

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

Ten new human cases of West Nile virus (WNV) were reported this week from the following six counties: Kern (2), Placer (1), Riverside (1), San Diego (1), San Joaquin (4), and Stanislaus (1). A total of 353 WNV cases have been reported in 2007, for a statewide incidence of 1.0 case per 100,000 people. Of the 353 cases reported, 200 (57%) are classified as West Nile fever, 147 (42%) are classified as neuroinvasive disease, and six (2%) are of unknown clinical presentation. The median age of all cases is 55 years (range: 2-96 years), and 194 cases (55%) are male. Sixteen WNV-related fatalities have been reported in 2007 from Colusa (1), Fresno (1), Kern (4), Kings (1), Los Angeles (3), Riverside (3), Sacramento (1), San Joaquin (1), and Tulare (1) counties. Forty-eight WNV-positive blood donation samples have been reported this year; 19 of the individuals subsequently developed symptoms and were reclassified as cases.

Horses

Two new equine cases of WNV were reported this week from Kings and Solano counties; **this is the first horse case reported from Solano County this year.** In 2007, 27 horses from 14 counties have tested positive for WNV, of which 13 were euthanized or died.

Dead Birds & Tree Squirrels

Twenty-seven WNV-positive dead birds were reported this week from 14 counties: Fresno (1), Los Angeles (3), Merced (1), Nevada (1), Orange (5), San Diego (2), San Luis Obispo (1), Santa Clara (2), Shasta (1), Sonoma (3), Stanislaus (3), Tehama (1), Tulare (2), and Yolo (1). A total of 1,311 dead birds from 50 counties have tested positive for WNV this year.

No positive tree squirrels were reported this week. In 2007, 25 squirrels from 10 counties have tested positive for WNV.

Reminder: Local agencies should check the Surveillance Gateway for their county DYCAST bird reporting updates.

Mosquito Pools

One new WNV-positive mosquito pool was reported this week from Fresno County. A total of 981 mosquito pools from 30 counties have tested positive for WNV in 2007.

No mosquito pools tested positive for western equine encephalomyelitis virus (WEE) this week. A total of 16 mosquito pools have tested positive for WEE this year from two counties: Fresno (1) and Kern (15).

Sentinel Chickens

Twenty-four new WNV seroconversions were reported this week from 9 counties: Fresno (2), Kern (6), Kings (4), Los Angeles (2), Merced (3), Riverside (1), San Bernardino (4), Shasta (1), and Ventura (1). **This is the first WNV-positive chicken detected in Ventura County this year.** A total of 450 sentinel chickens from 27 counties have tested positive for WNV this year.

Two new WEE seroconversions were reported this week from Los Angeles County. A total of 11 chickens have tested positive for WEE this year from Kern (8) and Los Angeles (3) counties.

Website Information For updated information on WNV in California, please visit the California WNV website, www.westnile.ca.gov, or the California Vectorborne Disease Surveillance System website, www.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC website, www.cdc.gov, and the USGS website, www.westnilemaps.usgs.gov.

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

YTD WNV Activity by Element and County, 2007

County	Humans*	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			16	1		1
Amador			1	1		
Butte	16		27	5	31	
Calaveras			3			
Colusa	2		4	1	2	
Contra Costa	2		26	28	5	4
El Dorado			7			2
Fresno	14	1	113	61	39	4
Glenn	7		36	1	8	
Humboldt			2			
Imperial	3			4	17	
Inyo			1			
Kern	132	4	123	206	73	
Kings	7	2	9	30	26	
Lake			3	8	2	
Lassen			2			
Los Angeles	35		150	84	18	3
Madera	2		6	8	4	
Marin			3			
Mendocino	2		3			1
Merced	4		34	2	8	
Modoc			1			
Napa	1		2			
Nevada			5			
Orange	8		25	22		
Placer	3	1	16	25	14	
Plumas			1			
Riverside	15		6	30	29	
Sacramento	19	2	135	135	15	2
San Bernardino	3		26	5	28	
San Diego	16	4	102	6	1	
San Francisco			1			
San Joaquin	10	1	42	154	24	1
San Luis Obispo		1	7			
San Mateo			2			1
Santa Barbara			1			
Santa Clara	4		75	9		6
Santa Cruz			6			
Shasta	9	3	46	17	7	
Siskiyou		1	4			
Solano	1	1	3		5	
Sonoma	1	2	11	1		
Stanislaus	19		130	77	32	
Sutter	2		1	23	17	
Tehama	4	2	20	2	8	
Trinity			1			
Tulare	10	2	35	23	24	
Tuolumne			1			
Ventura	1		11		1	
Yolo	1		25	10	4	
Yuba			1	2	8	
Totals	353	27	1,311	981	450	25

