

# California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 17, 2008

## Weekly and Year-To-Date Summaries

### WEEKLY COMMENTS



#### **Humans**

Two new human cases of West Nile virus (WNV) illness were reported this week from Riverside County. A total of 331 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 (114, including 2 from Long Beach), Merced (1), Orange (60), Placer (4), Riverside (52), Sacramento (10), 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 331 individuals, 214 (65%) developed neuroinvasive symptoms. The median age of the 331 individuals is 54 years (range: 3-94 years), and 201 (61%) are male. Seven WNV-related fatalities have been reported in Los Angeles (2), Orange (2), Riverside (2) and San Bernardino (1) counties. A total of 59 WNV-positive blood donation samples have been reported this year; 17 of the individuals reported symptoms and were reclassified as cases.

#### **Horses**

Two new equine WNV cases were reported this week from Sacramento and Stanislaus counties. In 2008, 28 horses have tested positive for WNV; 16 died or were euthanized as a result of their infection.

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

Sixty-eight WNV-positive dead birds were reported this week from 15 counties: Alameda (2), Contra Costa (1), El Dorado (3), Fresno (2), Los Angeles (22), Monterey (1), Orange (11), Sacramento (2), San Bernardino (3), San Diego (13), San Luis Obispo (1), Trinity (1), Tulare (1), Ventura (4), and Yolo (1). **This is the first indication of WNV activity from San Luis Obispo and Trinity counties this year.** In 2008, 2,387 WNV-positive dead birds have been detected in 45 counties.

Two WNV-positive tree squirrels were reported this week from Los Angeles and San Bernardino counties. In 2008, 29 tree squirrels have tested positive for WNV from seven counties.

#### **Mosquito Pools**

Ten WNV-positive mosquito pools were reported this week from 3 counties: Los Angeles (3), San Bernardino (6), and Yolo (1). In 2008, 1,849 WNV-positive mosquito pools have been detected in 26 counties.

#### **Sentinel Chickens**

Twenty-nine WNV seroconversions were reported this week from 9 counties: Imperial (2), Kings (1), Los Angeles (5), Riverside (8), Sacramento (1), San Bernardino (3), San Diego (1), Shasta (3), and Tulare (5). **These are the first WNV-positive chickens detected in Kings and Shasta counties this year.** In 2008, 481 WNV seroconversions have been detected in chickens from 22 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		36	5	30	
Calaveras	1		1			
Colusa	1		3		1	
Contra Costa	4	3	87	28	14	6
El Dorado	1		9			
Fresno	1	1	36	52	22	1
Glenn			17	1	4	
Humboldt			1			
Imperial				7	23	
Kern			10	7	13	
Kings	1		1		1	
Lake		1	2	3		
Lassen				1		
Los Angeles	114		447	479	93	11
Madera			2	1		
Marin			1			
Mendocino			1			
Merced	1		5			
Modoc			1			
Mono			2			
Monterey			6			
Napa			1			
Nevada			5			
Orange	60	2	615	276	3	4
Placer	4	1	3	27	11	
Riverside	52	6	39	117	101	
Sacramento	10	3	127	277	7	1
San Bernardino	18	1	166	160	57	5
San Diego	22	4	502	38	14	
San Joaquin	11		69	195	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		
Sonoma			8	2		
Stanislaus	17	3	45	75	32	
Sutter			2	11	9	
Tehama	1		6			
Trinity			1			
Tulare	2	1	50	64	20	
Ventura		1	24		4	
Yolo	1	1	9	19		
Yuba				1	1	
<b>Totals</b>	<b>331</b>	<b>28</b>	<b>2,387</b>	<b>1,849</b>	<b>481</b>	<b>29</b>

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2007 & 2008 YTD West Nile Virus Comparisons		
	2007	2008
Total # Dead Bird Reports	29,243	30,799
# Positive Counties	51	48
# Human Cases/ # Tested	354 / 1,104	331 / 969
# Horse Cases/ # Tested	27 / 309	28 / 287
# Positive Dead Birds/ # Tested	1,316 / 5,087	2,387 / 5,495
# Positive Mosquito Pools/ # Tested	995 / 26,154	1,849 / 28,877
# Positive Chicken Sera/ # Tested	449 / 25,564	481 / 26,517
# Positive Squirrels/ # Tested	25 / 192	29 / 275

