

California Arbovirus Surveillance Bulletin # 36

Week 43 Friday, October 24, 2008

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

Fourteen new human cases of West Nile virus (WNV) illness were reported this week from four counties: Los Angeles (8), Placer (1), Riverside (2), and Sacramento (3). A total of 345 human WNV cases have been identified in the following 24 counties: Alameda (1), Butte (5), Calaveras (1), Colusa (1), Contra Costa (4), El Dorado (1), Fresno (1), Kings (1), Los Angeles (122, including 2 from Long Beach), Merced (1), Orange (60), Placer (5), Riverside (54), Sacramento (13), San Bernardino (18), San Diego (22), San Joaquin (11), Santa Clara (1), Shasta (1), Solano (1), Stanislaus (17), Tehama (1), Tulare (2) and Yolo (1). Of the 345 individuals, 223 (65%) developed neuroinvasive symptoms. The median age of the 345 individuals is 55 years (range: 3-94 years), and 209 (61%) are male. Nine WNV-related fatalities have been reported in Los Angeles (3), Orange (2), Riverside (3) and San Bernardino (1) counties. A total of 63 WNV-positive blood donation samples have been reported this year; 19 of the individuals reported symptoms and were reclassified as cases.

Horses

One new equine WNV case was reported this week from Riverside County. In 2008, 29 horses from 14 counties have tested positive for WNV; 17 died or were euthanized as a result of their infection.

Dead Birds & Tree Squirrels

Thirty-one WNV-positive dead birds were reported this week from 6 counties: Los Angeles (10), Madera (1), Sacramento (2), San Bernardino (1), San Diego (16), and Tulare (1). In 2008, 2,418 WNV-positive dead birds have been detected in 45 counties.

One WNV-positive tree squirrel was reported this week from Los Angeles County. In 2008, 30 tree squirrels have tested positive for WNV from seven counties.

Mosquito Pools

Fourteen WNV-positive mosquito pools were reported this week from 3 counties: Contra Costa (1), Los Angeles (12), and Riverside (1). In 2008, 1,921** WNV-positive mosquito pools have been detected in 26 counties.

**Total has been adjusted to include pools not previously reported.

Sentinel Chickens

Thirty-four WNV seroconversions were reported this week from 8 counties: Butte (1), Calaveras (9), Contra Costa (1), Glenn (1), Los Angeles (8), Riverside (1), Solano (7), and Stanislaus (6). **These are the first WNV-positive chickens detected in Calaveras and Solano counties this year.** In 2008, 515 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		36	5	31	
Calaveras	1		1		9	
Colusa	1		3		1	
Contra Costa	4	3	87	31	15	6
El Dorado	1		9			
Fresno	1	1	36	52	22	1
Glenn			17	1	5	
Humboldt			1			
Imperial				7	23	
Kern			10	7	13	
Kings	1		1		1	
Lake		1	2	3		
Lassen				1		
Los Angeles	122		457	491	101	12
Madera			3	1		
Marin			1			
Mendocino			1			
Merced	1	1	5			
Modoc			1			
Mono			2			
Monterey			6			
Napa			1			
Nevada			5			
Orange	60	2	615	315	3	4
Placer	5	1	3	27	11	
Riverside	54	7	39	118	102	
Sacramento	13	3	129	277	7	1
San Bernardino	18	1	167	165	57	5
San Diego	22	4	518	38	14	
San Joaquin	11		69	207	18	
San Luis Obispo			1			
San Mateo			2			
Santa Barbara			1			
Santa Clara	1		11	1		
Santa Cruz			3			
Shasta	1		7		3	
Solano	1		7	1	7	
Sonoma			8	2		
Stanislaus	17	2	45	75	38	
Sutter			2	11	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	345	29	2,418	1,921	515	30

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2007 & 2008 YTD West Nile Virus Comparisons		
	2007	2008
Total # Dead Bird Reports	29,674	31,320
# Positive Counties	51	48
# Human Cases/ # Tested	361 / 1,128	345 / 1,048
# Horse Cases/ # Tested	27 / 314	29 / 288
# Positive Dead Birds/ # Tested	1,344 / 5,236	2,418 / 5,572
# Positive Mosquito Pools/ # Tested	999 / 26,520	1,921 / 29,351
# Positive Chicken Sera/ # Tested	467 / 26,351	515 / 27,139
# Positive Squirrels/ # Tested	26 / 203	30 / 282

2008 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	59	0	14	0	0	0	0	0	0
	YTD	1,028	0	345	0	0	0	0	0	0
Horses Tested	Week	1	0	1	0	0	0	0	0	0
	YTD	288	0	29	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	77	31
	YTD	5,572	2,418
Tree Squirrels	Week	7	1
	YTD	282	30

