

# California Arbovirus Surveillance Bulletin # 22

Week 27 Monday, July 13, 2009

## Weekly Summary

### WEEKLY COMMENTS



As of July 10, 2009, 25 counties have reported West Nile virus (WNV) activity. At this time last year, 21 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, three WNV cases had been reported from two counties.

#### 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

Last week, 51 new WNV positive dead birds were reported from 22 counties: Alameda (1), Butte (3), Contra Costa (1), Fresno (4), Kern (3), Kings (3), Los Angeles (13), Madera (2), Merced (1), Orange (1), Sacramento (4), San Bernardino (1), San Diego (3), San Joaquin (1), Santa Barbara (1), Santa Clara (1), Santa Cruz (1), Shasta (3), Tulare (1), Tuolumne (1), Ventura (1), and Yolo (1). This is the first indication of WNV activity in Butte, Merced, Santa Barbara, Santa Cruz, Tuolumne, and Ventura counties this year. In 2009, 139 birds from 24 counties have tested positive for WNV. At this time last year, 268 WNV positive dead birds had been reported from 20 counties.

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

#### Mosquito Pools

Twenty-three WNV positive mosquito pools were reported last week from six counties: Fresno (4), Kern (8), Los Angeles (1), San Joaquin (4), Sutter (1), and Tulare (5). In 2009, 120 mosquito pools have tested positive for WNV from 12 counties. At this time last year, 86 WNV positive mosquito pools had been reported from 14 counties.

#### Sentinel Chickens

Six new chickens tested positive for flavivirus antibodies last week from Imperial (1), Los Angeles (3), and San Diego (2) counties; confirmatory testing is pending. In 2009, five chickens from two counties have tested positive for WNV antibodies. At this time last year, four WNV seroconversions had been reported from three counties.

**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	13,708	8,633
# Positive Counties	21	25
# Human Cases/ # Tested	3 / 389	0 / 449
# Horse Cases/ # Tested	1 / 108	0 / 99
# Positive Dead Birds/ # Tested	268 / 2,113	139 / 1,398
# Positive Mosquito Pools/ # Tested	86 / 8,649	120 / 10,576
# Positive Chicken Sera/ # Tested	4 / 12,664	5 / 10,849
# Positive Squirrels/ # Tested	0 / 78	1 / 51

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## YTD WNV Activity by Element and County, 2009

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Alameda			6			
Butte			3			
Contra Costa			1	11		
Fresno			36	52		1
Kern			12	16		
Kings			6			
Los Angeles			21	3	4	
Madera			6	1		
Merced			1			
Orange			5	1		
Riverside			1	5		
Sacramento			5	1		
San Bernardino			2			
San Diego			14			
San Joaquin			3	7		
Santa Barbara			1			
Santa Clara			5	14		
Santa Cruz			1			
Shasta			4			
Stanislaus			2			
Sutter				2		
Tulare			1	7		
Tuolumne			1			
Ventura			1			
Yolo			1		1	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>139</b>	<b>120</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
<b>Humans Tested*</b>	Week	14	0	0	0	0	0	0	0
	YTD	449	0	0	0	0	0	0	0
<b>Horses Tested</b>	Week	4	0	0	0	0	0	0	0
	YTD	99	0	0	0	0	0	0	0

### Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
<b>Dead Birds</b>	Week	189	51
	YTD	1,398	139
<b>Tree Squirrels</b>	Week	1	0
	YTD	51	1

### Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	SLE Positive	WEE Positive	Flavivirus Positive
<b>Chicken Sera</b>	Week	734	0	0	0	5
	YTD	10,849	5	0	0	5
<b>Mosquito Pools: RT-PCR</b>	Week	891	23	0	0	n/a
	YTD	10,201	96	0	0	n/a
<b>Mosquito Pools: RAMP</b>	Week	50	0	N/A	N/A	n/a
	YTD	375	24	N/A	N/A	n/a

