

California Arbovirus Surveillance Bulletin # 38

Week 45 Friday, November 7, 2008

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

Twenty-five new human cases of West Nile virus (WNV) illness were reported this week from eight counties: Fresno (1), Kern (1), Los Angeles (13), Orange (2), Placer (1), Riverside (3), San Bernardino (3), and San Joaquin (1). **This is the first WNV case reported from Kern County this year.** A total of 380 human WNV cases have been identified in the following 25 counties: Alameda (1), Butte (5), Calaveras (1), Colusa (1), Contra Costa (4), El Dorado (1), Fresno (3), Kern (1), Kings (1), Los Angeles (139, including 2 from Long Beach), Merced (1), Orange (63), Placer (6), Riverside (58), Sacramento (13), San Bernardino (24), San Diego (22), San Joaquin (12), Santa Clara (1), Shasta (1), Solano (1), Stanislaus (17), Tehama (1), Tulare (2) and Yolo (1) counties. Of the 380 individuals, 246 (65%) developed neuroinvasive symptoms. The median age of the 380 individuals is 55 years (range: 3-94 years), and 235 (62%) are male. Ten WNV-related fatalities have been reported in Fresno (1), Los Angeles (3), Orange (2), Riverside (3) and San Bernardino (1) counties. A total of 67 WNV-positive blood donation samples have been reported this year; 21 of the individuals reported symptoms and were reclassified as cases.

Horses

Two new equine WNV cases were reported this week from Riverside County. In 2008, 31 horses from 14 counties have tested positive for WNV; 17 died or were euthanized as a result of their infection.

Dead Birds & Tree Squirrels

Twenty-nine WNV-positive dead birds were reported this week from eight counties: Fresno (2), Los Angeles (9), Orange (6), Placer (1), Sacramento (1), San Diego (8), San Luis Obispo (1), and Sonoma (1). In 2008, 2,488 WNV-positive dead birds have been detected in 45 counties.

There were no positive tree squirrels reported this week. In 2008, 32 tree squirrels have tested positive for WNV from seven counties.

Mosquito Pools

Six WNV-positive mosquito pools were reported this week from Los Angeles (5) and San Diego (1) counties. In 2008, 1,953 WNV-positive mosquito pools have been detected in 26 counties.

Sentinel Chickens

There were no new seroconversions reported this week. In 2008, 564 WNV seroconversions have been detected in chickens from 24 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, 2008

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda	1		12	1		1
Amador			3			
Butte	5		38	5	31	
Calaveras	1		1		9	
Colusa	1		3		1	
Contra Costa	4	3	87	31	15	6
El Dorado	1		9			
Fresno	3	1	41	52	24	1
Glenn			17	1	5	
Humboldt			1			
Imperial				7	26	
Kern	1		10	7	17	
Kings	1		1		1	
Lake		1	2	3		
Lassen				1		
Los Angeles	139		475	503	117	14
Madera			3	1	2	
Marin			1			
Mendocino			1			
Merced	1	1	5		3	
Modoc			1			
Mono			2			
Monterey			6			
Napa			1			
Nevada			5			
Orange	63	2	623	330	3	4
Placer	6	1	4	27	11	
Riverside	58	9	39	118	116	
Sacramento	13	3	130	277	7	1
San Bernardino	24	1	170	167	61	5
San Diego	22	4	546	40	15	
San Joaquin	12		69	207	18	
San Luis Obispo			2			
San Mateo			2			
Santa Barbara			1			
Santa Clara	1		11	1		
Santa Cruz			3			
Shasta	1		7		3	
Solano	1		7	1	7	
Sonoma			11	2		
Stanislaus	17	2	45	75	38	
Sutter			2	12	9	
Tehama	1		6			
Trinity			1			
Tulare	2	1	51	64	20	
Ventura		1	24		4	
Yolo	1	1	9	19		
Yuba				1	1	
Totals	380	31	2,488	1,953	564	32

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2007 & 2008 YTD West Nile Virus Comparisons		
	2007	2008
Total # Dead Bird Reports	30,509	32,022
# Positive Counties	51	48
# Human Cases/ # Tested	372 / 1,180	380 / 1,116
# Horse Cases/ # Tested	28 / 315	31 / 303
# Positive Dead Birds/ # Tested	1,368 / 5,440	2,488 / 5,795
# Positive Mosquito Pools/ # Tested	1,004 / 27,067	1,953 / 29,978
# Positive Chicken Sera/ # Tested	501 / 27,434	564 / 28,273
# Positive Squirrels/ # Tested	26 / 212	32 / 297

