YTD	357	0	0	0	1	0
Horse Cases	Week	0	0	0	0	0	0
	YTD	13	0	0	0	0	0

Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	14	5
	YTD	3,216	1,235
Tree Squirrels	Week	0	0
	YTD	97	8

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	301	3	0	0
	YTD	16,862	483	0	0
Mosquito Pools	Week	353	7	0	0
	YTD	30,602	2,527	0	0

California Arbovirus Surveillance Bulletin #38

Week 47 Friday, November 22, 2013

POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Los Angeles	Los Angeles Co West VCD	Los Angeles	90012	American Crow	11/11/2013	WNV	Recent	RT-PCR
Los Angeles	Los Angeles Co West VCD	Culver City	90230	American Crow	11/7/2013	WNV	Recent	RT-PCR
Orange	Orange Co VCD	Santa Ana	92704	American Crow	11/12/2013	WNV	Recent	RT-PCR
San Diego	San Diego Co VCP	Santee	92071	American Crow	11/6/2013	WNV	Recent	RT-PCR
San Diego	San Diego Co VCP	San Diego	92106	Red-tailed Hawk	11/1/2013	WNV	Recent	RT-PCR

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus	Method
Los Angeles	GRLA2035	6179	Cx. quinquefasciatus	Tarzana	37	GRVD	11/07/13	WNV	RTPCR
Los Angeles	GRLA2097	1115	Cx. quinquefasciatus	La Mirada	40	GRVD	11/06/13	WNV	RTPCR
Orange	ORCO0003	1836	Cx. quinquefasciatus	Garden Grove	38	GRVD	11/06/13	WNV	RTPCR
San Bernardino	WVAL2022	1463	Cx. quinquefasciatus	Fwy CA 60	34	GRVD	11/19/13	WNV	RTPCR
San Bernardino	WVAL5006	1424	Cx. quinquefasciatus	Rancho Cucamonga	24	GRVD	11/13/13	WNV	RTPCR
San Bernardino	WVAL6004	1448	Cx. quinquefasciatus	Ontario	50	GRVD	11/15/13	WNV	RTPCR
San Bernardino	WVAL6004	1451	Cx. quinquefasciatus	Ontario	49	GRVD	11/15/13	WNV	RTPCR

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Los Angeles	GRLA2223	Rowland Heights	11/13/2013	WNV	2652	2657	2660

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.

Horses:

Serum or brain tissue specimens from horses displaying neurological symptoms are submitted to the California Animal Health and Safety Laboratory (CAHFS) and tested by EIA and PRNT.

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.

California Arbovirus Surveillance Bulletin #38

Week 47 Friday, November 22, 2013

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