

California Arbovirus Surveillance Bulletin # 17

Week 24 Friday, June 15, 2007

Weekly and Year-To-Date Summaries

WEEKLY COMMENTS



Humans

A West Nile virus (WNV) positive asymptomatic blood donor was reported in Kern County this week. **This is the first WNV infection identified in 2007.** No human cases (symptomatic infections) have been reported this year.

Horses

No new equine cases were reported this week.

Dead Birds & Tree Squirrels

Eight new WNV positive dead birds were reported this week from the following counties: Kern (1), Orange (1), Sacramento (1), San Bernardino (1), Shasta (1), and Stanislaus (3). **This is the first detection of WNV activity in Sacramento, Shasta, and San Bernardino counties this year.**

No tree squirrels have tested positive for WNV in 2007.

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

Mosquito Pools

CVEC reported 14 new WNV positive pools this week from Kern (13) and Stanislaus (1) counties. This is the first detection of WNV in mosquitoes from Kern County this year. Additionally, San Joaquin MVCD reported one presumptive WNV positive mosquito pool by RAMP, which will be sent to CVEC for confirmation.

Sentinel Chickens

No new seroconversions were reported this week.

YTD ARBOVIRUS ACTIVITY

WNV* Activity by Element and County, 2007

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Imperial					1	
Kern			2	13		
Los Angeles			2	2	1	
Orange			8			
Riverside				1		
Sacramento			1			
San Bernardino			1			
San Diego			5			
Santa Clara			8			
Shasta			1			
Stanislaus			5	2		
Sonoma		1				
State Totals	0	1	33	18	2	0

*No other arbovirus activity has been detected in 2007.

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2007 & 2006 YTD West Nile Virus Comparisons		
	2007	2006
# Hotline Calls	9,698	18,316
Total # Dead Bird Reports	9,318	15,568
# Positive Counties	12	11
# Humans Cases / # Tested	0 / 411	0 / 531
# Horse Cases / # Tested	1 / 120	0 / 168
# Positive Dead Birds/ # Tested	33 / 1,582	28 / 1,863
# Positive Mosquito Pools/ # Tested	18 / 5,393	10 / 5,353
# Positive Chicken Sera/ # Tested	2 / 9,391	1 / 10,214
# Positive Squirrels/ # Tested	0 / 44	0 / 28

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.

TEST SUMMARIES

Humans & Horses

		Number Tested	WNV Positive		WEE Positive		SLE Positive		Other Positive	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested	Week	18	0	0	0	0	0	0	0	0
	YTD	411	0	0	0	0	0	0	0	0
Horses Tested	Week	5	0	0	0	0	0	0	0	0
	YTD	120	0	1	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	116	8
	YTD	1582	33
Tree Squirrels	Week	1	0
	YTD	44	0

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive	Flavivirus* Positive
Chicken Sera	Week	1067	0	0	0	0
	YTD	9391	2	0	0	0
Mosquito Pools: RT-PCR	Week	613	14	0	0	0
	YTD	5122	18	0	0	0
Mosquito Pools: RAMP	Week	138	0	N/A	N/A	N/A
	YTD	271	0	N/A	N/A	N/A

*Does not include those later confirmed as WNV or SLE

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POSITIVES: 6/11/07-6/15/07

Dead Birds

County	City	Zip Code	Species	Collected	Tested	Test Type
Kern	Bakersfield	93309	House Sparrow	6/4/07	6/11/07	RT-PCR
Orange	Anaheim	92802	American Crow	5/29/07	6/11/07	IHC
Sacramento	Sacramento	95822	American Crow	5/31/07	6/11/07	RT-PCR
San Bernardino	San Bernardino	92408	American Kestrel	5/30/07	6/11/07	RT-PCR
Shasta	Redding	96001	Yellow-billed Magpie	6/12/07	6/12/07	VecTest
Stanislaus	Modesto	95350	American Crow	5/30/07	6/11/07	RT-PCR
Stanislaus	Modesto	95350	American Crow	5/30/07	6/11/07	RT-PCR
Stanislaus	Modesto	95355	American Crow	6/4/07	6/11/07	RT-PCR

Mosquito Pools

Site Code	Pool #	Species	# in Pool	Collected	Tested	City	County	Virus
AFSB1002	5120	Cx quinquefasciatus	50	6/5/2007	6/13/2007	Bakersfield	Kern	WN
AFSB1002	5121	Cx quinquefasciatus	50	6/5/2007	6/13/2007	Bakersfield	Kern	WN
AFSB2012	5124	Cx quinquefasciatus	26	6/5/2007	6/13/2007	Bakersfield	Kern	WN
AFSB0106	5133	Cx quinquefasciatus	32	6/5/2007	6/13/2007	Bakersfield	Kern	WN
KERN0042	72	Cx tarsalis	50	6/5/2007	6/13/2007	Bakersfield	Kern	WN
KERN3004	78	Cx tarsalis	11	6/6/2007	6/13/2007	Bakersfield	Kern	WN
KERN2002	88	Cx quinquefasciatus	50	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2002	89	Cx quinquefasciatus	50	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2010	96	Cx quinquefasciatus	50	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2010	97	Cx quinquefasciatus	50	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2016	101	Cx quinquefasciatus	50	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2016	102	Cx quinquefasciatus	18	6/8/2007	6/13/2007	Bakersfield	Kern	WN
KERN2019	104	Cx quinquefasciatus	36	6/8/2007	6/13/2007	Bakersfield	Kern	WN
TRLK0432	391	Cx pipiens	50	6/12/2007	6/13/2007	Turlock	Stanislaus	WN

NATIONAL COMMENTS

As of June 12, 2007, WNV activity has been reported from the following 11 states: California, Florida, Idaho, Illinois, Indiana, Iowa, Mississippi, South Dakota, Tennessee, Texas, and Virginia. A total of 6 human cases have been reported in Iowa (1), Mississippi (4), and South Dakota (1). Of the 6 cases reported, 3 (50%) had West Nile neuroinvasive disease (i.e. encephalitis or meningitis). The median age of the cases was 45 years (range: 35-62 years) and 33% were male. One of the cases reported from Mississippi was fatal.

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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 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 the California Animal Health and Food Safety (CAHFS) laboratory at UC 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 submitted each week to the DHS Viral and Rickettsial Disease Laboratory (VRDL) are 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 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, Division of Communicable Disease Control, California Department of Health Services, 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: tfeiszli@dhs.ca.gov.