

California Arbovirus Surveillance Bulletin #15

Week 22 Friday, June 1, 2012



WEEKLY UPDATE

Human Cases

No human cases have been reported in 2012.

Horses

No equine cases have been reported in 2012.

Dead Birds & Squirrels

A total of 17 West Nile virus (WNV) positive dead birds were reported this week from four counties: Sacramento (12), Santa Clara (2), Stanislaus (1), and Yolo (2). This is the first indication of WNV activity in Stanislaus County this year. In 2012, 33 dead birds have tested positive for WNV from seven counties. An additional 15 dead birds have tested positive for chronic* WNV infection from four counties.

At this time last year, eight dead birds from four counties had tested positive for WNV.

**In 2010, The University of California, Center for Vectorborne Diseases (CVEC) and the California Department of Public Health, Vector-Borne Disease Section began differentiating between chronic and acute infections in WNV positive dead birds. Birds considered to have chronic infection with WNV are unlikely to have been infected recently with WNV and have limited surveillance utility.*

Mosquito Pools

A total of 22 WNV positive mosquito pools were reported this week from four counties: Kern (8), Riverside (7), Sacramento (6), and Yolo (1). This is the first indication of WNV activity in Kern County this year. In 2012, 30 mosquito pools from six counties have tested positive for WNV.

At this time last year, four mosquito pools had tested positive for WNV from three counties.

Sentinel Chickens

No seroconversions have been reported in 2012.

2011 & 2012 YTD West Nile Virus Comparisons		
	2011	2012
Total # Dead Bird Reports	2,622	3,361
# Positive Counties	6	11
# Human Cases	0	0
# Horse Cases	0	0
# Positive Dead Birds / # Tested	8 / 584	33 / 682
# Positive Mosquito Pools / # Tested	4 / 4,632	30 / 4,882
# Seroconversions / # Tested	0 / 4,574	0 / 3,735
# Positive Squirrels / # Tested	0 / 28	0 / 38

Website Information: For updated information on WNV in California, please visit the California WNV website, www.westmile.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.westmilemaps.usgs.gov

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YTD WNV Activity by Element and County, 2012

County	Humans	Horses	Dead Birds*	Mosquito Pools	Sentinel Chickens	Squirrels
Contra Costa			1			
Fresno				1		
Kern				8		
Los Angeles			2			
Riverside				8		
Sacramento			19	10		
San Bernardino				1		
San Joaquin			4			
Santa Clara			4			
Stanislaus			1			
Yolo			2	2		
Totals	0	0	33	30	0	0

*Total does not include chronic infections

TESTING SUMMARIES

Humans and Horses

		WNV		WEEV		SLEV	
		Local	Imported	Local	Imported	Local	Imported
Human Cases	Week	0	0	0	0	0	0
	YTD	0	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	103	17
	YTD	682	33
Tree Squirrels	Week	7	0
	YTD	38	0

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	819	0	0	0
	YTD	3,735	0	0	0
Mosquito Pools	Week	833	22	0	0
	YTD	4,882	30	0	0

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POSITIVES

Dead Birds

County	Submitting Agency	City	Zip	Species	Reported	Virus	Type of Infection	Method
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	Lesser Goldfinch	5/26/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	American Robin	5/16/12	WNV	Chronic	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	American Crow	5/28/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	American Crow	5/28/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95758	Western Scrub-Jay	5/29/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95815	Western Scrub-Jay	5/27/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95819	American Crow	5/27/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95819	American Crow	5/27/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95819	American Crow	5/28/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95826	Western Scrub-Jay	5/25/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	5/26/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95838	Yellow-billed Magpie	5/25/12	WNV	Recent	RT-PCR
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	5/29/12	WNV	Recent	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95117	American Crow	5/23/12	WNV	Recent	VecTest
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	5/24/12	WNV	Recent	VecTest
Shasta	Shasta MVCD	Redding	96002	Western Scrub-Jay	5/21/12	WNV	Chronic	RT-PCR
Stanislaus	East Side MAD	Modesto	95350	Western Scrub-Jay	5/21/12	WNV	Recent	RT-PCR
Stanislaus	East Side MAD	Modesto	95357	European Starling	5/21/12	WNV	Chronic	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	5/25/12	WNV	Recent	RT-PCR
Yolo	Sacramento-Yolo MVCD	Davis	95618	Western Scrub-Jay	5/29/12	WNV	Recent	RT-PCR

Mosquito Pools

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus	Method
Kern	KERN1005	266	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/21/12	WNV	RTPCR
Kern	KERN2002	351	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/24/12	WNV	RTPCR
Kern	KERN2016	300	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/22/12	WNV	RTPCR
Kern	KERN2016	302	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/22/12	WNV	RTPCR
Kern	KERN2016	303	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/22/12	WNV	RTPCR
Kern	KERN2016	304	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/22/12	WNV	RTPCR
Kern	KERN2018	315	Bakersfield	Cx. quinquefasciatus	24	GRVD	5/22/12	WNV	RTPCR
Kern	KERN2034	268	Bakersfield	Cx. quinquefasciatus	50	GRVD	5/21/12	WNV	RTPCR
Riverside	COAV116	1320	Mecca	Cx. tarsalis	42	CO2	5/22/12	WNV	RTPCR
Riverside	COAV123	1304	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Riverside	COAV13	1336	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Riverside	COAV46	1312	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Riverside	COAV57	1358	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Riverside	COAV58	1360	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Riverside	COAV58	1361	Mecca	Cx. tarsalis	50	CO2	5/22/12	WNV	RTPCR
Sacramento	SAYO233033	775	Sacramento	Cx. tarsalis	16	CO2	5/25/12	WNV	RTPCR
Sacramento	SAYO233061	771	Sacramento	Cx. pipiens	2	GRVD	5/25/12	WNV	RTPCR
Sacramento	SAYO233070	772	Sacramento	Cx. tarsalis	50	CO2	5/25/12	WNV	RTPCR
Sacramento	SAYO233070	773	Sacramento	Cx. tarsalis	49	CO2	5/25/12	WNV	RTPCR
Sacramento	SAYO233070	774	Sacramento	Cx. pipiens	44	CO2	5/25/12	WNV	RTPCR
Sacramento	SAYO234010	783	Sacramento	Cx. tarsalis	19	CO2	5/25/12	WNV	RTPCR
Yolo	SAYO145017	791	Davis	Cx. tarsalis	4	CO2	5/25/12	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.
