

# California Arbovirus Surveillance Bulletin # 40

Week 47 Friday, November 21, 2008

## Weekly and Year-To-Date Summaries

### WEEKLY COMMENTS



#### **Humans**

Seven new human cases of West Nile virus (WNV) illness were reported this week from three counties: Los Angeles (4), Riverside (2), and San Bernardino (1). A total of 399 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 (148, including 2 from Long Beach and 3 from Pasadena), Merced (1), Orange (65), Placer (6), Riverside (60), Sacramento (13), San Bernardino (25), 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 399 individuals, 257 (64%) developed neuroinvasive symptoms. The median age of the 399 individuals is 55 years (range: 3-94 years), and 249 (62%) are male. Thirteen WNV-related fatalities have been reported in Fresno (1), Los Angeles (5), Orange (2), Riverside (4) 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**

No new equine cases were reported this week. 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\*\***

Eight WNV-positive dead birds were reported this week from San Diego (6) and Santa Clara (2) counties. In 2008, 2,509 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.

**\*\* State testing of dead birds/squirrels has been suspended until spring 2009.**

#### **Mosquito Pools**

No positive mosquito pools were reported this week. In 2008, 1,956 WNV-positive mosquito pools have been detected in 26 counties.

#### **Sentinel Chickens**

Four new WNV seroconversions were reported this week from Kern (1), Lake (1), Los Angeles (1) and Riverside (1) counties. **This is the first WNV positive chicken detected in Lake County this year.** In 2008, 580 WNV seroconversions have been detected in chickens from 27 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	18	
Kings	1		1		1	
Lake		1	2	3	1	
Lassen				1		
Los Angeles	148		477	504	129	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	60	9	39	118	118	
Sacramento	13	3	130	277	7	1
San Bernardino	25	2	173	169	61	5
San Diego	22	4	553	40	15	
San Joaquin	12		69	207	18	
San Luis Obispo			2			
San Mateo			2			
Santa Barbara			1			
Santa Clara	1		13	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>399</b>	<b>32</b>	<b>2,509</b>	<b>1,956</b>	<b>580</b>	<b>32</b>

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2007 & 2008 YTD West Nile Virus Comparisons		
	2007*	2008
Total # Dead Bird Reports	30,810	32,451
# Positive Counties	51	49
# Human Cases/ # Tested	375 / 1,195	399 / 1,159
# Horse Cases/ # Tested	28 / 332	32 / 304
# Positive Dead Birds/ # Tested	1,381 / 5,497	2,509 / 5,866
# Positive Mosquito Pools/ # Tested	1,004 / 27,258	1,956 / 30,337
# Positive Chicken Sera/ # Tested	510 / 28,027	580 / 28,928
# Positive Squirrels/ # Tested	26 / 213	32 / 298

\*Data from week 47 not available. Numbers reflect week 46.

## 2008 TEST SUMMARIES

### Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
<b>Humans Tested*</b>	Week	22	0	7	0	0	0	0	0	0
	YTD	1,159	0	399	0	0	0	0	0	0
<b>Horses Tested</b>	Week	0	0	0	0	0	0	0	0	0
	YTD	304	0	32	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
<b>Dead Birds</b>	Week	14	8
	YTD	5,866	2,509
<b>Tree Squirrels</b>	Week	0	0
	YTD	298	32

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
<b>Chicken Sera</b>	Week	154	4	0	0
	YTD	28,928	580	0	0
<b>Mosquito Pools: RT-PCR</b>	Week	194	0	0	0
	YTD	27,526	1,599	0	0
<b>Mosquito Pools: RAMP</b>	Week	0	0	N/A	N/A
	YTD	2,811	357	N/A	N/A

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## POSITIVES: 11/17/08 – 11/21/08

### Humans

County	Reported	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
LOS ANGELES	11/18/08	62	F	WNND	09/28/08	NO
LOS ANGELES	11/20/08	68	F	WNND	09/13/08	NO
LOS ANGELES	11/20/08	84	M	WNND	10/17/08	NO
LOS ANGELES	11/20/08	66	M	WNF	09/27/08	NO
RIVERSIDE	11/17/08	50	M	WNF	n/a	NO
RIVERSIDE	11/18/08	60	M	WNND	09/01/08	NO
SAN BERNARDINO	11/20/08	65	F	WNF	08/07/08	NO

### Dead Birds and Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Result
San Diego	Carlsbad	92009	Cooper's Hawk	11/17/08	11/18/08	WNV
San Diego	Escondido	92025	American Crow	11/10/08	11/12/08	WNV
San Diego	Escondido	92025	American Crow	11/10/08	11/12/08	WNV
San Diego	Escondido	92026	American Crow	11/12/08	11/14/08	WNV
San Diego	San Diego	92109	American Crow	11/10/08	11/12/08	WNV
San Diego	San Diego	92121	Cooper's Hawk	11/17/08	11/18/08	WNV
Santa Clara	Los Altos	94024	American Crow	10/21/08	10/21/08	WNV
Santa Clara	Sunnyvale	94086	American Crow	10/20/08	10/21/08	WNV

### Sentinel Chickens

County	Site Code	City	Date Bled	Result	Band 01
Kern	DLNO0060	Delano	11/13/08	WNV	2566
Lake	LAKE1000	Upper Lake	10/15/08	WNV	1173
Los Angeles	LACW1002	Torrance	11/17/08	WNV	1037
Riverside	NWST0004	Flabob Airport	11/7/08	WNV	1423

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## NATIONAL COMMENTS

As of November 18, 2008, 1,301 human cases had been reported nationwide this year in the following 42 states: Alabama (21), Arizona (97), Arkansas (8), California (392), Colorado (77), Connecticut (8), Delaware (1), Florida (2), Georgia (7), Idaho (33), Illinois (19), Indiana (3), Iowa (9), Kansas (32), Kentucky (3), Louisiana (36), Maryland (14), Michigan (17), Minnesota (21), Mississippi (99), Missouri (18), Montana (5), Nebraska (49), Nevada (16), New Jersey (7), New Mexico (9), New York (44), North Dakota (43), Ohio (19), Oklahoma (7), Oregon (16), Pennsylvania (13), Rhode Island (1), South Dakota (39), Tennessee (12), Texas (60), Utah (25), Virginia (1), Washington (2), West Virginia (1), Wisconsin (7), and Wyoming (8). Of the 1,301 individuals, 602 (46%) had neuroinvasive illness. As of November 18, 34 fatalities had been reported in Arizona (4), California (12), Idaho (1), Iowa (1), Illinois (1), Mississippi (3), Missouri (1), New Jersey (1), New York (6), Ohio (1), Pennsylvania (1), Texas (1), and Wisconsin (1). At this time last year, 3,359 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.

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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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