

California Arbovirus Surveillance Bulletin # 21

Week 28 Friday, July 11, 2008

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

No new West Nile virus (WNV) positive human cases were reported this week. In 2008, three WNV human cases have been reported in Stanislaus (2) and Tulare (1) counties. One of these cases had neuroinvasive illness; none have resulted in fatalities.

Horses

One new equine case was reported this week from San Diego County. In 2008, two WNV cases have been detected in horses from Riverside (1) and San Diego (1) counties.

Dead Birds & Tree Squirrels

Sixty-four new West Nile virus (WNV) positive dead birds were reported this week from the following counties: Butte (1), Contra Costa (1), Fresno (1), Glenn (1), Kern (2), Los Angeles (12), Monterey (1), Riverside (2), Sacramento (8), San Bernardino (3), San Diego (10), San Joaquin (9), Solano (3), Stanislaus (5), Tulare (4), and Ventura (1). **This is the first indication of WNV activity in Monterey and Ventura counties this year.** In 2008, 332 WNV positive dead birds have been detected in 23 counties.

One new WNV positive tree squirrel was reported this week from San Bernardino County. **This is the first WNV positive tree squirrel reported in California in 2008.**

Mosquito Pools

Sixty-nine new positive mosquito pools were reported this week from the following counties: Contra Costa (1), Imperial (1), Los Angeles (4), Orange (4), Riverside (3), Sacramento (31), San Bernardino (1), San Joaquin (19), Stanislaus (1), Sutter (1), and Yolo (3). **This is the first indication of WNV activity in Yolo County this year.** In 2008, 155 WNV positive mosquito pools have been detected in 17 counties.

Sentinel Chickens

Two new seroconversions were reported this week from Imperial (1) and Riverside (1) counties. **This is the first indication of WNV activity in Imperial County this year.** In 2008, six WNV seroconversions have been detected in chickens from four 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.

2007 & 2008 YTD West Nile Virus Comparisons		
	2007	2008
Total # Dead Bird Reports	14,555	15,066
# Positive Counties	30	25
# Human Cases/ # Tested	4 / 487	3 / 400
# Horse Cases/ # Tested	2 / 146	2 / 109
# Positive Dead Birds/ # Tested	230 / 2,346	332 / 2,313
# Positive Mosquito Pools/ # Tested	184 / 9,602	155 / 9,923
# Positive Chicken Sera/ # Tested	12 / 13,242	6 / 13,710
# Positive Squirrels/ # Tested	3 / 78	1 / 85

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County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Butte			2			
Contra Costa			3	3		
El Dorado			1			
Fresno			3	3		
Glenn			2			
Imperial				1	1	
Kern			3	3		
Los Angeles			53	24	2	
Monterey			1			
Nevada			3			
Orange			68	6		
Riverside		1	6	22	2	
Sacramento			18	35		
San Bernardino			10	5	1	1
San Diego		1	71	1		
San Joaquin			25	37		
San Mateo			1			
Santa Clara			6	1		
Shasta			6			
Solano			3	1		
Stanislaus	2		11	2		
Sutter			2	1		
Tulare	1		33	7		
Ventura			1			
Yolo				3		
Totals	3	2	332	155	6	1

2008 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	12	0	0	0	0	0	0	0	0
	YTD	400	0	3	0	0	0	0	0	0
Horses Tested	Week	1	0	1	0	0	0	0	0	0
	YTD	109	0	2	0	0	0	0	0	0

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Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	207	64
	YTD	2,313	332
Tree Squirrels	Week	7	1
	YTD	85	1

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	1,046	2	0	0
	YTD	13,710	6	0	0
Mosquito Pools: RT-PCR	Week	1,150	49	0	0
	YTD	9,237	114	0	0
Mosquito Pools: RAMP	Week	124	20	N/A	N/A
	YTD	686	41	N/A	N/A

