Week 40 Friday, October 5, 2007

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

Thirty-two new human cases of West Nile virus (WNV) were reported this week from the following 10 counties: Kern (7), Kings (2), Los Angeles (6), Napa (1), Orange (1), Sacramento (2), San Diego (7), Santa Clara (2), Stanislaus (1), and Tulare (3). **This is the first human case reported from Napa County this year.** A total of 322 WNV cases have been reported in 2007, for a statewide incidence of 0.95 cases per 100,000 people. Of the 322 cases reported, 179 (56%) are classified as West Nile fever, 137 (43%) 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 174 cases (54%) are male. Fourteen WNV-related fatalities have been reported in 2007 from Colusa (1), Fresno (1), Kern (4), Kings (1), Los Angeles (1), Riverside (3), Sacramento (1), San Joaquin (1), and Tulare (1) counties. Forty-seven WNV-positive blood donation samples have been reported this year; 16 of the individuals subsequently developed symptoms and were reclassified as cases.

Horse

One new equine case of WNV was reported this week from Siskiyou County-this is the first WNV-positive horse from Siskiyou County this year. In 2007, 25 horses from 13 counties have tested positive for WNV, of which 13 were euthanized or died.

Dead Birds & Tree Squirrels

Sixty-seven WNV-positive dead birds were reported this week from 24 counties: Alameda (2), Colusa (1), Contra Costa (2), Fresno (3), Kern (2), Los Angeles (4), Marin (1), Mendocino (1), Merced (2), Orange (5), Placer (1), Sacramento (8), San Bernardino (2), San Diego (8), San Joaquin (4), San Mateo (1), Santa Clara (6), Santa Cruz (2), Shasta (1), Solano (1), Sonoma (3), Stanislaus (2), Tulare (2), and Ventura (3). A total of 1,273 dead birds from 50 counties have tested positive for WNV this year.

Two tree squirrels from Contra Costa (1) and Sacramento (1) counties tested positive for WNV this week. Nineteen squirrels from eight counties have tested positive for WNV this year.

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

Mosquito Pools

Thirty-three new WNV-positive mosquito pools were reported this week from 9 counties: Contra Costa (5), Kern (5), Merced (1), Orange (8), Placer (2), Sacramento (4), San Diego (1), San Joaquin (5), and Tulare (2). A total of 973 mosquito pools from 30 counties have tested positive for WNV in 2007.

In 2007, a total of 16 mosquito pools have tested positive for western equine encephalomyelitis virus (WEE) from two counties: Fresno (1) and Kern (15).

Sentinel Chickens

Forty new WNV seroconversions were reported this week from 9 counties: Fresno (4), Kern (5), Los Angeles (4), Merced (3), Riverside (2), San Bernardino (3), Stanislaus (1), Tulare (16), and Yuba (2). A total of 400 sentinel chickens from 26 counties have tested positive for WNV this year.

Four new WEE seroconversions were reported this week from Kern County. Nine chickens have tested positive for WEE this year from Kern (8) and Los Angeles (1) 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.

Week 40 Friday, October 5, 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	29					
Calaveras			3							
Colusa	2		4	1	2					
Contra Costa	2		25	28	5	3				
El Dorado			5							
Fresno	14	1	110	60	35	4				
Glenn	7		36	1	8					
Humboldt			2							
Imperial	3			4	17					
Inyo			1							
Kern	124	4	122	205	67					
Kings	7	1	9	30	22					
Lake			3	8	2					
Lassen			2							
Los Angeles	30		141	81	16					
Madera	1		6	8	4					
Marin	•		3							
Mendocino	2		3			1				
Merced	4		33	2	5	•				
Modoc	•		1	_	, and the second					
Napa	1		2							
Nevada	'		3							
Orange	8		19	19						
Placer	2	1	16	25	6					
Plumas	2		10	25	0					
Riverside	10		4	30	28					
Sacramento	16	2	128	135	14	2				
San Bernardino	3		25	5	24	2				
		4	94		1					
San Diego San Francisco	15	4	1	6	ı					
	0	4		454	22	4				
San Joaquin	6	1	41	154	23	1				
San Luis Obispo		1	6			4				
San Mateo			2			1				
Santa Barbara				•		•				
Santa Clara	4		69	9		6				
Santa Cruz			6	4=	-					
Shasta	8	3	44	17	5					
Siskiyou		1	4		-					
Solano	1		3		5					
Sonoma	1	2	7	1						
Stanislaus	17		124	77	24					
Sutter	2		1	23	17					
Tehama	4	2	18	2	8					
Trinity			1							
Tulare	10	2	30	23	24					
Tuolumne			1							
Ventura	1		10							
Yolo	1		22	10	3					
Yuba			1	2	6					
Totals	322	25	1,237	973	400	19				

