

## California Arbovirus Surveillance Bulletin #40

Week 46 Friday, November 18, 2011



### WEEKLY UPDATE

#### **Human Cases**

A total of 6 new human cases of West Nile virus (WNV) were reported this week from Kern (1), Los Angeles (3), Stanislaus (1), and Tehama (1) counties. To date this year, 150 WNV cases have been reported from 22 counties; of the 150 cases, 108 (72%) developed neuroinvasive disease. The median age for all cases is 57 years (range: 14-87 years) and 92 (61%) are male. Eight fatalities have been reported from Kern (3), Los Angeles (4) and Tehama (1) counties. Additionally, 25 WNV-positive blood donors have been reported this year; 8 of the individuals subsequently developed symptoms and were reclassified as cases.

At this time last year, 97 WNV cases had been reported from 17 counties.

National Activity: As of November 15, 2011, 627 human cases of WNV had been reported nationwide in 42 states and the District of Columbia: Alabama (3), Arizona (49), Arkansas (1), California (144), Colorado (7), Connecticut (9), Delaware (1), District of Columbia (1), Florida (21), Georgia (12), Idaho (2), Illinois (31), Indiana (9), Iowa (9), Kansas (4), Kentucky (3), Louisiana (10), Maryland (20), Massachusetts (5), Michigan (33), Minnesota (2), Mississippi (48), Missouri (8), Montana (1), Nebraska (28), Nevada (16), New Jersey (7), New Mexico (4), New York (43), North Carolina (2), North Dakota (4), Ohio (21), Pennsylvania (5), Rhode Island (1), South Dakota (2), Tennessee (18), Texas (25), Utah (3), Vermont (1), Virginia (8), West Virginia (1), Wisconsin (2), and Wyoming (3). Of the 627 cases, 429 (68%) developed neuroinvasive disease. A total of 36 WNV-related fatalities had been reported in Alabama (1), Arizona (4), California (5), Florida (2), Georgia (3), Illinois (3), Indiana (1), Kansas (1), Michigan (2), Minnesota (1), Mississippi (4), Nevada (1), New York (2), Ohio (1), Pennsylvania (1), Tennessee (1), Texas (2), and Virginia (1).

#### **Horses**

No new equine cases of WNV were reported this week. In 2011, 15 horses from 7 counties have tested positive for WNV, and 4 fatalities have been reported. At this time last year, 19 cases of WNV had been reported among horses from 11 counties.

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

Two WNV positive dead birds were reported this week from two counties: Orange (1) and Santa Clara (1). To date this year, 680 dead birds from 26 counties and 24 tree squirrels from 6 counties have tested positive for WNV. An additional 122 birds have tested positive for chronic\* WNV infection from 28 counties.

At this time last year, 408 birds from 27 counties, and 23 tree squirrels from 8 counties had tested positive for WNV.

NOTE: The statewide dead bird testing program has been suspended until March, 2012. If your agency would like to continue local testing during the winter months, please contact Leslie Foss at 510-412-6255 so the appropriate zip codes can remain open. Otherwise, all zip codes will be closed until the 2012 season. The WNV hotline will continue to operate Monday-Friday (8am-5pm) to receive dead bird and squirrel reports and answer questions from the public.

*\*In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section began differentiating between chronic and acute infections in WNV positive dead birds. Birds considered to have chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility.*

#### **Mosquito Pools**

No new positive mosquito pools were reported this week. In 2011, 2,083 mosquito pools from 26 counties have tested positive for WNV.

At this time last year, 1,302 mosquito pools from 24 counties had tested positive for WNV.

#### **Sentinel Chickens**

No new seroconversions were reported this week. To date this year, 381 WNV positive chickens have been detected among 69 flocks in 15 counties.

