

California Arbovirus Surveillance Bulletin #14

Week 21 Friday, May 23, 2014



WEEKLY UPDATE

Humans

No human cases or asymptomatic infections have been reported in 2014.

Dead Birds

A total of 15 West Nile virus (WNV) positive dead birds were reported this week from the following five counties: Contra Costa (1), Sacramento (1), Santa Clara (10), Solano (1), and Tulare (2). **These are the first indications of WNV activity in Sacramento and Solano counties this year.** To date this year, 33 birds have tested positive for WNV from nine counties. At this time last year, two WNV dead positive birds had been detected in Los Angeles and Yuba counties.

Mosquito Pools

This week, 11 WNV positive mosquito pools were reported from the following three counties: San Bernardino (1), Santa Clara (2), and Tulare (8). These are the first WNV positive mosquito pools from Santa Clara and Tulare counties this year. In 2014, 18 mosquito pools from five counties have tested positive for WNV. At this time last year, nine WNV positive mosquito pools had been reported from four counties.

Sentinel Chickens

No seroconversions were reported this week. To date this year, one WNV positive chicken has been reported from Los Angeles County. At this time last year, no seroconversions had been detected.

2013 & 2014 YTD West Nile Virus Comparisons		
	2013	2014
Total # Dead Bird Reports	3,026	2,258
# Positive Counties	5	7
# Human Cases	0	0
# Positive Dead Birds / # Tested	2 / 528	33 / 313
# Positive Mosquito Pools / # Tested	9 / 3,126	18 / 3,283
# Seroconversions / # Tested	0 / 2,960	1 / 2,857

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YTD Activity by Element and County, 2014				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Contra Costa		2		
Fresno		1		
Lake		3		
Los Angeles		2	1	1
Sacramento		1		
San Bernardino			6	
San Joaquin		1		
Santa Clara		17	2	
Solano		1		
Sonoma			1	
Tulare		5	8	
Totals	0	33	18	1

TESTING SUMMARIES

Humans

		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

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	94	15
	YTD	313	33

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	807	0	0	0
	YTD	2,857	1	0	0
Mosquito Pools	Week	802	11	0	0
	YTD	3,283	18	0	0

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Dead Birds

County	Agency	City	Zip	Species	Reported	Virus	Method
Contra Costa	Contra Costa MVCD	Pleasant Hill	94523	American Crow	5/18/2014	WNV	RAMP
Sacramento	Sacramento-Yolo MVCD	Sacramento	95823	American Crow	5/14/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	5/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	5/21/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	5/20/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	American Crow	5/16/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	Campbell	95008	American Crow	5/20/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95124	Western Scrub-Jay	5/15/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	5/20/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95125	American Crow	5/20/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95130	American Crow	5/20/2014	WNV	RT-PCR
Santa Clara	Santa Clara Co VCD	San Jose	95148	American Crow	5/20/2014	WNV	RT-PCR
Solano	Solano Co MAD	Fairfield	94533	American Crow	5/12/2014	WNV	RAMP
Tulare	Delta VCD	Visalia	93277	American Crow	5/17/2014	WNV	RT-PCR
Tulare	Delta VCD	Visalia	93292	Brewer's Blackbird	5/22/2014	WNV	RT-PCR

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap	Collected	Virus	Method
San Bernardino	WVAL6004	418	Cx. quinquefasciatus	Ontario	50	GRVD	5/15/2014	WNV	RTPCR
Santa Clara	STCL0171	5128	Cx. tarsalis		25	CO2	5/15/2014	WNV	RTPCR
Santa Clara	STCL0600	5116	Cx. tarsalis	San Jose	21	CO2	5/15/2014	WNV	RTPCR
Tulare	DLTA8436	110	Cx. quinquefasciatus	Visalia	23	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA8529	103	Cx. quinquefasciatus	Visalia	50	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA8531	106	Cx. quinquefasciatus	Visalia	45	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA8532	120	Cx. quinquefasciatus	Visalia	8	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA9504	100	Cx. quinquefasciatus	Visalia	20	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA9504	101	Cx. quinquefasciatus	Visalia	25	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA9504	102	Cx. quinquefasciatus	Visalia	42	GRVD	5/20/2014	WNV	RTPCR
Tulare	DLTA9506	109	Cx. quinquefasciatus	Visalia	50	GRVD	5/20/2014	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

Oral swab samples from corvids are collected onto RNase cards and tested by the UC Davis Center for Vectorborne Diseases (CVEC) for West Nile virus by 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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