

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017



Weekly Update

Humans

A total of 37 new human cases of West Nile virus (WNV) illness were reported this week from the following 9 counties: Contra Costa (2), Fresno (1), Inyo (1), Kern (3), Los Angeles (16), Orange (6), Riverside (3), San Bernardino (2), and Stanislaus (3). **These are the first human cases reported from Contra Costa County in 2017.** To date this year, 211 human cases of WNV illness have been reported from 18 counties. Of the 211 case-patients, 165 (78%) had neuroinvasive disease and 8 fatalities have been reported from Kern (1), Los Angeles (4), San Bernardino (1), and Yolo (2) counties. The median age of the individuals is 62 years (range: 4–93 years) and 141 (67%) are male. Dates of symptom onset ranged from March 16 to September 17. In addition to the 211 symptomatic cases, 23 asymptomatic WNV-positive blood donors have been reported from Fresno (1), Humboldt (1), Los Angeles (7), Orange (5), Placer (1), San Bernardino (6), and Stanislaus (2) counties. As of this date in 2016, 276 human WNV cases had been reported from 28 counties.

Dead Birds

A total of 33 WNV positive dead birds were reported this week from the following 13 counties: Butte (1), Contra Costa (5), El Dorado (1), Lake (1), Los Angeles (8), Orange (3), Placer (1), Riverside (3), Sacramento (2), San Bernardino (2), San Diego (4), San Luis Obispo (1), and Sutter (1). **This is the first detection of WNV in San Luis Obispo County in 2017.** To date this year, 428 birds from 37 counties have tested positive for WNV. As of this date in 2016, 1,288 WNV positive birds had been reported from 33 counties.

Mosquito Pools

West Nile Virus

A total of 66 WNV positive mosquito pools were reported this week from the following 13 counties: Contra Costa (1), Fresno (3), Inyo (1), Los Angeles (23), Orange (8), Placer (3), Riverside (2), Sacramento (8), San Bernardino (2), San Joaquin (4), Stanislaus (6), Tulare (4), and Yolo (1). To date this year, 3,182 WNV positive mosquito pools have been reported from 26 counties. As of this date in 2016, 3,360 WNV positive mosquito pools had been reported from 30 counties.

St. Louis Encephalitis Virus

A total of 14 mosquito pools tested positive for St. Louis encephalitis virus (SLEV) this week from 4 counties: Fresno (2), Kern (2), Stanislaus (9), and Tulare (1). To date this year, 166 SLEV positive mosquito pools have been reported from 13 counties: Butte (1), Fresno (60), Imperial (3), Kern (18), Kings (20), Los Angeles (1), Madera (4), Merced (2), Placer (1), Riverside (23), Stanislaus (27), Tulare (5), and Yuba (1). As of this date in 2016, 170 SLEV positive mosquito pools had been reported from 8 counties.

Sentinel Chickens

West Nile Virus

A total of 29 WNV seroconversions were reported this week from 10 counties: Butte (2), Contra Costa (1), Lake (1), Los Angeles (3), Placer (2), Shasta (4), Solano (6), Sutter (3), Tehama (4), and Yuba (3). **These are the first WNV positive chickens reported from Shasta and Tehama counties in 2017.** To date this year, 264 WNV seroconversions have been reported from 16 counties. As of this date in 2016, 301 WNV seroconversions had been detected from 17 counties.

St. Louis Encephalitis Virus

One SLEV seroconversion was reported this week from Los Angeles County; **this is the first SLEV positive chicken detected in Los Angeles County in 2017.** To date this year, 8 SLEV positive chickens have been reported from Los Angeles (1), Merced (1), and San Bernardino (6) counties. As of this date in 2016, 3 SLEV seroconversions had been detected in 2 counties.