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## POSITIVES

### Dead Birds & Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Virus	Method
Alameda	Livermore	94550	House Sparrow	6/25/09	7/6/09	WNV	RT-PCR
Butte	Chico	95973	Goldfinch	6/21/09	7/6/09	WNV	RT-PCR
Butte	Oroville	95966	Bluebird	6/24/09	7/6/09	WNV	RT-PCR
Butte	Oroville	95966	House Sparrow	6/25/09	7/6/09	WNV	RT-PCR
Contra Costa	Alamo	94507	Western Scrub-Jay	6/28/09	7/6/09	WNV	RT-PCR
Fresno	Fresno	93705	American Crow	6/24/09	7/6/09	WNV	RT-PCR
Fresno	Fresno	93703	Brewer's Blackbird	6/29/09	7/6/09	WNV	RT-PCR
Fresno	Fresno	93722	American Crow	7/7/09	7/8/09	WNV	RAMP
Fresno	Fresno	93704	Western Scrub-Jay	7/7/09	7/8/09	WNV	RAMP
Kern	Bakersfield	93312	Brewer's Blackbird	6/24/09	7/6/09	WNV	RT-PCR
Kern	Bakersfield	93313	American Crow	6/26/09	7/6/09	WNV	RT-PCR
Kern	Bakersfield	93309	Western Scrub-Jay	6/29/09	7/6/09	WNV	RT-PCR
Kings	Hanford	93230	American Crow	6/25/09	7/6/09	WNV	RT-PCR
Kings	Hanford	93230	American Crow	6/26/09	7/6/09	WNV	RT-PCR
Kings	Hanford	93230	Western Scrub-Jay	6/26/09	7/6/09	WNV	RT-PCR
Los Angeles	Lakewood	90712	House Finch	6/5/09	7/6/09	WNV	RT-PCR
Los Angeles	Acton	93510	American Crow	6/18/09	7/6/09	WNV	RT-PCR
Los Angeles	Cerritos	90703	Brewer's Blackbird	6/18/09	7/6/09	WNV	RT-PCR
Los Angeles	Los Angeles	90036	House Sparrow	6/21/09	7/6/09	WNV	RT-PCR
Los Angeles	Lancaster	93534	Sparrow	6/24/09	7/6/09	WNV	RT-PCR
Los Angeles	Lancaster	93536	House Sparrow	6/25/09	7/6/09	WNV	RT-PCR
Los Angeles	Lancaster	93534	Swainson's Thrush	6/25/09	7/6/09	WNV	RT-PCR
Los Angeles	Long Beach	90806	Brewer's Blackbird	6/25/09	7/6/09	WNV	RT-PCR
Los Angeles	Long Beach	90806	Brewer's Blackbird	6/29/09	7/6/09	WNV	RT-PCR
Los Angeles	Valley Village	91607	Black Phoebe	6/29/09	7/6/09	WNV	RT-PCR
Los Angeles	Downey	90241	Lesser Goldfinch	6/29/09	7/6/09	WNV	RT-PCR
Los Angeles	Lancaster	93536	Brewer's Blackbird	6/30/09	7/6/09	WNV	RT-PCR
Los Angeles	Lancaster	93534	House Sparrow	6/30/09	7/6/09	WNV	RT-PCR
Madera	Madera	93637	Western Scrub-Jay	6/29/09	7/6/09	WNV	RT-PCR
Madera	Madera	93637	Western Scrub-Jay	7/1/09	7/6/09	WNV	RT-PCR
Merced	Merced	95340	Nuttall's Woodpecker	6/25/09	7/6/09	WNV	RT-PCR
Orange	Mission Viejo	92691	American Crow	6/19/09	6/30/09	WNV	RT-PCR
Sacramento	Elk Grove	95757	White-crowned Sparrow	6/21/09	7/6/09	WNV	RT-PCR
Sacramento	Galt	95632	Western Scrub-Jay	6/24/09	7/6/09	WNV	RT-PCR
Sacramento	Galt	95632	American Robin	6/24/09	7/6/09	WNV	RT-PCR
Sacramento	Herald	95638	Red-winged Blackbird	6/29/09	7/6/09	WNV	RT-PCR
San Bernardino	San Bernardino	92404	House Finch	6/26/09	7/6/09	WNV	RT-PCR
San Diego	San Diego	92126	American Crow	6/18/09	7/6/09	WNV	RT-PCR
San Diego	Valley Center	92082	American Crow	6/23/09	7/6/09	WNV	RT-PCR
San Diego	Valley Center	92082	American Crow	6/23/09	7/6/09	WNV	RT-PCR
San Joaquin	Stockton	95206	American Crow	7/6/09	7/6/09	WNV	RAMP
Santa Barbara	Santa Ynez	93460	Yellow-billed Magpie	6/24/09	7/6/09	WNV	RT-PCR
Santa Clara	San Jose	95134	American Crow	6/24/09	6/24/09	WNV	VecTest
Santa Cruz	Scotts Valley	95066	House Finch	6/30/09	7/6/09	WNV	RT-PCR
Shasta	Redding	96003	White-crowned Sparrow	6/25/09	7/6/09	WNV	RT-PCR
Shasta	Cassel	96016	Lesser Goldfinch	6/26/09	7/6/09	WNV	RT-PCR