* Does not include asymptomatic infections

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

2007 & 2006 YTD West Nile Virus Comparisons		
	2007	2006
Total # Dead Bird Reports	29,243	42,992
# Positive Counties	51	54
# Human Cases/ # Tested	353 / 1,104	257 / 1,324
# Horse Cases/ # Tested	27 / 309	52 / 445
# Positive Dead Birds/ # Tested	1,311 / 5,087	1,298 / 5,254
# Positive Mosquito Pools/ # Tested	981 / 26,164	821 / 22,953
# Positive Chicken Sera/ # Tested	450 / 25,564	609 / 29,172
# Positive Squirrels/ # Tested	25 / 192	32 / 128

TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	38	0	10	0	0	0	0	0	0
	YTD	1,104	0	353	0	0	0	0	0	0
Horses Tested	Week	0	0	2	0	0	0	0	0	0
	YTD	309	0	27	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	113	27
	YTD	5,087	1,311
Tree Squirrels	Week	0	0
	YTD	192	25

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	774	24	2	0
	YTD	25,564	450*	11	0
Mosquito Pools: RT-PCR	Week	197	1	0	0
	YTD	24,144	806	16	0
Mosquito Pools: RAMP	Week	34	0	N/A	N/A
	YTD	2,020	175	N/A	N/A

One chicken was incorrectly reported twice and removed from the total

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

POSITIVES: 10/15/07 - 10/19/07

Dead Birds & Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Test Method
Fresno	Fresno	93722	American Crow	10/11/07	10/15/07	VecTest
Los Angeles	Claremont	91711	Spotted Towhee	9/28/07	10/15/07	RT-PCR
Los Angeles	South El Monte	91733	American Crow	10/4/07	10/15/07	RT-PCR
Los Angeles	West Covina	91792	Common Raven	9/27/07	10/15/07	RT-PCR
Merced	Merced	95340	American Crow	10/9/07	10/15/07	RT-PCR
Nevada	Rough And Ready	95975	American Goldfinch	10/3/07	10/15/07	RT-PCR
Orange	Anaheim	92804	American Crow	10/15/07	9/24/07	IHC
Orange	Fullerton	92831	American Crow	10/15/07	10/1/07	IHC
Orange	Garden Grove	92846	House Finch	10/15/07	9/28/07	IHC
Orange	Orange	92866	American Crow	10/15/07	10/1/07	IHC
Orange	Yorba Linda	92886	House Finch	10/15/07	10/2/07	IHC
San Diego	Carlsbad	92009	American Crow	10/10/07	10/15/07	VecTest
San Diego	Oceanside	92056	American Crow	10/11/07	10/15/07	VecTest
San Luis Obispo	Paso Robles	93447	House Finch	9/20/07	10/15/07	RT-PCR
Santa Clara	Gilroy	95020	American Crow	10/8/07	10/15/07	VecTest
Santa Clara	San Jose	95112	American Crow	10/10/07	10/15/07	VecTest
Shasta	Anderson	96007	American Crow	10/12/07	10/15/07	VecTest
Sonoma	Petaluma	94954	American Crow	10/10/07	10/15/07	RT-PCR
Sonoma	Santa Rosa	95403	Western Scrub-Jay	10/2/07	10/15/07	RT-PCR
Sonoma	Sebastopol	95472	American Crow	10/10/07	10/15/07	RT-PCR
Stanislaus	Patterson	95363	American Crow	10/5/07	10/15/07	RT-PCR
Stanislaus	Patterson	95363	Western Scrub-Jay	10/8/07	10/15/07	RT-PCR
Stanislaus	Turlock	95382	Yellow-billed Magpie	10/10/07	10/15/07	RT-PCR
Tehama	Cottonwood	96022	American Crow	10/9/07	10/15/07	VecTest
Tulare	Pixley	93256	American Crow	10/9/07	10/15/07	RT-PCR
Tulare	Visalia	93292	American Crow	10/3/07	10/15/07	RT-PCR
Yolo	Woodland	95695	American Crow	10/8/07	10/15/07	RT-PCR