^{*}Total does not include asymptomatic infections

Week 40 Friday, October 5, 2007

2007 & 2006 YTD West Nile Virus Comparisons									
	2007	2006							
Total # Dead Bird Reports	28,142	41,762							
# Positive Counties	51	53							
# Human Cases/ # Tested	322 / 1,009	242 / 1,212							
# Horse Cases/ # Tested	25 / 300	52 / 409							
# Positive Dead Birds/ # Tested	1,237 / 4,824	1,212 / 5,044							
# Positive Mosquito Pools/ # Tested	973 / 25,230	814 / 21,672							
# Positive Chicken Sera/ # Tested	400 / 24,127	568 / 27,460							
# Positive Squirrels/ # Tested	19 / 173	31 / 125							

TEST SUMMARIES

Human & Horse Cases

	Number Tested		WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	26	0	32	0	0	0	0	0	0
	YTD	1,009	0	322	0	0	0	0	0	0
Horses Tested	Week	11	0	1	0	0	0	0	0	0
	YTD	300	0	25	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive		
Dead	Week	147	67		
Birds	YTD	4,824	1,237		
Tree Squirrels	Week	4	2		
	YTD	173	19		

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	980	40	4	0
	YTD	24,127	400	9	0
Mosquito Pools:	Week	833	25	0	0
RT-PCR	YTD	23,252	798	16	0
Mosquito Pools:	Week	8	8	N/A	N/A
RAMP	YTD	1,978	175	N/A	N/A

