

# California Arbovirus Surveillance Bulletin # 39

Week 46 Friday, November 14, 2008

## Weekly and Year-To-Date Summaries

### WEEKLY COMMENTS



#### **Humans**

Twelve new human cases of West Nile virus (WNV) illness were reported this week from four counties: Los Angeles (5), Orange (2), Tehama (3), and Tulare (2). A total of 392 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 (144, including 2 from Long Beach and 2 from Pasadena), Merced (1), Orange (65), 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 (4), Tulare (4) and Yolo (1) counties. Of the 392 individuals, 253 (65%) developed neuroinvasive symptoms. The median age of the 380 individuals is 55 years (range: 3-94 years), and 245 (63%) are male. Twelve WNV-related fatalities have been reported in Fresno (1), Los Angeles (5), Orange (2), Riverside (3) and San Bernardino (1) counties. A total of 69 WNV-positive blood donation samples have been reported this year; 21 of the individuals reported symptoms and were reclassified as cases.

#### **Horses**

One new equine WNV case was reported this week from San Bernardino County. In 2008, 32 horses from 14 counties have tested positive for WNV; 17 died or were euthanized as a result of their infection.

#### **Dead Birds & Tree Squirrels\*\***

Thirteen WNV-positive dead birds were reported this week from six counties: Contra Costa (1), Del Norte (1), Los Angeles (2), Orange (5), San Bernardino (3), and San Diego (1). **This is the first indication of WNV activity in Del Norte County this year.** In 2008, 2,501 WNV-positive dead birds have been detected in 46 counties.

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

**\*\* Dead bird/squirrel testing has been suspended until spring 2009.**

#### **Mosquito Pools**

Three WNV-positive mosquito pools were reported this week from Los Angeles (1) and San Bernardino (2) counties. In 2008, 1,956 WNV-positive mosquito pools have been detected in 26 counties.

#### **Sentinel Chickens**

Twelve new WNV seroconversions were reported this week from Los Angeles (11) and Riverside (1) counties. In 2008, 576 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](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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## 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	88	31	15	6
Del Norte			1			
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	144		477	504	128	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	65	2	628	330	3	4
Placer	6	1	4	27	11	
Riverside	58	9	39	118	117	
Sacramento	13	3	130	277	7	1
San Bernardino	24	2	173	169	61	5
San Diego	22	4	547	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	4		6			
Trinity			1			
Tulare	4	1	51	64	20	
Ventura		1	24		4	
Yolo	1	1	9	19		
Yuba				1	1	
<b>Totals</b>	<b>392</b>	<b>32</b>	<b>2,501</b>	<b>1,956</b>	<b>576</b>	<b>32</b>

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2007 & 2008 YTD West Nile Virus Comparisons		
	2007	2008
Total # Dead Bird Reports	30,810	32,240
# Positive Counties	51	49
# Human Cases/ # Tested	375 / 1,195	392 / 1,137
# Horse Cases/ # Tested	28 / 332	32 / 304
# Positive Dead Birds/ # Tested	1,373 / 5,497	2,501 / 5,852
# Positive Mosquito Pools/ # Tested	1,004 / 27,258	1,956 / 30,143
# Positive Chicken Sera/ # Tested	510 / 28,027	576 / 28,774
# Positive Squirrels/ # Tested	26 / 213	32 / 298

## 2008 TEST SUMMARIES

### Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	21	0	12	0	0	0	0	0	0
	YTD	1,137	0	392	0	0	0	0	0	0
Horses Tested	Week	1	0	1	0	0	0	0	0	0
	YTD	304	0	32	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	57	13
	YTD	5,852	2,501
Tree Squirrels	Week	1	0
	YTD	298	32

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	501	12	0	0
	YTD	28,774	576	0	0
Mosquito Pools: RT-PCR	Week	165	3	0	0
	YTD	27,332	1,599	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: 11/10/08 – 11/14/08

### Humans

County	Reported	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
LOS ANGELES	11/13/08	94	F	n/a	n/a	NO
LOS ANGELES	11/13/08	63	M	WNF	09/02/08	NO
LOS ANGELES	11/13/08	73	M	WNND	09/10/08	YES
LOS ANGELES	11/13/08	73	M	WNND	09/13/08	NO
LOS ANGELES	11/13/08	71	M	WNND	10/15/08	NO
ORANGE	11/07/08	38	M	WNND	Week 37	NO
ORANGE	11/07/08	62	M	WNF	Week 36	NO
TEHAMA	11/10/08	>18	M	WNF	Week 38	NO
TEHAMA	11/10/08	>18	M	WNF	Week 35	NO
TEHAMA	11/10/08	>18	M	WNND	Week 32	NO
TULARE	11/12/08	31	M	WNND	09/13/08	NO
TULARE	11/13/08	73	F	WNF	10/13/08	NO

### Dead Birds and Tree Squirrels

County	City	Zip	Species	Reported	Tested	Result
Contra Costa	Walnut Creek	94598	Western Scrub-Jay	11/5/08	11/6/08	WNV
Del Norte	Crescent City	95531	Pine Siskin	10/27/08	11/10/08	WNV
Los Angeles	Los Angeles	90019	American Crow	10/22/08	11/10/08	WNV
Los Angeles	Torrance	90505	American Crow	10/30/08	11/10/08	WNV
Orange	Costa Mesa	92628	American Crow	10/27/08	10/30/08	WNV
Orange	Huntington Beach	92683	American Crow	10/23/08	10/30/08	WNV
Orange	Huntington Beach	92647	Western Bluebird	10/30/08	11/2/08	WNV
Orange	Irvine	92620	American Crow	11/3/08	11/6/08	WNV
Orange	Mission Viejo	92692	American Crow	11/3/08	11/6/08	WNV
San Bernardino	Redlands	92373	American Crow	10/10/08	10/15/08	WNV
San Bernardino	Yucaipa	92399	American Crow	10/1/08	10/2/08	WNV
San Bernardino	Yucaipa	92399	American Crow	10/2/08	10/2/08	WNV
San Diego	San Diego	92130	American Crow	11/5/08	11/6/08	WNV

### Mosquito Pools

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Result
Los Angeles	GRLA2635	6162	Cx quinquefasciatus	50	11/7/2008	11/14/2008	Van Nuys	WNV
San Bernardino	SANB0011	650	Cx tarsalis	32	10/2/2008	11/13/2008	Rialto	WNV
San Bernardino	SANB0008	661	Cx quinquefasciatus	30	9/11/2008	11/13/2008	Upland	WNV

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### Chickens

County	Site Code	City	Date Bled	Result	Band 01	Band 02	Band 03
Los Angeles	LACW1049	Inglewood	11/6/2008	WNV	1136		
Los Angeles	LACW1001	Rolling Hills Estates	11/6/2008	WNV	1035	1032	
Los Angeles	LACW1026	Beverly Hills	11/5/2008	WNV	1128	1126	
Los Angeles	LACW1024	Calabasas	11/5/2008	WNV	1145	1147	
Los Angeles	GRLA2223	Rowland Heights	11/5/2008	WNV	2731	2736	2739
Los Angeles	GRLA2465	Los Angeles	11/3/2008	WNV	3901		
Riverside	COAV0035	Mecca	11/3/2008	WNV	3843		

### 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.

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### **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.

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### **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.

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### **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.

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### **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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*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) 412-6298, FAX (510) 412-6263, or email: [tina.feiszli@cdph.ca.gov](mailto:tina.feiszli@cdph.ca.gov)*

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