At this time last year, 279 chickens (62 flocks) had tested positive for WNV from 21 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)

## California Arbovirus Surveillance Bulletin #40

Week 46 Friday, November 18, 2011

2010 & 2011 YTD West Nile Virus Comparisons		
	2010	2011
Total # Dead Bird Reports	10,225	9,705
# Positive Counties	35	35
# Human Cases	97	150
# Horse Cases	19	15
# Positive Dead Birds / # Tested	408 / 2,076	680 / 2,391
# Positive Mosquito Pools / # Tested	1,302 / 30,315	2,083 / 32,484
# Seroconversions / # Tested	279 / 25,715	381 / 22,204
# Positive Squirrels / # Tested	23 / 106	24 / 106

### YTD WNV Activity by Element and County, 2011

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda						1
Amador	1					
Butte	3			1	20	
Contra Costa	3		38	7		
El Dorado	1		2			
Fresno	9	5	15	123		
Glenn	1		2		5	
Imperial				3	3	
Inyo				2		
Kern	18	1	3	389	140	
Kings			9	63		
Lake			1	3		
Los Angeles	56	1	225	465	82	15
Madera	2		3	5		
Merced	1	3	9	11	12	
Nevada			1			
Orange	10		48	91		1
Placer	1	2	10	48	6	
Riverside	6		7	56	38	
Sacramento	4		134	381	7	3
San Bernardino	4		32	148	41	
San Diego				1		
San Joaquin	5		27	51		
Santa Barbara	1					
Santa Clara	1		33	16		1
Shasta				1		
Solano			1		1	
Sonoma				2		
Stanislaus	11		24	100	7	
Sutter			2	26	8	
Tehama	1		1			
Tulare	10	1	42	82	7	
Ventura			1			
Yolo		2	9	7		3
Yuba	1		1	1	4	
<b>Totals</b>	<b>150</b>	<b>15</b>	<b>680</b>	<b>2,083</b>	<b>381</b>	<b>24</b>

# California Arbovirus Surveillance Bulletin #40

Week 46 Friday, November 18, 2011

## TESTING SUMMARIES

### Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	6	0	0	0	0	0
	YTD	150	0	0	0	0	0
Horse Cases	Week	0	0	0	0	0	0
	YTD	15	0	0	0	0	0

### Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	28	2
	YTD	2,391	680
Tree Squirrels	Week	0	0
	YTD	106	24

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	145	0	0	0
	YTD	22,204	381	0	0
Mosquito Pools: RT-PCR	Week	160	0	0	0
	YTD	32,168	2,064	0	0
Mosquito Pools: RAMP	Week	0	0	N/A	N/A
	YTD	316	19	N/A	N/A

## NEW POSITIVES

### Humans

WNV Cases							
ID	Report Date	County	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
11-0145	11/10/11	Stanislaus	40	F	WNND	10/18/11	No
11-0146	11/16/11	Tehama	>18	M	WNND	WEEK 41	Yes
11-0147	11/17/11	Kern	49	M	WNND	09/28/11	Yes
11-0148	11/17/11	Los Angeles	83	M	WNND	10/26/11	No
11-0149	11/17/11	Los Angeles	67	F	WNND	10/15/11	Yes
11-0150	11/17/11	Los Angeles	65	M	WNF	09/09/11	No
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
BD11-0020	11/10/11	Riverside	24	M			

### Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Orange	Orange Co VCD	Yorba Linda	92886	American Crow	11/7/2011	WNV	Recent	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95120	American Crow	11/3/2011	WNV	Recent	VecTest

## California Arbovirus Surveillance Bulletin #40

Week 46 Friday, November 18, 2011

### 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.

---

#### **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:**

Dead birds and tree 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 West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

---

#### **Sentinel Chickens:**

Dried blood spot specimens from sentinel chickens are submitted to the California Department of Public Health Vector-Borne Disease Laboratory and tested for the presence of antibodies to West Nile, western equine encephalomyelitis (WEEV), and St. Louis encephalitis (SLEV) 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 WEEV, SLEV, 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.

---