2008 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	39	0	25	0	0	0	0	0	0
	YTD	1,116	0	380	0	0	0	0	0	0
Horses Tested	Week	2	0	2	0	0	0	0	0	0
	YTD	303	0	31	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	88	29
	YTD	5,795	2,488
Tree Squirrels	Week	7	0
	YTD	297	32

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	235	0	0	0
	YTD	28,273	564	0	0
Mosquito Pools: RT-PCR	Week	201	6	0	0
	YTD	27,167	1,596	0	0
Mosquito Pools: RAMP	Week	0	0	N/A	N/A
	YTD	2,811	357	N/A	N/A

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POSITIVES: 11/3/08 – 11/7/08

Humans

County	Reported	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
FRESNO	11/04/08	87	M	WNND	10/5/08	YES
KERN	11/05/08	41	F	WNF	08/01/08	NO
LOS ANGELES	11/03/08	47	F	WNF^	n/a	NO
LOS ANGELES	11/03/08	49	M	WNND	n/a	NO
LOS ANGELES	11/03/08	68	F	WNND	10/7/08	NO
LOS ANGELES	11/03/08	65	M	WNND	9/10/08	NO
LOS ANGELES	11/06/08	74	M	WNF	10/04/08	NO
LOS ANGELES	11/06/08	54	M	n/a	10/10/08	NO
LOS ANGELES	11/06/08	79	M	WNND	10/05/08	NO
LOS ANGELES	11/06/08	44	M	WNND	09/06/08	NO
LOS ANGELES	11/06/08	73	M	WNND	10/18/08	NO
LOS ANGELES	11/06/08	75	F	WNND	10/05/08	NO
LOS ANGELES	11/06/08	58	M	WNF	10/18/08	NO
LOS ANGELES	11/06/08	58	M	WNF	09/17/08	NO
LOS ANGELES	11/06/08	60	M	WNND	09/27/08	NO
ORANGE	10/21/08	50	F	WNF^	Week 38	NO
ORANGE	11/05/08	53	M	WNF	Week 37	NO
PLACER	10/28/08	>18	M	WNND	10/11/08	NO
RIVERSIDE	10/29/08	56	M	WNF	9/12/08	NO
RIVERSIDE	10/29/08	49	M	WNF	8/24/08	NO
RIVERSIDE	10/29/08	47	M	WNND	n/a	NO
SAN BERNARDINO	10/29/08	48	F	WNND	7/29/08	NO
SAN BERNARDINO	10/30/08	45	F	WNND	9/14/08	NO
SAN BERNARDINO	11/03/08	43	M	WNND	8/22/08	NO
SAN JOAQUIN	10/30/08	43	M	WNND	9/20/08	NO

Dead Birds and Tree Squirrels

County	City	Zip Code	Species	Reported	Collected	Result
Fresno	Fowler	93625	American Crow	10/23/08	11/3/08	WNV
Fresno	Fresno	93730	Cedar Waxwing	10/22/08	11/3/08	WNV
Los Angeles	El Segundo	90245	American Crow	10/23/08	11/3/08	WNV
Los Angeles	La Mirada	90638	American Crow	10/28/08	11/3/08	WNV
Los Angeles	Lomita	90717	American Crow	10/27/08	11/3/08	WNV
Los Angeles	Long Beach	90808	American Crow	10/20/08	11/3/08	WNV
Los Angeles	Los Angeles	90064	American Crow	10/27/08	11/3/08	WNV
Los Angeles	Los Angeles	90036	American Crow	10/28/08	11/3/08	WNV
Los Angeles	Montrose	91020	House Finch	10/22/08	11/3/08	WNV
Los Angeles	Santa Clarita	91351	American Crow	10/27/08	11/3/08	WNV
Los Angeles	Torrance	90504	American Crow	10/22/08	11/3/08	WNV
Orange	Garden Grove	92842	American Crow	10/22/08	10/28/08	WNV
Orange	Ladera Ranch	92694	American Crow	10/22/08	10/28/08	WNV
Orange	Laguna Woods	92637	American Crow	10/17/08	10/28/08	WNV
Orange	Newport Beach	92663	House Sparrow	10/22/08	10/28/08	WNV
Orange	Rancho Santa Margarita	92688	American Crow	10/22/08	10/28/08	WNV
Orange	Tustin	92780	American Crow	10/22/08	10/27/08	WNV
Placer	Roseville	95678	Western Scrub-Jay	10/24/08	11/3/08	WNV