Week 40 Friday, October 5, 2007

POSITIVES: 10/1/07 - 10/5/07

Dead Birds & Tree Squirrels

Dead Birds &	Tree Squirrels					
County	City	Zip	Species	Reported	Tested	Test Method
Alameda	Livermore	94550	American Crow	9/20/07	10/1/07	RAMP
Alameda	Oakland	94605	Fox Sparrow	9/20/07	10/1/07	RT-PCR
Colusa	Williams	95987	Yellow-billed Magpie	9/20/07	10/1/07	RT-PCR
Contra Costa	Antioch	94509	Fox Squirrel	9/22/07	10/1/07	RT-PCR
Contra Costa	Antioch	94509	American Crow	9/24/07	10/1/07	RT-PCR
Contra Costa	Oakley	94561	American Crow	9/26/07	10/1/07	RAMP
Fresno	Clovis	93611	Common Raven	9/23/07	10/1/07	RT-PCR
Fresno	Fresno	93722	American Crow	9/21/07	10/1/07	RT-PCR
Fresno	Fresno	93702	American Crow	9/27/07	10/1/07	VecTest
Kern	Bakersfield	93312	House Sparrow	9/17/07	10/1/07	RT-PCR
Kern	Fellows	93224	Sparrow	9/20/07	10/1/07	RT-PCR
Los Angeles	Beverly Hills	90210	Sparrow	9/19/07	10/1/07	RT-PCR
Los Angeles	North Hollywood	91601	American Crow	9/25/07	10/1/07	RT-PCR
Los Angeles	Santa Clarita	91350	House Finch	9/25/07	10/1/07	RT-PCR
Los Angeles	Van Nuys	91401	American Crow	9/21/07	10/1/07	RT-PCR
Marin	Novato	94949	Lesser Goldfinch	9/14/07	10/1/07	RT-PCR
Mendocino	Potter Valley	95469	Common Raven	9/21/07	10/1/07	RT-PCR
Merced	Atwater	95301	Yellow-billed Magpie	9/22/07	10/1/07	RT-PCR
Merced	Winton	95388	Yellow-billed Magpie	9/18/07	10/1/07	RT-PCR
Orange	Anaheim	92807	American Crow	9/13/07	10/1/07	IHC
Orange	Fullerton	92835	American Crow	9/12/07	10/1/07	IHC
Orange	Garden Grove	92845	American Crow	9/5/07	10/1/07	IHC
Orange	Santa Ana	92735	American Crow	9/5/07	10/1/07	IHC
Orange	Santa Ana	92705	American Crow	9/13/07	10/1/07	IHC
Placer	Lincoln	95648	Common Raven	9/25/07	10/1/07	RT-PCR
Sacramento	Rio Linda	95673	Yellow-billed Magpie	9/23/07	10/1/07	RT-PCR
Sacramento	Rio Linda	95673	Western Scrub-Jay	9/23/07	10/1/07	RT-PCR
Sacramento	Sacramento	95831	Eastern Gray Squirrel	9/17/07	10/1/07	RT-PCR
Sacramento	Sacramento	95828	American Crow	9/20/07	10/1/07	RT-PCR
Sacramento	Sacramento	95829	Western Scrub-Jay	9/20/07	10/1/07	RT-PCR
Sacramento	Sacramento	95820	Sparrow	9/20/07	10/1/07	RT-PCR
Sacramento	Sacramento	95829	California Quail	9/20/07	10/1/07	RT-PCR
Sacramento	Sacramento	95827	Yellow-billed Magpie	9/25/07	10/1/07	RT-PCR
Sacramento	Sacramento	95815	Yellow-billed Magpie	9/25/07	10/1/07	RT-PCR
San Bernardino	Chino Hills	91709	Sparrow	9/20/07	10/1/07	RT-PCR
San Bernardino	Ontario	91762	American Crow	9/24/07	10/1/07	RAMP
San Diego	El Cajon	92020	American Crow	9/24/07	10/1/07	VecTest
San Diego	El Cajon	92019	American Crow	9/24/07	10/1/07	VecTest
San Diego	La Mesa	91941	American Crow	9/25/07	10/1/07	VecTest
San Diego	Lakeside	92040	American Crow	9/24/07	10/1/07	VecTest
San Diego	Lakeside	92040	American Crow	9/26/07	10/1/07	VecTest
San Diego	San Diego	92122	American Crow	9/24/07	10/1/07	VecTest
San Diego	San Diego	92123	Western Scrub-Jay	9/24/07	10/1/07	VecTest
San Diego	San Marcos	92123	American Crow	9/24/07	10/1/07	VecTest
San Joaquin	Stockton	95219	Western Scrub-Jay	9/20/07	10/1/07	RT-PCR
San Joaquin	Tracy	95376	American Crow	9/24/07	10/1/07	VecTest
San Joaquin	Tracy	95376	American Crow	9/28/07	10/1/07	VecTest
San Joaquin	Tracy	95376	American Crow	9/28/07	10/1/07	RAMP
San Mateo	San Carlos	94070	Western Tanager	9/24/07	10/1/07	RT-PCR
			•			
Santa Clara	Gilroy	95020	Common Raven	9/16/07	10/1/07	VecTest

California Arbovirus Surveillance Bulletin # 33 Week 40 Friday, October 5, 2007

Santa Clara	Los Gatos	95030	Common Raven	9/19/07	10/1/07	VecTest
Santa Clara	Monte Sereno	95030	American Crow	9/26/07	10/1/07	VecTest
Santa Clara	San Jose	95117	American Crow	9/18/07	10/1/07	VecTest
Santa Clara	San Jose	95124	American Crow	9/28/07	10/1/07	VecTest
Santa Clara	Saratoga	95070	American Crow	9/23/07	10/1/07	VecTest
Santa Cruz	Los Gatos	95033	Western Scrub-Jay	9/25/07	10/1/07	RT-PCR
Santa Cruz	Santa Cruz	95065	European Starling	9/20/07	10/1/07	RT-PCR
Shasta	Shingletown	96088	Steller's Jay	9/24/07	10/1/07	VecTest
Solano	Fairfield	94534	American Crow	9/24/07	10/1/07	VecTest
Sonoma	Geyserville	95441	Lesser Goldfinch	9/23/07	10/1/07	RT-PCR
Sonoma	Healdsburg	95448	Western Scrub-Jay	9/19/07	10/1/07	RT-PCR
Sonoma	Santa Rosa	95401	California Towhee	9/19/07	10/1/07	RT-PCR
Stanislaus	Empire	95319	Northern Mockingbird	9/20/07	10/1/07	RT-PCR
Stanislaus	Modesto	95356	Yellow-billed Magpie	9/20/07	10/1/07	RT-PCR
Tulare	Visalia	93291	Mourning Dove	9/23/07	10/1/07	RT-PCR
Tulare	Visalia	93277	Northern Flicker	9/24/07	10/1/07	RT-PCR
Ventura	Camarillo	93010	House Finch	9/24/07	10/1/07	RT-PCR
Ventura	Newbury Park	91320	House Finch	9/23/07	10/1/07	RT-PCR
Ventura	Thousand Oaks	91360	White-crowned Sparrow	9/25/07	10/1/07	RT-PCR