## 2008 TEST SUMMARIES

### Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	20	0	2	0	0	0	0	0	0
	YTD	969	0	331	0	0	0	0	0	0
Horses Tested	Week	2	0	2	0	0	0	0	0	0
	YTD	287	0	28	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	130	68
	YTD	5,495	2,387
Tree Squirrels	Week	16	2
	YTD	275	29

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	787	29	0	0
	YTD	26,517	481	0	0
Mosquito Pools: RT-PCR	Week	526	10	0	0
	YTD	26,092	1,507	0	0
Mosquito Pools: RAMP	Week	30	0	N/A	N/A
	YTD	2,785	342	N/A	N/A

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## POSITIVES: 10/13/08 – 10/17/08

### Humans

County	Report Date	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
Riverside	10/10/08	24	M	WNND	9/4/2008	NO
Riverside	10/9/08	84	F	WNND	9/13/2008	NO

### Dead Birds and Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Result
Alameda	Pleasanton	94566	American Crow	9/30/08	10/13/08	WNV
Alameda	Pleasanton	94566	American Crow	9/30/08	10/13/08	WNV
Contra Costa	Concord	94521	Western Scrub-Jay	9/30/08	10/13/08	WNV
El Dorado	El Dorado	95623	Black Phoebe	9/28/08	10/13/08	WNV
El Dorado	El Dorado Hills	95762	Oak Titmouse	9/30/08	10/13/08	WNV
El Dorado	El Dorado Hills	95762	Woodpecker	9/25/08	10/13/08	WNV
Fresno	Kingsburg	93631	White-crowned Sparrow	10/7/08	10/13/08	WNV
Fresno	Selma	93662	American Crow	10/8/08	10/13/08	WNV
Los Angeles	Altadena	91001	American Crow	8/7/08	8/7/08	WNV
Los Angeles	Altadena	91001	American Crow	8/20/08	8/21/08	WNV
Los Angeles	Arcadia	91006	American Crow	9/2/08	9/3/08	WNV
Los Angeles	Burbank	91501	American Crow	10/5/08	10/13/08	WNV
Los Angeles	Covina	91722	American Crow	8/11/08	8/11/08	WNV
Los Angeles	Covina	91722	American Crow	8/29/08	8/29/08	WNV
Los Angeles	Diamond Bar	91765	House Sparrow	9/29/08	10/13/08	WNV
Los Angeles	Long Beach	90808	American Crow	10/1/08	10/13/08	WNV
Los Angeles	Long Beach	90808	American Crow	10/6/08	10/13/08	WNV
Los Angeles	Los Angeles	90048	American Crow	9/4/08	9/5/08	WNV
Los Angeles	Los Angeles	90016	American Crow	10/3/08	10/13/08	WNV
Los Angeles	Los Angeles	90033	Mallard	9/29/08	10/13/08	WNV
Los Angeles	Manhattan Beach	90266	American Crow	10/5/08	10/13/08	WNV
Los Angeles	Montebello	90640	American Crow	10/2/08	10/13/08	WNV
Los Angeles	San Gabriel	91775	American Crow	8/4/08	8/4/08	WNV
Los Angeles	San Marino	91108	American Crow	10/6/08	10/13/08	WNV
Los Angeles	Santa Clarita	91321	Cooper's Hawk	10/7/08	10/13/08	WNV
Los Angeles	Sun Valley	91352	American Crow	10/6/08	10/13/08	WNV
Los Angeles	Sunland	91040	Fox Squirrel	10/2/2008	10/13/2008	WNV
Los Angeles	Temple City	91780	American Crow	8/22/08	8/21/08	WNV
Los Angeles	Valencia	91355	American Crow	10/8/08	10/13/08	WNV
Los Angeles	West Covina	91790	American Crow	8/5/08	8/4/07	WNV
Los Angeles	West Covina	91791	American Crow	8/28/08	8/29/08	WNV
Monterey	Salinas	93905	Cockatiel	9/25/08	10/13/08	WNV
Orange	Anaheim	92807	American Crow	10/2/08	10/7/08	WNV
Orange	Anaheim	92808	American Crow	10/3/08	10/7/08	WNV
Orange	Anaheim	92804	American Crow	10/6/08	10/9/08	WNV
Orange	Anaheim	92807	House Sparrow	10/1/08	10/7/08	WNV
Orange	Fullerton	92832	American Crow	10/6/08	10/9/08	WNV
Orange	Huntington Beach	92647	American Crow	10/7/08	10/9/08	WNV
Orange	Irvine	92676	American Crow	10/6/08	10/7/08	WNV

