

## California Arbovirus Surveillance Bulletin #37

Week 44 Friday, November 2, 2012



### Human Cases

A total of 38 new cases of West Nile virus (WNV) were reported this week from the following 11 counties: Los Angeles (13), Orange (4), Placer (2), Riverside (1), Sacramento (5), San Bernardino (7), San Joaquin (1), Solano (1), Stanislaus (1), Tehama (2), and Yuba (1). As of November 1, 2012, a total of 377 human cases of WNV illness have been reported in 30 counties. Of the 377 case-patients, 244 (65%) had neuroinvasive illness. The median age of the 376 individuals for whom data are available is 55 years (range: 1-93 years); 223 (59%) are male. Dates of symptom onset for all patients ranged from May 23 to October 14, 2012. A total of 15 WNV-related fatalities have been reported in Fresno (2), Glenn (1), Kern (2), Los Angeles (4), Merced (1), Placer (1), Sacramento (2), San Bernardino (1), and Sutter (1) counties. A total of 59 WNV-positive blood donors have been reported this year; 18 individuals developed symptoms and were reclassified as cases.

At this time last year, 140 WNV cases had been reported from 21 counties.

**National Comments:** As of October 30, 2012, 4,891 cases had been reported nationwide from 47 states and the District of Columbia (DC). This is the highest number of cases reported through the last week of October since 2003. Over 70 percent of the cases have been reported from Texas, California, Louisiana, Mississippi, Illinois, South Dakota, Michigan, Oklahoma, Nebraska, and Colorado. Of the 4,891 cases, 2,498 (51%) were classified as neuroinvasive disease, and 223 (5%) patients died.

### Horses

No equine cases were reported this week. In 2012, 21 horses from 12 counties have tested positive for WNV; 7 (33%) died or were euthanized as a result of their illness. At this time last year, 14 equine cases of WNV from 7 counties had been reported.

### Dead Birds & Squirrels

A total of 11 WNV positive dead birds were reported this week from 3 counties: Los Angeles (9), San Diego (1), and Shasta (1). This is the first WNV positive dead bird reported from San Diego County. In 2012, 1,614 dead birds and 21 squirrels have tested positive for recent WNV infection from 39 and 5 counties, respectively. At this time last year, 678 dead birds from 26 counties and 24 tree squirrels from 6 counties had tested positive for WNV.

### Mosquito Pools

A total of 22 WNV positive mosquito pools were reported this week from 7 counties: Fresno (1), Kern (1), Los Angeles (14), Orange (1), Riverside (1), San Joaquin (3), and Tulare (1). In 2012, 2,814 mosquito pools from 28 counties have tested positive for WNV. At this time last year, 2,077 mosquito pools had tested positive for WNV from 26 counties.

### Sentinel Chickens

A total of 15 WNV seroconversions were reported this week from 8 flocks Los Angeles County. In 2012, 507 WNV antibody-positive chickens have been detected among 105 flocks in 21 counties. At this time last year, 369 WNV positive chickens had been detected among 69 flocks in 15 counties.

