

California Arbovirus Surveillance Bulletin # 19

Week 24 Friday, June 19, 2009

Weekly Summary

WEEKLY COMMENTS



As of June 19, 2009, 14 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.

Horses

No equine cases have been reported in 2009.

Dead Birds & Tree Squirrels

Eight new WNV positive dead birds were reported this week from six counties: Fresno (3), Kern (1), Los Angeles (1), Madera (1), San Diego (1), and Shasta (1). This is the first detection of WNV activity in Shasta County this year. In 2009, 46 birds from 11 counties have tested positive for WNV. At this time last year, 133 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

Twelve WNV positive mosquito pools were reported this week from three counties: Fresno (10), Kern (1), and Los Angeles (1). In 2009, 68 mosquito pools have tested positive for WNV from eight counties. At this time last year, 33 WNV positive mosquito pools had been reported from nine counties.

Sentinel Chickens

No seroconversions were reported this week. In 2009, three chickens from Los Angeles County have tested positive for WNV antibodies. At this time last year, two WNV seroconversions had been reported from one county.

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.

2009 & 2008 YTD West Nile Virus Comparisons		
	2008	2009
Total # Dead Bird Reports	9,875	6,610
# Positive Counties	19	14
# Human Cases/ # Tested	0 / 307	0 / 404
# Horse Cases/ # Tested	0 / 0	0 / 87
# Positive Dead Birds/ # Tested	133 / 1,450	46 / 1,075
# Positive Mosquito Pools/ # Tested	33 / 5,465	68 / 7,187
# Positive Chicken Sera/ # Tested	2 / 9,571	3 / 8,388
# Positive Squirrels/ # Tested	0 / 46	1 / 38

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YTD WNV Activity by Element and County, 2009

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa				11		
Fresno			15	32		1
Kern			2	2		
Kings			1			
Los Angeles			5	2	3	
Madera			3			
Orange			4	1		
Riverside				5		
San Diego			10			
San Joaquin			2			
Santa Clara			2	14		
Shasta			1			
Stanislaus			1			
Tulare				1		
Total	0	0	46	68	3	1

2009 TEST SUMMARIES

Human & Horse Cases

		Number Tested	WNV		WEE		SLE		Other	
			Imported	Local	Imported	Local	Imported	Local	Imported	Local
Humans Tested*	Week	20	0	0	0	0	0	0	0	0
	YTD	404	0	0	0	0	0	0	0	0
Horses Tested	Week	3	0	0	0	0	0	0	0	0
	YTD	87	0	0	0	0	0	0	0	0

Dead Birds & Tree Squirrels

		Number Tested	WNV Positive
Dead Birds	Week	125	8
	YTD	1,075	46
Tree Squirrels	Week	6	0
	YTD	38	1

Sentinel Chickens & Mosquito Pools

		Number Tested	WNV Positive	WEE Positive	SLE Positive
Chicken Sera	Week	861	0	0	0
	YTD	8,388	3	0	0
Mosquito Pools: RT-PCR	Week	1,037	12	0	0
	YTD	6,900	44	0	0
Mosquito Pools: RAMP	Week	13	0	N/A	N/A
	YTD	287	24	N/A	N/A

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POSITIVES

Dead Birds & Tree Squirrels

County	City	Zip Code	Species	Reported	Tested	Test Method	Virus
Fresno	Clovis	93612	Western Scrub-Jay	11-Jun-09	11-Jun-09	RAMP	WNV
Fresno	Fresno	93710	American Crow	12-Jun-09	16-Jun-09	RAMP	WNV
Fresno	Fresno	93703	European Starling	28-May-09	15-Jun-09	RT-PCR	WNV
Kern	Bakersfield	93308	Western Scrub-Jay	08-Jun-09	15-Jun-09	RT-PCR	WNV
Los Angeles	Lancaster	93536	Brewer's Blackbird	08-Jun-09	15-Jun-09	RT-PCR	WNV
Madera	Madera	93637	American Crow	04-Jun-09	15-Jun-09	RT-PCR	WNV
San Diego	Vista	92081	American Crow	01-Jun-09	15-Jun-09	RT-PCR	WNV
Shasta	Redding	96003	Savannah Sparrow	04-Jun-09	15-Jun-09	RT-PCR	WNV

Mosquitoes

County	Site Code	Pool #	Species	# in Pool	Collected	Tested	City	Virus	Test Method
Fresno	CNSL1112	110	Cx quinquefasciatus	31	6/12/2009	6/17/2009	Clovis	WN	RTPCR
Fresno	CNSL1112	112	Cx quinquefasciatus	36	6/12/2009	6/17/2009	Clovis	WN	RTPCR
Fresno	CNSL1123	288	Cx quinquefasciatus	50	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1342	292	Cx quinquefasciatus	28	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1423	290	Cx quinquefasciatus	32	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1530	285	Cx quinquefasciatus	50	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1530	286	Cx quinquefasciatus	50	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1530	287	Cx quinquefasciatus	50	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	CNSL1619	289	Cx quinquefasciatus	50	6/10/2009	6/17/2009	Fresno	WN	RTPCR
Fresno	FRNO8007	11	Cx quinquefasciatus	21	6/17/2009	6/18/2009	-----	WN	RTPCR
Kern	KERN3018	147	Cx quinquefasciatus	21	6/10/2009	6/17/2009	Bakersfield	WN	RTPCR
Los Angeles	GRLA2527	5495	Cx stigmatosoma	34	6/9/2009	6/17/2009	Los Angeles	WN	RTPCR

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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.

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:

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.

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.

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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