POSITIVES: 7/7/08 – 7/11/08

Dead Birds and Tree Squirrels

County	City	Zip	Species	Reported	Tested	Test Method
Butte	Oroville	95965	Orange-Crowned Warbler	7/2/08	7/7/08	RT-PCR
Contra Costa	Knightsen	94548	Western Scrub-Jay	6/26/08	7/7/08	RT-PCR
Fresno	Clovis	93611	House Sparrow	6/30/08	7/7/08	RT-PCR
Glenn	Willows	95988	Other	7/2/08	7/7/08	RT-PCR
Kern	Bakersfield	93306	Great-tailed Grackle	6/23/08	7/7/08	RT-PCR
Kern	Bakersfield	93309	Costa's Hummingbird	6/27/08	7/7/08	RT-PCR
Los Angeles	Arcadia	91007	American Crow	6/30/08	7/7/08	RT-PCR
Los Angeles	Calabasas	91302	American Crow	7/1/08	7/2/08	VecTest
Los Angeles	Covina	91724	Northern Mockingbird	6/26/08	7/7/08	RT-PCR
Los Angeles	Hidden Hills	91302	American Crow	7/1/08	7/7/08	RT-PCR
Los Angeles	La Puente	91744	American Crow	7/2/08	7/7/08	RT-PCR
Los Angeles	Lancaster	93535	Northern Mockingbird	7/1/08	7/7/08	RT-PCR
Los Angeles	Los Angeles	90004	American Crow	7/2/08	7/2/08	VecTest
Los Angeles	Monrovia	91016	American Crow	7/1/08	7/7/08	RT-PCR
Los Angeles	Temple City	91780	American Crow	6/23/08	7/7/08	RT-PCR
Los Angeles	Temple City	91780	American Crow	7/2/08	7/7/08	RT-PCR
Los Angeles	Temple City	91780	American Crow	7/3/08	7/7/08	VecTest
Los Angeles	West Covina	91791	American Crow	7/1/08	7/7/08	RT-PCR
Monterey	Prunedale	93907	Red-shouldered Hawk	7/1/08	7/7/08	RT-PCR
Riverside	Corona	92881	American Crow	7/1/08	7/7/08	RT-PCR
Riverside	Riverside	92503	House Sparrow	6/27/08	7/7/08	RT-PCR
Sacramento	Elk Grove	95624	American Robin	6/30/08	7/7/08	RT-PCR
Sacramento	Sacramento	95842	Western Scrub-Jay	6/25/08	7/7/08	RT-PCR
Sacramento	Sacramento	95831	American Crow	6/27/08	7/7/08	RT-PCR
Sacramento	Sacramento	95829	American Crow	6/30/08	7/7/08	RT-PCR
Sacramento	Sacramento	95831	American Crow	6/30/08	7/7/08	RT-PCR
Sacramento	Sacramento	95822	Western Scrub-Jay	7/1/08	7/7/08	RT-PCR
Sacramento	Sacramento	95828	Western Scrub-Jay	7/2/08	7/7/08	RT-PCR

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Sacramento	Wilton	95693	House Sparrow	6/30/08	7/7/08	RT-PCR
San Bernardino	Blue Jay	92317	Lesser Goldfinch	6/27/08	7/7/08	RT-PCR
San Bernardino	Chino	91710	House Sparrow	6/25/08	7/7/08	RT-PCR
San Bernardino	Crestline	92325	Western Gray Squirrel	6/25/2008	7/9/2008	RT-PCR
San Bernardino	Rancho Cucamonga	91701	White-crowned Sparrow	6/25/08	7/7/08	RT-PCR
San Diego	Del Mar	92014	American Crow	6/25/08	7/1/08	RT-PCR
San Diego	Del Mar	92014	American Crow	6/27/08	7/1/08	RT-PCR
San Diego	La Mesa	91941	American Crow	6/27/08	7/1/08	RT-PCR
San Diego	La Mesa	91941	American Crow	6/30/08	7/3/08	RT-PCR
San Diego	Oceanside	92054	American Crow	6/26/08	7/1/08	RT-PCR
San Diego	San Diego	92121	American Crow	6/25/08	7/1/08	RT-PCR
San Diego	San Diego	92131	American Crow	6/26/08	7/1/08	RT-PCR
San Diego	San Diego	92126	American Crow	6/30/08	7/3/08	RT-PCR
San Diego	San Marcos	92078	American Crow	6/30/08	7/3/08	RT-PCR
San Diego	Vista	92081	American Crow	6/30/08	7/3/08	RT-PCR
San Joaquin	Clements	95227	Western Scrub-Jay	6/30/08	7/7/08	RT-PCR
San Joaquin	French Camp	95231	American Crow	7/2/08	7/2/08	RAMP
San Joaquin	Manteca	95336	American Crow	7/7/08	7/7/08	VecTest
San Joaquin	Stockton	95209	Western Scrub-Jay	6/27/08	7/7/08	RT-PCR
San Joaquin	Stockton	95207	Western Scrub-Jay	6/27/08	7/7/08	RT-PCR
San Joaquin	Stockton	95204	Western Scrub-Jay	6/30/08	7/7/08	RT-PCR
San Joaquin	Stockton	95209	American Crow	7/1/08	7/1/08	VecTest
San Joaquin	Stockton	95203	Western Scrub-Jay	7/1/08	7/7/08	RT-PCR
San Joaquin	Stockton	95209	Sparrow	7/2/08	7/7/08	RT-PCR
Solano	Vacaville	95687	American Crow	6/27/08	6/27/08	RAMP
Solano	Vacaville	95687	American Crow	6/30/08	6/30/08	RAMP
Solano	Vacaville	95687	American Crow	7/3/08	7/3/08	RAMP
Stanislaus	Modesto	95350	American Robin	6/30/08	7/7/08	RT-PCR
Stanislaus	Modesto	95355	Western Scrub-Jay	7/1/08	7/7/08	RT-PCR
Stanislaus	Salida	95368	Western Scrub-Jay	7/1/08	7/7/08	RT-PCR
Stanislaus	Turlock	95380	Yellow-billed Magpie	6/30/08	7/7/08	RT-PCR
Stanislaus	Turlock	95380	Yellow-billed Magpie	7/1/08	7/7/08	RT-PCR
Tulare	Visalia	93292	Western Scrub-Jay	6/30/08	7/7/08	RT-PCR
Tulare	Visalia	93277	American Crow	6/30/08	7/7/08	RT-PCR
Tulare	Visalia	93277	American Crow	6/30/08	7/7/08	RT-PCR
Tulare	Visalia	93292	American Crow	7/2/08	7/7/08	RT-PCR
Ventura	Simi Valley	93065	Mourning Dove	6/30/08	7/7/08	RT-PCR