Mosquito Pools

County	Site Code	Pool #	Species	# in Pool	Collected	City	Virus
Fresno	CNSL3030	471	Cx quinquefasciatus	39	10/10/07	Orange Cove	WNV

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

Sentinel Chickens

County	Agency Code	Date Bled	Nearest City	Virus	Band 01	Band 02	Band 03	Band 04
Fresno	FRNO0012	10/9/2007	Fresno	WNV	1606	1608		
Kern	KERN0101	10/1/2007	Lost Hills	WNV	1784	1786	1787	1923
Kern	KERN0112	10/1/2007	Wasco	WNV	1858			
Kern	KERN0113	10/1/2007	Bakersfield	WNV	1865			
Kings	DLNO0060	10/11/2007	Delano	WNV	1524	1527	1532	
Kings	KNGS2004	10/10/2007	Corcoran	WNV	1945			
Los Angeles	ANTV5662	10/10/2007	Lancaster	WEE	1068	1069		
Los Angeles	GRLA2651	10/9/2007	Encino	WNV	1711	1713		
Merced	MERC0002	10/9/2007	Dos Palos	WNV	2296	2297		
Merced	MERC0502	10/9/2007	Hilmar	WNV	2317			
Riverside	COAV0035	10/9/2007	Mecca	WNV	1365			
San Bernardino	SANB0011	10/9/2007	Rialto	WNV	2824			
San Bernardino	SANB0004	10/9/2007	San Bernardino	WNV	2769			
San Bernardino	SANB0006	10/9/2007	Yucaipa	WNV	2777			
San Bernardino	SANB0008	9/24/2007	Upland	WNV	2799			
Shasta	SHAS9701	10/2/2007	Cottonwood	WNV	3085			
Ventura	VENT0500	9/25/2007	Camarillo	WNV	3464			

NATIONAL COMMENTS

As of October 16, 2007, a total of 3,022 human cases had been reported nationwide in the following 42 states: Alabama (17), Arizona (62), Arkansas (15), California (343), Colorado (544), Connecticut (4), Delaware (1), Florida (3), Georgia (44), Idaho (104), Illinois (68), Indiana (10), Iowa (23), Kansas (37), Kentucky (3), Louisiana (2), Maryland (9), Massachusetts (6), Michigan (12), Minnesota (96), Mississippi (108), Missouri (61), Montana (193), Nebraska (135), Nevada (11), New Jersey (1), New Mexico (57), New York (11), North Dakota (352), Ohio (15), Oklahoma (86), Oregon (22), Pennsylvania (6), Rhode Island (1), South Carolina (4), South Dakota (206), Tennessee (7), Texas (109), Utah (47), Virginia (3), Wisconsin (6), and Wyoming (178). Of the 3,022 cases reported, 946 (31%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the 3,011 cases where data was available was 51 years (range: 15 months-97 years), and 55% were male. A total of 76 human fatalities had been reported from Alabama (3), Arkansas (1), California (14), Colorado (6), Florida (1), Georgia (2), Idaho (1), Iowa (2), Illinois (4), Indiana (1), Kansas (1), Minnesota (2), Mississippi (3), Missouri (2), Montana (3), Nebraska (3), New Mexico (3), New York (1), North Dakota (2), Ohio (1), Oklahoma (7), South Dakota (5), Tennessee (1), Texas (5), Utah (1), and Wyoming (1). For the latest updates about WNV activity in the United States, please visit the CDC WNV website at <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>.

California Arbovirus Surveillance Bulletin # 35

Week 42 Friday, October 19, 2007

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).

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:

All bird and tree squirrel species from all zip codes are currently being accepted for testing unless otherwise requested by a local agency. Additionally, once WNV has been detected within a county, doves, pigeons, and chickens will no longer be accepted for testing from that county. 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, Ryan Carney, can be reached directly at (510) 412-6254.

Sentinel Chickens:

Dried blood spot specimens from sentinel chickens are submitted to VRDL 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.

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.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch) and the Viral and Rickettsial Disease Laboratory 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