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	622	34	0	0
	YTD	27,139	515	0	0
Mosquito Pools: RT-PCR	Week	408	13	0	0
	YTD	26,544	1,564	0	0
Mosquito Pools: RAMP	Week	8	1	N/A	N/A
	YTD	2,807	357	N/A	N/A

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POSITIVES: 10/20/08 – 10/24/08

Humans

County	Report Date	Age	Sex	Clin Pres	Onset Date	WNV Fatality
LOS ANGELES	10/9/2008	34	F	WNF^	9/7/2008	NO
LOS ANGELES	10/20/2008	78	F	WNF	9/2/2008	NO
LOS ANGELES	10/20/2008	63	F	WNND	9/13/2008	NO
LOS ANGELES	10/20/2008	46	F	WNF	9/11/2008	NO
LOS ANGELES	10/20/2008	90	M	WNND	9/7/2008	NO
LOS ANGELES	10/20/2008	74	F	WNND	9/18/2008	NO
LOS ANGELES	10/20/2008	82	M	WNND	9/11/2008	NO
LOS ANGELES	10/21/2008	66	M	WNND	9/18/2008	NO
PLACER	10/20/2008	>18	M	WNF	9/2/2008	NO
RIVERSIDE	10/14/2008	90	F	WNND	9/5/2008	YES
RIVERSIDE	10/15/2008	70	M	WNF	9/7/2008	NO
SACRAMENTO	10/16/2008	71	M	WNND	8/15/2008	NO
SACRAMENTO	10/20/2008	23	M	WNND	8/1/2008	NO
SACRAMENTO	10/21/2008	68	M	WNND	8/27/2008	NO

Dead Birds and Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Result
Los Angeles	Inglewood	90305	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Inglewood	90305	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Long Beach	90804	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Santa Clarita	91350	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Santa Clarita	91350	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Santa Clarita	91350	American Crow	10/14/08	10/20/08	WNV
Los Angeles	Sun Valley	91352	American Crow	10/14/08	10/20/08	WNV
Los Angeles	Sylmar	91342	American Crow	10/9/08	10/20/08	WNV
Los Angeles	Valencia	91355	American Crow	10/10/08	10/20/08	WNV
Los Angeles	Walnut	91789	House Finch	10/9/08	10/20/08	WNV
Los Angeles	Woodland Hills	91364	Fox Squirrel	10/14/08	10/20/08	WNV
Madera	Madera	93637	American Crow	10/14/08	10/20/08	WNV
Sacramento	Carmichael	95608	Western Scrub-Jay	10/14/08	10/20/08	WNV
Sacramento	Sacramento	95816	Yellow-billed Magpie	10/7/08	10/20/08	WNV
San Bernardino	San Bernardino	92404	Sharp-shinned Hawk	10/13/08	10/20/08	WNV
San Diego	Escondido	92026	American Crow	10/16/08	10/16/08	WNV
San Diego	Fallbrook	92028	American Crow	10/15/08	10/16/08	WNV
San Diego	Jamul	91935	American Crow	10/8/08	10/13/08	WNV
San Diego	Oceanside	92057	American Crow	10/13/08	10/13/08	WNV
San Diego	Oceanside	92057	American Crow	10/14/08	10/16/08	WNV
San Diego	Oceanside	92057	American Crow	10/14/08	10/16/08	WNV
San Diego	Oceanside	92057	American Crow	10/15/08	10/16/08	WNV
San Diego	San Diego	92109	American Crow	10/13/08	10/13/08	WNV
San Diego	San Diego	92130	American Crow	10/13/08	10/13/08	WNV
San Diego	San Diego	92119	American Crow	10/14/08	10/16/08	WNV
San Diego	San Diego	92130	American Crow	10/14/08	10/16/08	WNV
San Diego	San Diego	92126	Cooper's Hawk	10/8/08	10/13/08	WNV

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San Diego	Solana Beach	92075	American Crow	10/14/08	10/16/08	WNV
San Diego	Valley Center	92082	American Crow	10/13/08	10/13/08	WNV
San Diego	Valley Center	92082	American Crow	10/13/08	10/13/08	WNV
San Diego	Vista	92084	American Crow	10/13/08	10/13/08	WNV
Tulare	Springville	93265	Western Scrub-Jay	10/10/08	10/20/08	WNV

