

California Arbovirus Surveillance Bulletin #7

Week 20 Friday, May 19, 2017



Weekly Update

Humans

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

Dead Birds

One positive dead bird was reported this week from Sacramento County. To date this year, four birds from four counties have tested positive for West Nile virus (WNV). At this time last year, 25 WNV positive birds had been reported from 6 counties.

Mosquito Pools

Three WNV positive mosquito pools were reported this week from San Bernardino (1) and Tulare (2) counties. **This is the first detection of WNV activity in San Bernardino County in 2017.** To date this year, eight WNV positive mosquito pools have been reported from four counties. At this time last year, 19 WNV positive mosquito pools had been reported from six counties, and three SLEV positive mosquitoes pools had been reported from one county.

Sentinel Chickens

No seroconversions have been reported in 2017.

2016 & 2017 YTD West Nile Virus Comparisons		
	2016	2017
Total # Dead Bird Reports	1,890	1,598
# Positive Counties	9	9
# Human Cases	0	1
# Positive Dead Birds / # Tested	25 / 312	4 / 285
# Positive Mosquito Pools / # Tested	19 / 6,660	8 / 7,012
# Seroconversions / # Tested	0 / 893	0 / 1,590

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YTD WNV Activity by Element and County, 2017				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Kings	1			
Los Angeles			1	
Orange		1		
Riverside			1	
Sacramento		1		
San Bernardino			1	
San Diego		1		
San Mateo		1		
Tulare			5	
Totals	1	4	8	0

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
Human Cases	Week	0	0	0
	YTD	1	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	111	1
	YTD	285	4

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	529	0	0	0
	YTD	1,590	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	3 / 726	0 / 725	0 / 628	0 / 33	0 / 33	0 / 33
		YTD	8 / 7,002	0 / 6,819	0 / 6,240	0 / 212	0 / 212	0 / 212

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New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus	Test Result
Sacramento	Sacramento-Yolo MVCD	Folsom	95630	Red-shouldered Hawk	5/7/2017	WNV	Positive

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
San Bernardino	WVAL9003	808	<i>Cx. quinquefasciatus</i>	Upland	25	GRVD	5/18/2017	WNV
Tulare	DLTA8528	392	<i>Cx. quinquefasciatus</i>	Visalia	47	GRVD	5/17/2017	WNV
Tulare	DLTA9505	180	<i>Cx. quinquefasciatus</i>	Visalia	50	GRVD	5/5/2017	WNV

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.

Dead Birds

Oral swab samples from corvids are collected onto RNA preservation 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. Some local agencies test birds using the RAMP© test or conduct RT-PCR on tissue samples.

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, and St. Louis encephalitis viruses by EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are submitted to CVEC and screened for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a Taqman multiplex RT-PCR. CVEC no longer performs confirmatory 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.

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) 412-6253 or email: tina.feiszli@cdph.ca.gov.