Mosquito Pools

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Virus
Contra Costa	CNTR3802	328	Cx tarsalis	50	8/23/2007	8/24/2007	Antiioch	WNV
Contra Costa	CNTR3802	329	Cx tarsalis	50	8/23/2007	8/24/2007	Antiioch	WNV
Contra Costa	CNTR9223	324	Cx tarsalis	50	8/23/2007	8/24/2007	Antiioch	WNV
Contra Costa	CNTR9223	326	Cx pipiens	24	8/23/2007	8/24/2007	Antiioch	WNV
Contra Costa	CNTR9223	451	Cx tarsalis	50	9/6/2007	9/7/2007	Antiioch	WNV
Kern	AFSB0035	5521	Cx tarsalis	50	9/20/2007	10/1/2007	Bakersfield	WNV
Kern	AFSB0039	5541	Cx quinquefasciatus	6	9/26/2007	10/2/2007	Shafter	WNV
Kern	AFSB0040	5494	Cx tarsalis	50	9/13/2007	10/1/2007	Lost Hills	WNV
Kern	AFSB0056	5483	Cx quinquefasciatus	43	9/13/2007	10/1/2007	Buttonwillow	WNV
Kern	AFSB0060	5487	Cx quinquefasciatus	50	9/13/2007	10/1/2007	Buttonwillow	WNV
Merced	MERC0506	81	Cx pipiens	50	9/19/2007	9/28/2007	Livingston	WNV
Orange	ORCO0001	675	Cx quinquefasciatus	3	9/13/2007	9/17/2007	Irvine	WNV
Orange	ORCO0002	656	Cx quinquefasciatus	50	9/12/2007	9/17/2007	Fullerton	WNV
Orange	ORCO0002	657	Cx quinquefasciatus	24	9/12/2007	9/17/2007	Fullerton	WNV
Orange	ORCO0024	640	Cx erythrothorax	6	9/6/2007	9/10/2007	Mission Viejo	WNV
Orange	ORCO0030	662	Cx quinquefasciatus	50	9/12/2007	9/17/2007	La Habra	WNV
Orange	ORCO0041	649	Cx quinquefasciatus	11	9/7/2007	9/10/2007	Anaheim	WNV
Orange	ORCO0041	666	Cx quinquefasciatus	16	9/12/2007	9/17/2007	Anaheim	WNV
Orange	ORCO0050	648	Cx quinquefasciatus	8	9/7/2007	9/10/2007	Buena Park	WNV
Placer	PLCR0467	567	Cx pipiens	7	9/27/2007	10/3/2007	Roseville	WNV
Placer	PLCR0467	568	Cx tarsalis	50	9/27/2007	10/3/2007	Roseville	WNV
Sacramento	SAYO2213	6797	Cx tarsalis	2	10/1/2007	10/3/2007	Elk Grove	WNV
Sacramento	SAYO4168	6675	Cx tarsalis	5	9/27/2007	10/3/2007		WNV
Sacramento	SAYO4220	6712	Cx tarsalis	1	9/27/2007	10/3/2007	Rancho Cordova	WNV
Sacramento	SAYO7000	6874	Cx pipiens	24	10/2/2007	10/3/2007	Elk Grove	WNV
San Diego	SAND0123	143	Cx quinquefasciatus	35	10/1/2007	10/3/2007	La Mesa	WNV
San Joaquin	SJCM8010	1890	Cx tarsalis	15	9/26/2007	9/28/2007	Ripon	WNV
San Joaquin	SJCM8083	1164	Cx pipiens	50	8/1/2007	8/1/2007	Escalon	WNV
San Joaquin	SJCM8083	1165	Cx pipiens	50	8/1/2007	8/1/2007	Escalon	WNV
San Joaquin	SJCM8110	1157	Cx tarsalis	50	8/1/2007	8/1/2007	Lodi	WNV
San Joaquin	SJCM8110	1909	Cx tarsalis	40	9/26/2007	9/28/2007	Lodi	WNV
Tulare	DLTA2301	329	Cx quinquefasciatus	50	9/28/2007	10/2/2007	Kingsburg	WNV
Tulare	DLTA2304	344	Cx quinquefasciatus	50	9/28/2007	10/2/2007	Traver	WNV