Mosquito Pools

Site Code	Pool #	Species	# in Pool	Collected	Tested	City	County	Result
CNTR9223	140	Cx tarsalis	50	7/7/2008	7/11/2008	Antioch	Contra Costa	WNV
COAV0046	1224	Cx tarsalis	50	6/26/2008	7/10/2008	Mecca	Riverside	WNV
COAV5001	1274	Cx tarsalis	50	7/8/2008	7/10/2008	Niland	Imperial	WNV
EAST1025	8108	Cx pipiens	50	7/9/2008	7/9/2008	Modesto	Stanislaus	WNV
GRLA2751	584	Cx quinquefasciatus	40	7/3/2008	7/11/2008	Los Angeles	Los Angeles	WNV
GRLA2779	578	Cx quinquefasciatus	30	7/3/2008	7/10/2008	Norwalk	Los Angeles	WNV
GRLA2800	573	Cx quinquefasciatus	50	7/3/2008	7/10/2008	Long Beach	Los Angeles	WNV
LONG0903	197	Cx quinquefasciatus	50	7/8/2008	7/9/2008	Long Beach	Los Angeles	WNV
NWST9401	8159	Cx tarsalis	50	6/30/2008	7/9/2008	Corona	Riverside	WNV

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ORCO18	559	Cx tarsalis	24	7/2/2008	7/2/2008	Lake Forest	Orange	WNV
ORCO26	554	Cx tarsalis	50	7/2/2008	7/2/2008	Orange	Orange	WNV
ORCO26	555	Cx tarsalis	20	7/2/2008	7/2/2008	Orange	Orange	WNV
ORCO3	538	Cx quinquefasciatus	14	7/1/2008	7/1/2008	Garden Grove	Orange	WNV
RIVR0052	270	Cx tarsalis	33	6/24/2008	7/8/2008	Moreno Valley	Riverside	WNV
SAYO2211	3482	Cx tarsalis	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO2211	3490	Cx pipiens	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO2213	2551	Cx tarsalis	35	6/26/2008	6/26/2008	Elk Grove	Sacramento	WNV
SAYO2213	2942	Cx tarsalis	50	7/2/2008	7/2/2008	Elk Grove	Sacramento	WNV
SAYO2213	3059	Cx tarsalis	36	7/3/2008	7/3/2008	Elk Grove	Sacramento	WNV
SAYO2213	3067	Cx tarsalis	50	7/3/2008	7/3/2008	Elk Grove	Sacramento	WNV
SAYO2213	3071	Cx tarsalis	50	7/3/2008	7/3/2008	Elk Grove	Sacramento	WNV
SAYO2213	3072	Cx tarsalis	50	7/3/2008	7/3/2008	Elk Grove	Sacramento	WNV
SAYO2213	3175	Cx tarsalis	50	7/8/2008	7/8/2008	Elk Grove	Sacramento	WNV
SAYO2213	3177	Cx pipiens	50	7/8/2008	7/8/2008	Elk Grove	Sacramento	WNV
SAYO2213	3179	Cx pipiens	32	7/8/2008	7/8/2008	Elk Grove	Sacramento	WNV
SAYO4116	3384	Cx tarsalis	2	7/8/2008	7/8/2008	Elverta	Sacramento	WNV
SAYO4125	3118	Cx pipiens	27	7/3/2008	7/3/2008	Carmichael	Sacramento	WNV
SAYO4154	3133	Cx tarsalis	50	7/3/2008	7/3/2008	Sacramento	Sacramento	WNV
SAYO4214	2947	Cx tarsalis	19	7/2/2008	7/2/2008	Sacramento	Yolo	WNV
SAYO4214	2992	Cx pipiens	28	7/2/2008	7/2/2008	Sacramento	Yolo	WNV
SAYO4214	3218	Cx pipiens	50	7/8/2008	7/8/2008	Sacramento	Yolo	WNV
SAYO4264	2596	Cs incidens	34	6/26/2008	6/26/2008	Sacramento	Sacramento	WNV
SAYO4264	2959	Cx tarsalis	19	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2965	Cx pipiens	9	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2966	Cx tarsalis	19	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2967	Cx pipiens	48	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2969	Cx tarsalis	20	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2970	Cx pipiens	35	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	2972	Cx pipiens	11	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4264	3196	Cx pipiens	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4264	3197	Cx tarsalis	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4268	2953	Cx pipiens	50	7/2/2008	7/2/2008	Sacramento	Sacramento	WNV