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Orange	Laguna Hills	92653	American Crow	10/2/08	10/7/08	WNV
Orange	Orange	92865	Sharp-shinned Hawk	9/29/08	10/2/08	WNV
Orange	Santa Ana	92705	American Crow	9/29/08	10/2/08	WNV
Orange	Santa Ana	92704	American Crow	9/29/08	10/2/08	WNV
Sacramento	Elverta	95626	Western Scrub-Jay	10/2/08	10/13/08	WNV
Sacramento	Sloughhouse	95683	Sparrow	9/25/08	10/13/08	WNV
San Bernardino	Big Bear Lake	92315	Western Gray Squirrel	10/3/2008	10/13/08	WNV
San Bernardino	Rancho Cucamonga	91701	American Crow	9/29/08	9/29/08	WNV
San Bernardino	Rancho Cucamonga	91701	Western Scrub-Jay	9/30/08	10/13/08	WNV
San Bernardino	Upland	91786	American Crow	9/10/08	9/10/08	WNV
San Diego	El Cajon	92020	Western Scrub-Jay	10/8/08	10/8/08	WNV
San Diego	Escondido	92029	American Crow	10/7/08	10/7/08	WNV
San Diego	Escondido	92025	American Crow	10/7/08	10/7/08	WNV
San Diego	Escondido	92025	American Crow	10/8/08	10/8/08	WNV
San Diego	Fallbrook	92028	American Crow	10/6/08	10/6/08	WNV
San Diego	La Mesa	91942	American Crow	10/6/08	10/6/08	WNV
San Diego	La Mesa	91941	Great Horned Owl	10/6/08	10/6/08	WNV
San Diego	Ramona	92065	American Crow	10/6/08	10/6/08	WNV
San Diego	Ramona	92065	American Crow	10/6/08	10/6/08	WNV
San Diego	Ramona	92065	American Crow	10/8/08	10/8/08	WNV
San Diego	San Diego	92111	American Crow	10/7/08	10/7/08	WNV
San Diego	San Diego	92130	American Crow	10/8/08	10/8/08	WNV
San Diego	Santa Ysabel	92070	Western Scrub-Jay	10/8/08	10/8/08	WNV
San Luis Obispo	San Luis Obispo	93401	House Finch	9/16/08	10/13/08	WNV
Trinity	Weaverville	96093	Western Scrub-Jay	9/29/08	10/13/08	WNV
Tulare	Visalia	93277	American Robin	9/29/08	10/13/08	WNV
Ventura	Fillmore	93015	American Crow	10/8/08	10/13/08	WNV
Ventura	Moorpark	93021	American Crow	10/2/08	10/13/08	WNV
Ventura	Ventura	93003	American Crow	10/2/08	10/13/08	WNV
Ventura	Ventura	93004	American Crow	10/6/08	10/13/08	WNV
Yolo	Davis	95618	Yellow-billed Magpie	10/3/08	10/13/08	WNV