Week 40 Friday, October 5, 2007

Sentinel Chickens

Sentinei Cii	ICKCIIS											
County	Agency Code	Date Bled	Nearest City	Virus	Band 01	Band 02	Band 03	Band 04	Band 05	Band 06	Band 07	Band 08
Fresno	FRNO0004	9/24/2007	Kerman	WNV	1623	1627	1629					
Fresno	FRNO0012	9/24/2007	Fresno	WNV	1607							
Kern	KERN101	9/17/2007	Lost Hills	WNV	1781	1924	1925					
Kern	KERN101	9/17/2007	Lost Hills	WEE/WNV	1782							
Kern	KERN105	9/4/2007	Pumpkin Center	WEE	1813	1815	1817					
Kern	KERN106	9/17/2007	Bakersfield	WNV	1918							
Los Angeles	ANTV3247	9/26/2007	Lancaster	WNV	1031	1033						
Los Angeles	GRLA2223	9/25/2007	Rowland Heights	WNV	1728							
Los Angeles	GRLA2651	9/25/2007	Encino	WNV	1719							
Merced	MERC0002	9/24/2007	Dos Palos	WNV	2298							
Merced	MERC0502	9/24/2007	Hilmar	WNV	2315	2318						
Riverside	COAV0035	9/24/2007	Mecca	WNV	1391							
Riverside	COAV0114	9/24/2007	Mecca	WNV	1331							
San Bernardino	SANB0001	9/24/2007	Needles	WNV	2727	2728						
San Bernardino	SANB0007	9/10/2007	Fontana	WNV	2792							
Stanislaus	TRLK9702	9/17/2007	Patterson	WNV	3388							
Tulare	DLNO21	9/27/2007	Earlimart	WNV	1546							
Tulare	DLTA1002	9/24/2007	Reedley	WNV	1553	1558						
Tulare	DLTA6005	9/24/2007	Visalia	WNV	1576	1582						
Tulare	TLRE11	9/26/2007	Mefford Field	WNV	3306	3307	3310					
Tulare	TLRE12	9/26/2007	Alpaugh	WNV	3315	3316	3317	3319	3320	3321	3322	3324
Yuba	SUYA0071	9/20/2007	Olivehurst	WNV	3202	3209						

NATIONAL COMMENTS

As of October 2, 2007, a total of 2,511 human cases had been reported nationwide in the following 41 states: Alabama (13), Arizona (31), Arkansas (11), California (290), Colorado (457), Connecticut (4), Delaware (1), Florida (3), Georgia (32), Idaho (70), Illinois (48), Indiana (10), Iowa (17), Kansas (27), Kentucky (3), Louisiana (2), Maryland (7), Massachusetts (3), Michigan (8), Minnesota (89), Mississippi (85), Missouri (45), Montana (171), Nebraska (81), Nevada (10), New Mexico (51), New York (5), North Dakota (324), Ohio (10), Oklahoma (69), Oregon (17), Pennsylvania (3), Rhode Island (1), South Carolina (4), South Dakota (196), Tennessee (4), Texas (91), Utah (37), Virginia (3), Wisconsin (4), and Wyoming (174). Of the 2,511 cases reported, 766 (31%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the 2,501 cases where data was available was 50 years (range: 15 months-97 years), and 55% were male. A total of 64 human fatalities had been reported from Alabama (3), Arkansas (1), California (14), Colorado (5), Florida (1), Georgia (1), Iowa (1), Illinois (4), Indiana (1), Mississippi (3), Missouri (1), Montana (3), Nebraska (3), New Mexico (3), New York (1), North Dakota (2), Oklahoma (5), South Dakota (4), 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.

Week 40 Friday, October 5, 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

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