Mosquito Pools

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Result
Contra Costa	CNTR1966	699	Cs inornata	17	10/21/2008	10/23/2008	Pittsburg	WNV
Los Angeles	GRLA2101	1212	Cx quinquefasciatus	30	10/9/2008	10/24/2008	Norwalk	WNV
Los Angeles	GRLA2164	1236	Cx quinquefasciatus	21	10/9/2008	10/24/2008	Downey	WNV
Los Angeles	GRLA2228	1280	Cx quinquefasciatus	10	10/15/2008	10/23/2008	Rowland Heights	WNV
Los Angeles	GRLA2365	1271	Cx quinquefasciatus	42	10/15/2008	10/23/2008	Pico Rivera	WNV
Los Angeles	GRLA2458	6068	Cx quinquefasciatus	50	10/16/2008	10/24/2008	Los Angeles	WNV
Los Angeles	GRLA2463	6070	Cx quinquefasciatus	50	10/16/2008	10/24/2008	Los Angeles	WNV
Los Angeles	GRLA2524	6063	Cx quinquefasciatus	38	10/16/2008	10/24/2008	Los Angeles	WNV
Los Angeles	GRLA2557	6057	Cx quinquefasciatus	29	10/16/2008	10/23/2008	Reseda	WNV
Los Angeles	GRLA2583	6050	Cx quinquefasciatus	19	10/16/2008	10/24/2008	Studio City	WNV
Los Angeles	GRLA2650	6033	Cx quinquefasciatus	50	10/10/2008	10/24/2008	Encino	WNV
Los Angeles	GRLA3031	1282	Cx quinquefasciatus	50	10/16/2008	10/23/2008	Long Beach	WNV
Los Angeles	LACW1010	286	Cx quinquefasciatus	50	10/15/2008	10/22/2008	Los Angeles(Miracle Mile)	WNV
Riverside	COAV0121	1899	Cx tarsalis	50	10/17/2008	10/23/2008	Mecca	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Result	Band 01	Band 02	Band 03	Band 04	Band 05	Band 06	Band 07	Band 08	Band 09
Butte	BUCO0006	Chico	10/15/2008	WNV	2174								
Calaveras	SCSD9901	Copperopolis	10/1/2008	WNV	1668	1669	1670	1671	1672	1673	1674	1675	1676
Contra Costa	CNTR7402	Oakley	10/13/2008	WNV	2512								
Glenn	GLEN9701	Willows	10/15/2008	WNV	2712								
Los Angeles	LACW1005	El Segundo	10/7/2008	WNV	1057								
Los Angeles	LACW1007	Baldwin Hills	10/7/2008	WNV	1067	1068							
Los Angeles	LACW1010	Los Angeles(Miracle Mile)	10/7/2008	WNV	1082								
Los Angeles	LACW1012	Venice	10/6/2008	WNV	1089								
Los Angeles	LACW1026	Beverly Hills	10/6/2008	WNV	1127	1130	1150						
Riverside	RIVR0004	Beaumont	10/8/2008	WNV	1521								
Solano	SOLA0010	Vacaville	10/21/2008	WNV	3193								
Solano	SOLA0010	Vacaville	10/7/2008	WNV	3201								
Solano	SOLA0125	Cordelia	10/7/2008	WNV	3204	3209	3213						
Solano	SOLA0224	Birds Landing	10/7/2008	WNV	3178	3185							
Stanislaus	TRLK0402	Denair	10/13/2008	WNV	3380	3389							
Stanislaus	TRLK9702	Patterson	10/13/2008	WNV	3416	3417	3423	3425					

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NATIONAL COMMENTS

As of October 21, 2008, 1,141 human cases had been reported nationwide this year in the following 42 states: Alabama (19), Arizona (77), Arkansas (8), California (329), Colorado (77), Connecticut (7), Delaware (1), Florida (2), Georgia (7), Idaho (32), Illinois (19), Indiana (3), Iowa (9), Kansas (25), Kentucky (2), Louisiana (36), Maryland (13), Michigan (14), Minnesota (21), Mississippi (97), Missouri (16), Montana (5), Nebraska (37), Nevada (15), New Jersey (7), New Mexico (4), New York (39), North Dakota (43), Ohio (16), Oklahoma (8), Oregon (4), Pennsylvania (5), Rhode Island (1), South Dakota (39), Tennessee (11), Texas (51), Utah (24), Virginia (1), Washington (2), West Virginia (1), Wisconsin (6), and Wyoming (8). Of the 1,141 individuals, 520 (46%) had neuroinvasive illness. As of October 21, 25 fatalities had been reported in Arizona (3), California (7), Iowa (1), Illinois (1), Mississippi (3), Missouri (1), New Jersey (1), New York (6), Ohio (1) and Texas (1). At this time last year, 3,107 human cases had been reported nationwide.

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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