## Mosquito Pools

County	Site Code	Pool #	Species	# in pool	City	Collected	Tested	Results
Los Angeles	GRLA2270	1238	Cx quinquefasciatus	22	Bellflower	10/9/2008	10/16/2008	WNV
Los Angeles	GRLA2890	1201	Cx quinquefasciatus	48	Lakewood	10/9/2008	10/16/2008	WNV
Los Angeles	GRLA3030	1256	Cx quinquefasciatus	50	Rosemead	10/9/2008	10/17/2008	WNV
San Bernardino	SANB0002	443	Cx tarsalis	32	Redlands	9/24/2008	10/17/2008	WNV
San Bernardino	SANB0004	383	Cx tarsalis	19	San Bernadino	8/22/2008	10/16/2008	WNV
San Bernardino	SANB0007	469	Cx tarsalis	7	Fontana	8/13/2008	10/17/2008	WNV
San Bernardino	SANB0007	470	Cx quinquefasciatus	15	Fontana	8/13/2008	10/17/2008	WNV
San Bernardino	SANB0011	471	Cx tarsalis	28	Rialto	8/13/2008	10/17/2008	WNV
San Bernardino	SANB0011	472	Cx quinquefasciatus	23	Rialto	8/13/2008	10/17/2008	WNV
Yolo	SAYO3270	8427	Cx pipiens	21	Plainfield	10/10/2008	10/16/2008	WNV

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## Sentinel Chickens

County	Site Code	City	Date Bled	Result	Band 01	Band 02
Imperial	COAV5001	Niland	10/6/2008	WNV	2350	2378
Kings	KNGS2007	Lemoore	9/23/2008	WNV	1022	
Los Angeles	ANTV3247	Lancaster	10/8/2008	WNV	2028	
Los Angeles	ANTV5662	Lancaster	10/8/2008	WNV	2033	
Los Angeles	ANTV7947	Palmdale	10/8/2008	WNV	2039	
Los Angeles	LONG0002	Long Beach	10/6/2008	WNV	2210	
Los Angeles	LONG0003	Long Beach	10/6/2008	WNV	2223	
Riverside	COAV0035	Mecca	10/6/2008	WNV	2311	2395
Riverside	COAV0122	Mecca	10/6/2008	WNV	2335	
Riverside	COAV0131	Oasis	10/6/2008	WNV	2329	
Riverside	RIVR0001	San Jacinto	10/8/2008	WNV	1503	1504
Riverside	RIVR0008	Murrieta	10/8/2008	WNV	1543	1549
Sacramento	SAYO7004	Elverta	10/8/2008	WNV	1569	
San Bernardino	SANB0006	Yucaipa	10/6/2008	WNV	1732	1739
San Bernardino	SANB0008	Upland	10/6/2008	WNV	1754	
San Diego	SAND0016	Carlsbad	10/6/2008	WNV	1859	
Shasta	SHAS9704	Redding	9/4/2008	WNV	3123	
Shasta	SHAS9704	Redding	9/18/2008	WNV	3116	3119
Tulare	DLTA6309	Reedley	10/6/2008	WNV	2610	
Tulare	DLTA7322	Kingsburg	10/6/2008	WNV	3807	3808
Tulare	DLTA8530	Visalia	10/6/2008	WNV	2606	2608

## NATIONAL COMMENTS

As of October 14, 2008, 1,108 human cases had been reported nationwide this year in the following 42 states: Alabama (16), Arizona (77), Arkansas (8), California (331), Colorado (77), Connecticut (7), Delaware (1), Florida (2), Georgia (6), Idaho (32), Illinois (16), Indiana (3), Iowa (9), Kansas (22), Kentucky (1), Louisiana (36), Maryland (12), Michigan (9), Minnesota (21), Mississippi (94), Missouri (15), Montana (5), Nebraska (37), Nevada (16), New Jersey (7), New Mexico (4), New York (30), North Dakota (43), Ohio (16), Oklahoma (9), Oregon (4), Pennsylvania (5), Rhode Island (1), South Dakota (37), Tennessee (11), Texas (51), Utah (21), Virginia (1), Washington (2), West Virginia (1), Wisconsin (6), and Wyoming (8). Of the 1,108 individuals, 508 (46%) had neuroinvasive illness. As of October 14, 22 fatalities had been reported in Arizona (3), California (7), Iowa (1), Mississippi (3), Missouri (1), New Jersey (1), New York (4), Ohio (1) and Texas (1). At this time last year, 3,022 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 Stan Husted by phone (510) 412-6253, FAX (510) 412-6263, or email: [stan.husted@cdph.ca.gov](mailto:stan.husted@cdph.ca.gov)*

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