SAYO4268	3153	Cx pipiens	43	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4268	3155	Cx tarsalis	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4273	3184	Cx tarsalis	50	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4273	3185	Cx tarsalis	34	7/8/2008	7/8/2008	Sacramento	Sacramento	WNV
SAYO4274	3192	Cx tarsalis	50	7/8/2008	7/8/2008	Elk Grove	Sacramento	WNV
SAYO7000	3525	Cx tarsalis	50	7/9/2008	7/9/2008	Elk Grove	Sacramento	WNV
SJCM8016	521	Cx pipiens	12	7/8/2008	7/8/2008	Tracy	San Joaquin	WNV
SJCM8018	548	Cx tarsalis	50	7/9/2008	7/9/2008	El Rancho	San Joaquin	WNV
SJCM8018	555	Cx tarsalis	50	7/9/2008	7/9/2008	El Rancho	San Joaquin	WNV
SJCM8018	562	Cx tarsalis	50	7/9/2008	7/9/2008	El Rancho	San Joaquin	WNV
SJCM8076	534	Cx tarsalis	47	7/9/2008	7/9/2008	Stockton	San Joaquin	WNV
SJCM8076	535	Cx pipiens	23	7/9/2008	7/9/2008	Stockton	San Joaquin	WNV
SJCM8077	531	Cx tarsalis	41	7/9/2008	7/9/2008	Stockton	San Joaquin	WNV
SJCM8077	532	Cx pipiens	13	7/9/2008	7/9/2008	Stockton	San Joaquin	WNV
SJCM8089	510	Cx pipiens	6	7/8/2008	7/8/2008	Tracy	San Joaquin	WNV
SJCM8097	483	Cx pipiens	50	7/9/2008	7/9/2008	Banta	San Joaquin	WNV
SJCM8097	515	Cx pipiens	50	7/8/2008	7/8/2008	Banta	San Joaquin	WNV

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SJCM8098	484	Cx pipiens	50	7/9/2008	7/9/2008	Banta	San Joaquin	WNV
SJCM8098	516	Cx pipiens	50	7/8/2008	7/8/2008	Banta	San Joaquin	WNV
SJCM8099	487	Cx pipiens	48	7/9/2008	7/9/2008	Banta	San Joaquin	WNV
SJCM8100	506	Cx tarsalis	41	7/8/2008	7/8/2008	Tracy	San Joaquin	WNV
SJCM8101	508	Cx pipiens	50	7/8/2008	7/8/2008	Tracy	San Joaquin	WNV
SJCM8114	497	Cx tarsalis	12	7/8/2008	7/8/2008	Manteca	San Joaquin	WNV
SJCM8118	513	Cx tarsalis	8	7/8/2008	7/8/2008	Manteca	San Joaquin	WNV
SJCM8128	479	Cx tarsalis	50	7/9/2008	7/9/2008	Tracy	San Joaquin	WNV
SUYA0031	135	Cx tarsalis	40	7/8/2008	7/10/2008	Rio Oso	Sutter	WNV
WVAL2006	461	Cx tarsalis	50	7/2/2008	7/8/2008	Chino	San Bernardino	WNV

Sentential Chickens

Agency Code	County	Nearest City	Date Bled	Virus	Band 01	Band 02	Band 03
IMPR0002	Imperial	Seeley	6/17/2008	WNV	2812		
NWST9401	Riverside	Corona	6/25/2008	WNV	1416		

NATIONAL COMMENTS

As of July 8, 2008, 22 human cases had been reported nationwide this year in the following 8 states: Arizona (1), California (3), Mississippi (8), North Dakota (3), Oklahoma (2), South Dakota (1), Tennessee (1), and Texas (3). Six (27%) of the cases had neuroinvasive illness; none have resulted in fatalities. At this time last year, 26 human cases had been reported nationwide.

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.

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, 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.

Sentinel Chickens:

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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.

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), 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