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Shasta	Shingletown	96088	Great Blue Heron	6/29/09	7/6/09	WNV	RT-PCR
Tulare	Tulare	93274	Zebra Finch	6/26/09	7/6/09	WNV	RT-PCR
Tuolumne	Sonora	95370	Sparrow	4/3/09	7/6/09	WNV	RT-PCR
Ventura	Simi Valley	93065	House Sparrow	6/29/09	7/6/09	WNV	RT-PCR
Yolo	Madison	95653	American Crow	6/18/09	7/6/09	WNV	RT-PCR

### Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Virus	Method
Fresno	CNSL1663	165	Cx tarsalis	32	7/2/2009	7/9/2009	Clovis	WNV	RTPCR
Fresno	CNSL4025	539	Cx quinquefasciatus	42	7/1/2009	7/9/2009	Selma	WNV	RTPCR
Fresno	CNSL4028	544	Cx quinquefasciatus	50	7/2/2009	7/10/2009	Selma	WNV	RTPCR
Fresno	CNSL4029	545	Cx quinquefasciatus	50	7/2/2009	7/10/2009	Selma	WNV	RTPCR
Kern	AFSB0119	5103	Cx quinquefasciatus	27	7/2/2009	7/9/2009	Bakersfield	WNV	RTPCR
Kern	KERN0009	242	Cx quinquefasciatus	26	7/1/2009	7/7/2009	Bakersfield	WNV	RTPCR
Kern	KERN0029	251	Cx tarsalis	49	7/1/2009	7/7/2009	Lamont	WNV	RTPCR
Kern	KERN2001	265	Cx quinquefasciatus	12	7/2/2009	7/9/2009	Bakersfield	WNV	RTPCR
Kern	KERN2002	236	Cx quinquefasciatus	10	6/30/2009	7/7/2009	Bakersfield	WNV	RTPCR
Kern	KERN2007	246	Cx quinquefasciatus	11	7/1/2009	7/7/2009	Bakersfield	WNV	RTPCR
Kern	KERN2010	260	Cx quinquefasciatus	22	7/2/2009	7/9/2009	Bakersfield	WNV	RTPCR
Kern	KERN2027	234	Cx tarsalis	29	6/30/2009	7/7/2009	Bakersfield	WNV	RTPCR
Los Angeles	ANTV4334	6	Cx tarsalis	20	7/7/2009	7/8/2009	Lancaster	WNV	RTPCR
San Joaquin	SJCM8076	285	Cx tarsalis	24	6/30/2009	7/7/2009	Stockton	WNV	RTPCR
San Joaquin	SJCM8079	304	Cx tarsalis	39	7/2/2009	7/7/2009	Manteca	WNV	RTPCR
San Joaquin	SJCM8143	275	Cx tarsalis	27	6/30/2009	7/7/2009	Stockton	WNV	RTPCR
San Joaquin	SJCM9906	300	Cx tarsalis	37	6/30/2009	7/7/2009	French Camp	WNV	RTPCR
Sutter	SUYA0031	116	Cx tarsalis	50	7/7/2009	7/9/2009	Rio Oso	WNV	RTPCR
Tulare	DLTA6405	349	Cx quinquefasciatus	50	7/8/2009	7/10/2009	Dinuba	WNV	RTPCR
Tulare	DLTA6406	350	Cx quinquefasciatus	49	7/8/2009	7/9/2009	Dinuba	WNV	RTPCR
Tulare	DLTA6409	306	Cx tarsalis	13	7/2/2009	7/7/2009	Dinuba	WNV	RTPCR
Tulare	DLTA8414	291	Cx tarsalis	39	7/1/2009	7/7/2009	Visalia	WNV	RTPCR
Tulare	DLTA8427	336	Cx quinquefasciatus	34	7/7/2009	7/9/2009	Visalia	WNV	RTPCR

### NATIONAL COMMENTS

As of July 7, 2009, six human cases have been reported nationwide in Arizona, Arkansas, Idaho, Nevada, South Dakota, and Texas. No fatalities have been reported.

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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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