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<b>YTD WNV Activity by Element and County, 2012</b>						
<b>County</b>	<b>Humans</b>	<b>Horses</b>	<b>Dead Birds</b>	<b>Mosquito Pools</b>	<b>Sentinel Chickens</b>	<b>Squirrels</b>
Alameda	2		15			1
Butte	10	1	53	27	43	2
Calaveras		1				
Colusa	3		5		6	
Contra Costa	3		66	19	7	
El Dorado			5			
Fresno	22	3	25	146		
Glenn	7	1	16	4	8	
Imperial	1			4	10	
Kern	25	2	14	571	74	
Kings	3		2	102		
La ke			10	23	4	
Los Angeles	105		257	314	122	15
Madera	1		2	14		
Marin			1			
Mendocino			6			
Merced	13	1	42	4		
Monterey	1					
Napa			1	1		
Nevada			3			
Orange	35		87	68		
Placer	12		60	108	8	
Riverside	13		4	130	62	
Sacramento	26	2	464	487	36	
San Bernardino	24		36	55	42	
San Diego	1		1			
San Francisco	1		1			
San Joaquin	10	2	55	167		
San Luis Obispo			1			
San Mateo			5			
Santa Clara			19	3		2
Santa Cruz			1			
Shasta	1	5	36	17	6	1
Solano	2		28	3	2	
Sonoma			8	3	1	
Stanislaus	23	1	51	210	8	
Sutter	8		29	19	38	
Tehama	4		5			
Tulare	7		54	144	11	
Ventura	4		37	2	2	
Yolo	5	1	98	154	4	
Yuba	5	1	11	15	13	
<b>Totals</b>	<b>377</b>	<b>21</b>	<b>1,614</b>	<b>2,814</b>	<b>507</b>	<b>21</b>

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2011 & 2012 YTD West Nile Virus Comparisons		
	2011	2012
Total # Dead Bird Reports	9,461	19,835
# Positive Counties	35	42
# Human Cases	140	377
# Horse Cases	14	21
# Positive Dead Birds / # Tested	678 / 2,355	1,614 / 4,192
# Positive Mosquito Pools / # Tested	2,077 / 31,988	2,814 / 32,015
# Seroconversions / # Tested	369 / 21,745	507 / 21,588
# Positive Squirrels / # Tested	24 / 106	21 / 176

### TESTING SUMMARIES

#### Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
<b>Human Cases</b>	Week	38	0	0	0	0	0
	YTD	377	0	0	0	0	0
<b>Horse Cases</b>	Week	0	0	0	0	0	0
	YTD	21	0	0	0	0	0

#### Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
<b>Dead Birds</b>	Week	45	11
	YTD	4,192	1,614
<b>Squirrels</b>	Week	2	0
	YTD	176	21

#### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
<b>Chicken Sera</b>	Week	419	15	0	0
	YTD	21,588	507	0	0
<b>Mosquito Pools</b>	Week	428	22	0	0
	YTD	32,015	2,814	0	0

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**POSITIVES: WEEK 44**

**Humans**

WNV Cases							
ID	Report Date	County/Local Health Jurisdiction	Age	Sex	Clin Pres	Onset Date	WNV Fatality?
12-0340	10/25/12	LOS ANGELES	56	M	WNND	09/14/12	NO
12-0341	10/25/12	LOS ANGELES	54	M	WNND	09/26/12	NO
12-0342	10/25/12	LOS ANGELES	48	M	WNND	10/08/12	NO
12-0343	10/25/12	LOS ANGELES	72	M	WNND	10/05/12	NO
12-0344	10/25/12	LOS ANGELES	77	M	WNND	10/04/12	NO
12-0345	10/25/12	LOS ANGELES	44	M	WNND	09/18/12	NO
12-0346	10/25/12	LOS ANGELES	70	F	WNND	10/13/12	NO
12-0347	10/25/12	LOS ANGELES	73	F	WNND	09/12/12	NO
12-0348	10/25/12	LOS ANGELES	58	M	WNND	09/20/12	NO
12-0349	10/25/12	LOS ANGELES	66	F	WNND	09/27/12	NO
12-0350	10/25/12	LOS ANGELES	69	F	WNND	10/01/12	NO
12-0351	10/25/12	LOS ANGELES	36	F	WNND	09/05/12	NO
12-0352	10/26/12	PLACER	>18	F	WNND	10/14/12	NO
12-0353	10/26/12	SAN JOAQUIN	31	M	WNF	09/19/12	NO
12-0354	10/26/12	SACRAMENTO	51	F	WNND	09/12/12	NO
12-0355	10/26/12	SACRAMENTO	68	M	WNF	09/17/12	NO
12-0356	10/26/12	SACRAMENTO	66	M	WNND	10/01/12	NO
12-0357	10/26/12	SACRAMENTO	34	F	WNND	09/24/12	NO
12-0358	10/26/12	SACRAMENTO	53	M	WNND	10/10/12	NO
12-0359	10/29/12	PASADENA CITY	54	F	WNF	09/04/12	NO
12-0360	10/29/12	SOLANO	>18	F	WNF	09/13/12	NO
12-0361	10/29/12	SAN BERNARDINO	66	M	WNND	08/23/12	NO
12-0362	10/29/12	SAN BERNARDINO	52	M	WNND	09/23/12	NO
12-0363	10/29/12	SAN BERNARDINO	61	F	WNND	09/25/12	NO
12-0364	10/29/12	SAN BERNARDINO	23	M	WNF	09/10/12	NO
12-0365	10/29/12	TEHAMA	N/A	M	WNF	Week 36	NO
12-0366	10/29/12	TEHAMA	>18	F	WNF	Week 36	NO
12-0367	10/29/12	PLACER	>18	M	WNND	10/06/12	NO
12-0368	10/30/12	YUBA	N/A	F	WNND	N/A	NO
12-0369	10/30/12	STANISLAUS	41	M	WNND	10/06/12	NO
12-0370	10/31/12	ORANGE	70	M	WNF	Week 39	NO
12-0371	10/31/12	ORANGE	74	M	WNND	Week 41	NO
12-0372	10/31/12	ORANGE	60	M	WNF	Week 39	NO
12-0373	10/31/12	ORANGE	18	F	WNF	Week 39	NO
12-0374	10/31/12	RIVERSIDE	80	M	WNND	N/A	NO

