

# California Arbovirus Surveillance Bulletin # 21

Week 26 Friday, July 3, 2009

## Weekly Summary

### WEEKLY COMMENTS



As of June 26, 2009, 19 counties have reported West Nile virus (WNV) activity. At this time last year, 19 counties had reported WNV activity.

#### **Humans**

No human cases have been reported in 2009. One WNV infection has been identified in a blood donor from Los Angeles County. The individual has remained asymptomatic. At this time last year, one human WNV case had been reported from Tulare County.

#### **Horses**

No equine cases have been reported in 2009. At this time last year, one equine WNV case had been reported from Riverside County.

#### **Dead Birds & Tree Squirrels**

Twenty-six new WNV positive dead birds were reported this week from nine counties: Alameda (5), Fresno (8), Kern (4), Kings (2), Los Angeles (3), Madera (1), Riverside (1), Sacramento (1), and San Bernardino (1). This is the first indication of WNV activity in Alameda and San Bernardino counties this year. In 2009, 88 birds from 15 counties have tested positive for WNV. At this time last year, 184 WNV positive dead birds had been reported from 18 counties.

No positive tree squirrels were reported this week. In 2009, one tree squirrel from Fresno County has tested positive for WNV.

#### **Mosquito Pools**

Sixteen WNV positive mosquito pools were reported this week from five counties: Fresno (8), Kern (4), San Joaquin (2), Sutter (1), and Tulare (1). This is the first detection of WNV activity in Sutter County this year. In 2009, 97 mosquito pools have tested positive for WNV from 12 counties. At this time last year, 57 WNV positive mosquito pools had been reported from 12 counties.

#### **Sentinel Chickens**

Two WNV seroconversions in chickens were reported this week from Los Angeles and Yolo counties. This is the first detection of WNV activity in Yolo County this year. In 2009, five chickens from two counties have tested positive for WNV antibodies. At this time last year, two WNV seroconversions had been reported from Los Angeles County.

**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).

2009 & 2008 YTD West Nile Virus Comparisons		
	2008	2009
Total # Dead Bird Reports	12,524	8,050
# Positive Counties	19	19
# Human Cases/ # Tested	1 / 371	0 / 435
# Horse Cases/ # Tested	1 / 19	0 / 95
# Positive Dead Birds/ # Tested	184 / 1,874	88 / 1,311
# Positive Mosquito Pools/ # Tested	57 / 7,719	97 / 9,635
# Positive Chicken Sera/ # Tested	2 / 11,776	5 / 10,115
# Positive Squirrels/ # Tested	0 / 71	1 / 50

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## YTD WNV Activity by Element and County, 2009

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			5			
Contra Costa				11		
Fresno			32	48		1
Kern			9	8		
Kings			3			
Los Angeles			8	2	4	
Madera			4	1		
Orange			4	1		
Riverside			1	5		
Sacramento			1	1		
San Bernardino			1			
San Diego			11			
San Joaquin			2	3		
Santa Clara			4	14		
Shasta			1			
Stanislaus			2			
Sutter				1		
Tulare				2		
Yolo					1	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>88</b>	<b>97</b>	<b>5</b>	<b>1</b>

## 2009 TEST SUMMARIES

### Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	13	0	0	0	0	0	0	0	0
	YTD	435	0	0	0	0	0	0	0	0
Horses Tested	Week	4	0	0	0	0	0	0	0	0
	YTD	95	0	0	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	143	26
	YTD	1,311	88
Tree Squirrels	Week	2	0
	YTD	50	1

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive	Flavivirus Positive
Chicken Sera	Week	866	2	0	0	0
	YTD	10,115	5	0	0	0
Mosquito Pools: RT-PCR	Week	1,349	16	0	0	n/a
	YTD	9,310	73	0	0	n/a
Mosquito Pools: RAMP	Week	17	0	N/A	N/A	n/a
	YTD	325	24	N/A	N/A	n/a

