

# California Arbovirus Surveillance Bulletin #11

Week 20 Friday, May 20, 2016



## Weekly Update

### Humans

No human cases have been reported in 2016.

### Dead Birds

This week, a total of 60 dead birds were tested from 16 counties. Four dead birds tested positive for West Nile virus (WNV) from Orange (2) and San Diego (2) counties. **These are the first WNV positive dead birds from Orange County this year.** In 2016, 25 dead birds have tested positive for WNV from six counties, whereas at this time last year, 39 WNV positive birds had been reported from seven counties.

### Mosquito Pools

A total of 12 WNV positive mosquito pools were reported this week from the following four counties: Orange (2), Riverside (1), San Bernardino (5), and Tulare (4). **This is the first detection of WNV activity in Orange, San Bernardino, and Tulare counties in 2016.** To date this year, 19 mosquito pools have tested positive for WNV from six counties, whereas at this time last year, 25 WNV positive mosquito pools had been reported from five counties.

**A total of three mosquito pools tested positive for St. Louis encephalitis virus (SLEV) from Kern County. This is the first detection of SLEV activity in California this year and the first detection of SLEV in Kern County since 1992.** Prior to the introduction of WNV into California in 2003, SLEV was commonly detected in mosquitoes and sentinel chickens but seemingly disappeared until 2015, when it was detected in both mosquito and sentinel chicken samples from the Coachella Valley in Riverside County.

### Sentinel Chickens

This week, a total of 391 sentinel chicken blood samples were tested from 14 counties; no positives were detected. To date this year, no seroconversions have been reported.

2015 & 2016 YTD West Nile Virus Comparisons		
	2015	2016
Total # Dead Bird Reports	2,865	1,890
# Positive Counties	10	9
# Human Cases	0	0
# Positive Dead Birds / # Tested	39 / 522	25 / 312
# Positive Mosquito Pools / # Tested	25 / 4,285	19 / 6,660
# Seroconversions / # Tested	0 / 2,113	0 / 893

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YTD WNV Activity by Element and County, 2016				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Los Angeles		2	3	
Orange		2	2	
Riverside			3	
Sacramento		1		
San Bernardino			5	
San Diego		16	2	
Santa Clara		3		
Solano		1		
Tulare			4	
<b>Totals</b>	<b>0</b>	<b>25</b>	<b>19</b>	<b>0</b>

## TESTING SUMMARIES

### Humans

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

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	60	4
	YTD	312	25

### Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	391	0	0	0
	YTD	893	0	0	0
Mosquito Pools	Week	2,157	12	3	0
	YTD	6,660	19	3	0

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## NEW POSITIVES

### Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Orange	Orange Co VCD	Orange	92867	American Crow	5/10/2016	WNV
Orange	Orange Co VCD	Yorba Linda	92886	Mallard	5/16/2016	WNV
San Diego	San Diego Co VCP	San Diego	92128	American Crow	5/16/2016	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	5/16/2016	WNV

### Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Kern	KERN2020	54	Cx. quinquefasciatus	Bakersfield	25	GRVD	5/11/16	SLEV
Kern	KERN2027	52	Cx. quinquefasciatus	Bakersfield	28	GRVD	5/11/16	SLEV
Kern	KERN2028	53	Cx. quinquefasciatus	Bakersfield	33	GRVD	5/11/16	SLEV
Orange	ORCO198	569	Cx. quinquefasciatus	La Habra	28	GRVD	5/6/16	WNV
Orange	ORCO7	585	Cx. quinquefasciatus	Seal Beach	50	GRVD	5/10/16	WNV
Riverside	COAV208	1764	Cx. quinquefasciatus	Palm Springs	41	GRVD	5/19/16	WNV
San Bernardino	WVAL2022	625	Cx. quinquefasciatus	Fwy CA 60	18	GRVD	5/11/16	WNV
San Bernardino	WVAL5004	513	Cx. quinquefasciatus	Rancho Cucamonga	25	GRVD	5/4/16	WNV
San Bernardino	WVAL6015	606	Cx. quinquefasciatus	Ontario	29	GRVD	5/11/16	WNV
San Bernardino	WVAL6015	608	Cx. quinquefasciatus	Ontario	25	GRVD	5/11/16	WNV
San Bernardino	WVAL6015	609	Cx. quinquefasciatus	Ontario	25	GRVD	5/11/16	WNV
Tulare	DLTA6408	244	Cx. quinquefasciatus	Dinuba	11	GRVD	5/5/16	WNV
Tulare	DLTA8530	234	Cx. quinquefasciatus	Visalia	31	GRVD	5/5/16	WNV
Tulare	DLTA9401	241	Cx. quinquefasciatus	Visalia	25	GRVD	5/5/16	WNV
Tulare	DLTA9610	249	Cx. quinquefasciatus	Exeter	46	GRVD	5/6/16	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.

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### **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.

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### **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.

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*Website Information: For updated information on WNV in California, please visit the California WNV website, [www.westmile.ca.gov](http://www.westmile.ca.gov), or the California Vectorborne Disease Surveillance System website, [www.calsurv.org](http://www.calsurv.org). For national information on WNV and other arboviruses, please visit the CDC website, [www.cdc.gov](http://www.cdc.gov), and the USGS website, [www.westmilemaps.usgs.gov](http://www.westmilemaps.usgs.gov)*

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