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12-0375	10/31/12	SAN BERNARDINO	16	M	WNND	09/11/12	NO
12-0376	10/31/12	SAN BERNARDINO	33	M	WNF	09/16/12	NO
12-0377	10/31/12	SAN BERNARDINO	91	M	WNF	09/25/12	NO
Presumptive Viremic Blood Donors (Asymptomatic Infections)							
ID	Report Date	County	Age	Sex			
BD12-0045	10/25/12	STANISLAUS	44	M			
BD12-0046	10/25/12	LOS ANGELES	24	M			
BD12-0047	10/29/12	SAN BERNARDINO	17	F			

### Dead Birds & Squirrels

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Los Angeles	LA VCD - SFS	Cerritos	90703	American Crow	9/28/2012	WNV	Recent	RT-PCR
Los Angeles	LA VCD - Sylmar	Glendale	91208	American Crow	10/17/2012	WNV	Recent	RT-PCR
Los Angeles	LA Co Vet	Los Angeles	90034	American Crow	10/24/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Los Angeles	90064	American Crow	10/28/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Los Angeles	90066	American Crow	10/26/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Los Angeles	90066	American Crow	10/14/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	Beverly Hills	90210	American Crow	10/24/2012	WNV	Recent	VecTest
Los Angeles	LA Co Vet	North Hollywood	91606	American Crow	10/26/2012	WNV	Recent	VecTest
Los Angeles	San Gabriel Vall. MVCD	Sierra Madre	91024	American Crow	10/4/2012	WNV	Recent	RAMP
San Diego	San Diego VCP	San Diego	92037	American Crow	10/24/2012	WNV	Recent	RT-PCR
Shasta	Shasta MVCD	Anderson	96007	American Crow	10/17/2012	WNV	Recent	VecTest

### Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Test Method
Fresno	FRWS3201	386	Firebaugh	Cx. quinquefasciatus	22	CO2	10/26/2012	WNV	RTPCR
Kern	KERN0039	2817	Wasco	Cx. tarsalis	38	CO2	10/16/2012	WNV	RTPCR
Los Angeles	GRLA2100	1243	Norwalk	Cx. quinquefasciatus	35	GRVD	10/16/2012	WNV	RTPCR
Los Angeles	GRLA2325	1256	Los Angeles	Cx. quinquefasciatus	24	GRVD	10/17/2012	WNV	RTPCR
Los Angeles	GRLA2444	6245	Glendale	Cx. quinquefasciatus	16	GRVD	10/24/2012	WNV	RTPCR
Los Angeles	GRLA2492	6247	La Canada Flintridge	Cx. quinquefasciatus	13	GRVD	10/25/2012	WNV	RTPCR
Los Angeles	GRLA2500	6215	Los Angeles	Cx. quinquefasciatus	50	GRVD	10/18/2012	WNV	RTPCR
Los Angeles	GRLA2511	6237	Los Angeles	Cx. quinquefasciatus	35	GRVD	10/23/2012	WNV	RTPCR
Los Angeles	GRLA2521	6239	Los Feliz	Cx. quinquefasciatus	31	GRVD	10/23/2012	WNV	RTPCR
Los Angeles	GRLA2531	6227	Chatsworth	Cx. quinquefasciatus	31	GRVD	10/23/2012	WNV	RTPCR
Los Angeles	GRLA2593	6246	San Marino	Cx. quinquefasciatus	22	GRVD	10/25/2012	WNV	RTPCR
Los Angeles	GRLA2637	6253	Van Nuys	Cx. quinquefasciatus	28	GRVD	10/26/2012	WNV	RTPCR
Los Angeles	GRLA2651	6256	Encino	Cx. quinquefasciatus	13	GRVD	10/26/2012	WNV	RTPCR
Los Angeles	GRLA3102	6183	Studio City	Cx. quinquefasciatus	37	GRVD	10/17/2012	WNV	RTPCR
Los Angeles	GRLA3133	6232	San Fernando	Cx. quinquefasciatus	50	GRVD	10/23/2012	WNV	RTPCR
Los Angeles	LACW1002	343	Torrance	Cx. quinquefasciatus	26	CO2	10/23/2012	WNV	RTPCR

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Orange	ORCO0003	1505	Garden Grove	Cx. quinquefasciatus	14	GRVD	10/25/2012	WNV	RTPCR
Riverside	COAV0204	8006	Indio	Cx. quinquefasciatus	17	GRVD	8/27/2012	WNV	RTPCR
San Joaquin	SJCM8027	1451	McDonald Island Bridge	Ae. vexans	14	CO2	10/31/2012	WNV	RTPCR
San Joaquin	SJCM8047	1448	Stockton	Cx, pipiens	5	CO2	10/31/2012	WNV	RTPCR
San Joaquin	SJCM8084	1441	Stockton	Cx, pipiens	3	CO2	10/31/2012	WNV	RTPCR
Tulare	DLTA9506	617	Visalia	Cx. quinquefasciatus	17	GRVD	10/31/2012	WNV	RTPCR

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04
Los Angeles	GRLA2056	Long Beach	10/16/2012	WNV	3531	3533	3539	
Los Angeles	LACW1005	El Segundo	10/18/2012	WNV	1075			
Los Angeles	LACW1010	Los Angeles(Miracle Mile)	10/8/2012	WNV	1104			
Los Angeles	LACW1026	Beverly Hills	10/17/2012	WNV	1151			
Los Angeles	LACW1049	Inglewood	10/16/2012	WNV	1155			
Los Angeles	LACW1073	Los Angeles	10/12/2012	WNV	1161	1164		
Los Angeles	SGVA0001	City of Industry	10/25/2012	WNV	3641	3643		
Los Angeles	SGVA0002	Monterey Park	10/25/2012	WNV	3645	3646	3647	3648

### 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

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Center for Vectorborne Diseases (CVEC) for West Nile virus testing using the singleplex RT-PCR Taqman assay and confirmed with a second primer set.

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### **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.

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### **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.

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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) 412-6253 or email: [tina.feiszli@cdph.ca.gov](mailto:tina.feiszli@cdph.ca.gov).*

*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).*