

California Arbovirus Surveillance Bulletin #15

Week 24 Friday, June 14, 2013



WEEKLY UPDATE

Human Cases

No cases were reported this week. To date this year, one human case of West Nile virus (WNV) has been reported from Sacramento County.

Horses

No equine cases have been reported in 2013.

Dead Birds & Squirrels

Seven WNV positive birds were reported this week from Kings (1), Los Angeles (2), Marin (1), Merced (1), Sacramento (1), and Solano (1) counties. **This is the first detection of WNV activity in Kings, Marin, and Solano counties this year.** To date this year, 17 dead birds have tested positive for WNV from 10 counties and an additional 25 dead birds have tested positive for chronic WNV infection from 16 counties. At this time last year, 98 dead birds had tested positive for WNV from 11 counties.

Mosquito Pools

A total of 18 WNV positive mosquito pools were reported this week from six counties: Fresno (4), Kern (3), Los Angeles (3), Sacramento (6), Sutter (1), and Tulare (1). **This is the first indication of WNV activity in Kern and Sutter counties in 2013.** To date this year, 39 mosquito pools from 8 counties have tested positive for WNV. At this time last year, 124 mosquito pools from 10 counties had tested positive for WNV.

Sentinel Chickens

No new seroconversions were reported this week. In 2013, one chicken from Los Angeles County has tested positive for antibodies to WNV. At this time last year, one WNV seroconversion had been detected in a flock located in Riverside County.

2012 & 2013 YTD West Nile Virus Comparisons		
	2012	2013
Total # Dead Bird Reports	4,434	4,311
# Positive Counties	15	14
# Human Cases	0	1
# Horse Cases	0	0
# Positive Dead Birds / # Tested	98 / 955	17 / 816
# Positive Mosquito Pools / # Tested	124 / 6,917	39 / 10,065
# Seroconversions / # Tested	1 / 5,297	1 / 5,005
# Positive Squirrels / # Tested	0 / 47	0 / 41

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

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YTD WNV Activity by Element and County, 2013

County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens	Squirrels
Fresno			1	7		
Kern				3		
Kings			1			
Los Angeles			4	14	1	
Marin			1			
Merced			3			
Orange			1	1		
Sacramento	1		3	8		
San Joaquin				2		
Solano			1			
Sutter				1		
Tulare				3		
Ventura			1			
Yuba			1			
Totals	1	0	17	39	1	0

TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	0	0	0	0	0	0
	YTD	1	0	0	0	0	0
Horse Cases	Week	0	0	0	0	0	0
	YTD	0	0	0	0	0	0

Dead Birds & Squirrels

		Number Tested	WNV Positive (recent only)
Dead Birds	Week	125	7
	YTD	816	17
Tree Squirrels	Week	4	0
	YTD	41	0

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	893	0	0	0
	YTD	5,005	1	0	0
Mosquito Pools	Week	1,461	18	0	0
	YTD	10,065	39	0	0

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POSITIVES

Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Kings	Kings MAD	Lemoore	93245	American Crow	5/30/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Rolling Hills Estates	90274	American Crow	5/29/2013	WNV	Recent	RT-PCR
Los Angeles	LA West VCD	Lomita	90717	American Crow	5/28/2013	WNV	Recent	RT-PCR
Marin	Marin-Sonoma MVCD	San Anselmo	94960	American Crow	5/29/2013	WNV	Recent	RT-PCR
Merced	Merced Co MAD	Gustine	95322	American Crow	5/29/2013	WNV	Recent	RT-PCR
Sacramento	Sac-Yolo MVCD	Sacramento	95823	American Crow	6/5/2013	WNV	Recent	RT-PCR
Solano	Solano Co MAD	Fairfield	94533	American Crow	6/7/2013	WNV	Recent	RAMP

Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Fresno	CNSL1215	115	Fresno	Cx. tarsalis	28	CO2	6/6/2013	WNV	RTPCR
Fresno	CNSL1417	89	Clovis	Cx. quinquefasciatus	50	GRVD	5/30/2013	WNV	RTPCR
Fresno	CNSL1570	111	Fresno	Cx. quinquefasciatus	45	GRVD	6/6/2013	WNV	RTPCR
Fresno	CNSL1696	127	Fresno	Cx. quinquefasciatus	31	GRVD	6/11/2013	WNV	RTPCR
Kern	KERN2010	80	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/5/2013	WNV	RTPCR
Kern	KERN2011	81	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/5/2013	WNV	RTPCR
Kern	KERN2028	79	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/5/2013	WNV	RTPCR
Los Angeles	GRLA2123	291	Harbor City	Cx. quinquefasciatus	43	GRVD	6/4/2013	WNV	RTPCR
Los Angeles	GRLA2521	5347	Los Feliz	Cx. quinquefasciatus	39	GRVD	6/4/2013	WNV	RTPCR
Los Angeles	LACW1082	196	Torrance	Cx. tarsalis	50	CO2	6/6/2013	WNV	RTPCR
Sacramento	SAYO212012	849	Sacramento	Cx. pipiens	28	GRVD	6/7/2013	WNV	RTPCR
Sacramento	SAYO214013	781	Carmichael	Cx. pipiens	11	GRVD	6/4/2013	WNV	RTPCR
Sacramento	SAYO222015	782	Sacramento	Cx. tarsalis	3	CO2	6/4/2013	WNV	RTPCR
Sacramento	SAYO222017	855	Sacramento	Cx. pipiens	15	GRVD	6/7/2013	WNV	RTPCR
Sacramento	SAYO222019	857	Sacramento	Cx. pipiens	29	CO2	6/7/2013	WNV	RTPCR
Sacramento	SAYO261003	1123	Isleton	Cx. pipiens	29	CO2	6/11/2013	WNV	RTPCR
Sutter	SUYA0014	32	Sutter	Cx. tarsalis	50	REST	6/10/2013	WNV	RTPCR
Tulare	TLRE0020	6	Tulare	Cx. tarsalis	17	CO2	6/12/2013	WNV	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.

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.

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 (WEEV), and St. Louis encephalitis (SLEV) 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 WEEV, SLEV, 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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