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## POSITIVES

### Dead Birds & Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Result	Test Type
Alameda	Livermore	94550	American Crow	6/18/09	6/29/09	WNV	RT-PCR
Alameda	Livermore	94550	American Crow	6/18/09	6/29/09	WNV	RT-PCR
Alameda	Livermore	94550	American Crow	6/18/09	6/29/09	WNV	RT-PCR
Alameda	Livermore	94550	American Crow	6/18/09	6/29/09	WNV	RT-PCR
Alameda	Livermore	94551	American Crow	6/18/09	6/29/09	WNV	RT-PCR
Fresno	Clovis	93611	American Crow	6/17/09	6/29/09	WNV	RT-PCR
Fresno	Fresno	93702	Western Scrub-Jay	6/17/09	6/29/09	WNV	RT-PCR
Fresno	Fresno	93711	Western Scrub-Jay	6/22/09	6/29/09	WNV	RT-PCR
Fresno	Fresno	93711	Western Scrub-Jay	6/22/09	6/29/09	WNV	RT-PCR
Fresno	Fresno	93711	American Crow	6/23/09	6/29/09	WNV	RT-PCR
Fresno	Fresno	93722	Western Scrub-Jay	6/25/09	6/25/09	WNV	RAMP
Fresno	Fresno	93725	American Crow	6/26/09	6/26/09	WNV	RAMP
Fresno	Fresno	93726	Western Scrub-Jay	6/24/09	6/24/09	WNV	RAMP
Kern	Bakersfield	93308	House Finch	6/18/09	6/29/09	WNV	RT-PCR
Kern	Bakersfield	93308	American Crow	6/19/09	6/29/09	WNV	RT-PCR
Kern	Bakersfield	93309	American Kestrel	6/18/09	6/29/09	WNV	RT-PCR
Kern	Bakersfield	93312	House Sparrow	6/24/09	6/29/09	WNV	RT-PCR
Kings	Hanford	93230	Western Scrub-Jay	6/22/09	6/29/09	WNV	RT-PCR
Kings	Hanford	93230	Western Scrub-Jay	6/23/09	6/29/09	WNV	RT-PCR
Los Angeles	Lancaster	93534	White-crowned Sparrow	6/22/09	6/29/09	WNV	RT-PCR
Los Angeles	Lancaster	93535	American Crow	6/19/09	6/29/09	WNV	RT-PCR
Los Angeles	Lancaster	93536	Common Raven	6/21/09	6/29/09	WNV	RT-PCR
Madera	Madera	93637	American Crow	6/19/09	6/29/09	WNV	RT-PCR
Riverside	Riverside	92504	American Crow	6/19/09	6/29/09	WNV	RT-PCR
Sacramento	Isleton	95641	American Crow	6/19/09	6/29/09	WNV	RT-PCR
San Bernardino	Chino	91710	American Crow	6/25/09	6/26/09	WNV	VecTest

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## Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Virus	Test Method
Fresno	CNSL1282	144	Cx quinquefasciatus	32	6/24/2009	7/1/2009	Fresno	WNV	RTPCR
Fresno	CNSL1306	143	Cx quinquefasciatus	29	6/24/2009	7/1/2009	Fresno	WNV	RTPCR
Fresno	CNSL1658	147	Cx quinquefasciatus	18	6/25/2009	7/1/2009	Clovis	WNV	RTPCR
Fresno	CNSL2083	145	Cx quinquefasciatus	50	6/24/2009	7/1/2009	Sanger	WNV	RTPCR
Fresno	CNSL2249	151	Cx quinquefasciatus	21	6/25/2009	7/1/2009	Sanger	WNV	RTPCR
Fresno	CNSL4013	522	Cx quinquefasciatus	31	6/26/2009	7/1/2009	Fowler	WNV	RTPCR
Fresno	CNSL4058	521	Cx quinquefasciatus	44	6/26/2009	7/1/2009	Fowler	WNV	RTPCR
Fresno	CNSL5099	525	Cx quinquefasciatus	25	6/30/2009	7/1/2009	Kingsburg	WNV	RTPCR
Kern	AFSB0119	5094	Cx quinquefasciatus	38	6/25/2009	7/1/2009	Bakersfield	WNV	RTPCR
Kern	KERN0050	216	Cx tarsalis	40	6/25/2009	7/1/2009	Bakersfield	WNV	RTPCR
Kern	KERN2007	208	Cx quinquefasciatus	12	6/24/2009	7/1/2009	Bakersfield	WNV	RTPCR
Kern	KERN2016	211	Cx quinquefasciatus	23	6/24/2009	7/1/2009	Bakersfield	WNV	RTPCR
San Joaquin	SJCM8018	260	Cx tarsalis	50	6/30/2009	7/1/2009	Stockton	WNV	RTPCR
San Joaquin	SJCM8083	239	Cx tarsalis	12	6/25/2009	7/1/2009	Escalon	WNV	RTPCR
Sutter	SUYA0016	78	Cx tarsalis	33	6/29/2009	7/2/2009	Trowbridge	WNV	RTPCR
Tulare	DLTA6409	250	Cx quinquefasciatus	50	6/30/2009	7/2/2009	Dinuba	WNV	RTPCR

## Sentinel Chickens

County	Site Code	City	Date Bled	Band #	Virus
Los Angeles	ANTV8656	Lancaster	6/17/2009	3408	WNV
Yolo	SAYO6002	Woodland	06/22/09	1904	WNV

## NATIONAL COMMENTS

As of June 30, 2009, two human cases have been reported nationwide, in South Dakota and Texas. At this time last year, 13 cases had been reported nationwide.

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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 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.

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### **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.

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### **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 Center for Vectorborne Diseases (CVEC) for West Nile virus 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.

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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 (WEE), and St. Louis encephalitis (SLE) 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 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.

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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) 412-6298 or email: [tina.feiszli@cdph.ca.gov](mailto:tina.feiszli@cdph.ca.gov)*

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