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Sacramento	Rancho Cordova	95670	Green Heron	10/22/08	11/3/08	WNV
San Diego	Campo	91906	Western Scrub-Jay	10/27/08	9/29/08	WNV
San Diego	Fallbrook	92028	American Crow	10/30/08	10/30/08	WNV
San Diego	La Mesa	91942	Sharp-shinned Hawk	10/27/08	9/29/08	WNV
San Diego	San Diego	92109	American Crow	10/30/08	10/30/08	WNV
San Diego	Solana Beach	92075	American Crow	10/27/08	9/29/08	WNV
San Diego	Valley Center	92082	American Crow	10/27/08	9/29/08	WNV
San Diego	Valley Center	92082	American Crow	10/31/08	10/31/08	WNV
San Diego	Warner Springs	92086	American Crow	10/29/08	10/29/08	WNV
San Luis Obispo	Oceano	93445	Great Horned Owl	10/14/08	11/3/08	WNV
Sonoma	Santa Rosa	95407	Domestic Dove	10/17/08	11/3/08	WNV

Mosquito Pools

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Result
Los Angeles	GRLA2458	1373	Cx quinquefasciatus	20	10/28/2008	11/7/2008	Los Angeles	WNV
Los Angeles	GRLA2936	6127	Cx quinquefasciatus	37	10/29/2008	11/5/2008	Burbank	WNV
Los Angeles	GRLA2492	6136	Cx quinquefasciatus	14	10/29/2008	11/7/2008	La Canada Flintridge	WNV
Los Angeles	GRLA2497	6138	Cx quinquefasciatus	17	10/29/2008	11/7/2008	La Canada Flintridge	WNV
Los Angeles	GRLA2950	6146	Cx quinquefasciatus	42	10/31/2008	11/7/2008	Sunland	WNV
San Diego	SAND0266	277	Cx quinquefasciatus	20	11/4/2008	11/7/2008	San Diego	WNV

NATIONAL COMMENTS

As of November 4, 2008, 1,200 human cases had been reported nationwide this year in the following 42 states: Alabama (20), Arizona (97), Arkansas (8), California (329), Colorado (77), Connecticut (8), Delaware (1), Florida (2), Georgia (7), Idaho (32), Illinois (19), Indiana (3), Iowa (9), Kansas (31), Kentucky (3), Louisiana (36), Maryland (13), Michigan (17), Minnesota (21), Mississippi (98), Missouri (16), Montana (5), Nebraska (37), Nevada (15), New Jersey (7), New Mexico (8), New York (41), North Dakota (43), Ohio (19), Oklahoma (7), Oregon (4), Pennsylvania (13), Rhode Island (1), South Dakota (39), Tennessee (12), Texas (58), Utah (25), Virginia (1), Washington (2), West Virginia (1), Wisconsin (7), and Wyoming (8). Of the 1,200 individuals, 550 (46%) had neuroinvasive illness. As of November 7, 27 fatalities had been reported in Arizona (4), California (7), Iowa (1), Illinois (1), Mississippi (3), Missouri (1), New Jersey (1), New York (6), Ohio (1), Texas (1), and Wisconsin (1). At this time last year, 3,265 human cases had been reported nationwide.

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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 by plaque reduction neutralization test (PRNT).

*Human denominator data only includes specimens tested at VRDL and does not include additional negative specimens that are tested by local agencies only.

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 and Tree Squirrels:

All bird and tree squirrel species from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Additionally, doves, pigeons, and chickens are no longer be accepted for testing. Corvids that test positive via RAMP or VecTest are no longer confirmed. Dead birds and squirrels are necropsied at CAHFS laboratory at University of California, Davis. Oral swabs from American Crows and kidney tissue from all other dead birds and squirrels are forwarded to the UC Davis Center for Vectorborne Diseases (CVEC) for WNV testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set. The WNV Dead Bird Surveillance Coordinator, Erin Parker, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to VBDS Laboratory and tested for the presence of antibodies to West Nile virus (WNV), western equine encephalomyelitis (WEE), and St. Louis encephalitis (SLE) 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 WEE, SLE, 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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