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

YTD WNV Activity by Element and County, 2017					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			1		
Butte	2		5	46	31
Colusa			1		
Contra Costa	2	1	16	7	5
El Dorado			2		
Fresno	3	1	5	166	
Glenn		1	2	12	1
Humboldt			1		
Imperial	1				
Inyo	4			9	
Kern	17	2	3	150	
Kings	1		1	78	
Lake			4	17	2
Lassen		1			
Los Angeles	96		84	494	117
Madera			1	60	
Merced			1	39	19
Monterey			1		
Nevada			1		
Orange	20		47	237	
Placer			3	56	4
Plumas		1			
Riverside	11	4	39	192	
Sacramento	1		77	148	2
San Benito					1
San Bernardino	24		41	285	35
San Diego			32	5	
San Francisco	1		1		
San Joaquin	9	1	6	236	
San Luis Obispo			1		
San Mateo			1		
Santa Clara			7		
Santa Cruz			1		
Shasta			2		4
Solano			2	6	9
Sonoma			3	1	
Stanislaus	11		6	193	
Sutter	1		3	16	21
Tehama		1			4
Tulare	4		8	628	
Ventura			1	2	
Yolo	3		12	81	1
Yuba			6	18	8
Totals	211	13	428	3,182	264

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

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

2016 & 2017 YTD West Nile Virus Comparisons		
	2016	2017
Total # Dead Bird Reports	8,396	6,569
# Positive Counties	37	43
# Human Cases	276	211
# Positive Dead Birds / # Tested	1,288 / 2,629	428 / 1,711
# Positive Mosquito Pools / # Tested	3,360 / 38,647	3,182 / 38,452
# Seroconversions / # Tested	301 / 8,975	264 / 9,470

TESTING SUMMARIES

Humans

		WNV	SLE	WEE
	Week	37	0	0
	YTD	211	0	0

Dead Birds

		Number Tested	WNV Positive
	Week	61	33
	YTD	1,711	428

Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
	Week	383	29	1	0
	YTD	9,470	264	8	0

Mosquitoes

		Positive / Total Tested					
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA
		66 / 1,490	14 / 1,138	0 / 1,138	0 / 0	0 / 0	0 / 0
		3,182 / 38,452	166 / 31,384	0 / 29,592	0 / 1,220	0 / 1,220	0 / 1,220

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

New Positives

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Butte	Butte Co MVCD	Chico	95928	American Crow	9/20/2017	WNV
Contra Costa	Contra Costa MVCD	Martinez	94553	Western Scrub-Jay	9/27/2017	WNV
Contra Costa	Contra Costa MVCD	Pleasant Hill	94523	American Crow	9/27/2017	WNV
Contra Costa	Contra Costa MVCD	Walnut Creek	94596	American Crow	9/24/2017	WNV
Contra Costa	Contra Costa MVCD	Walnut Creek	94598	American Crow	9/21/2017	WNV
Contra Costa	Contra Costa MVCD	Walnut Creek	94598	Western Scrub-Jay	9/27/2017	WNV
El Dorado	El Dorado Co Env Management	Garden Valley	95633	Acorn Woodpecker	9/24/2017	WNV
Lake	Lake Co VCD	Lower Lake	95457	Cooper's Hawk	9/25/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Agoura Hills	91301	American Crow	9/26/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Granada Hills	91334	American Crow	9/20/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Los Angeles	90066	Common Raven	9/26/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90404	American Crow	9/20/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90404	American Crow	9/22/2017	WNV
Los Angeles	Los Angeles Co Veterinarian	Santa Monica	90405	American Crow	9/20/2017	WNV
Los Angeles	San Gabriel Valley MVCD	Altadena	91001	Western Scrub-Jay	9/18/2017	WNV
Los Angeles	San Gabriel Valley MVCD	Covina	91722	American Crow	9/14/2017	WNV
Orange	Orange Co VCD	Fountain Valley	92708	American Crow	9/18/2017	WNV
Orange	Orange Co VCD	Garden Grove	92840	American Crow	9/20/2017	WNV
Orange	Orange Co VCD	Placentia	92870	American Crow	9/14/2017	WNV
Placer	Placer MVCD	Granite Bay	95746	Western Scrub-Jay	9/24/2017	WNV
Riverside	Northwest Mosquito VCD	Corona	92882	Sparrow	9/14/2017	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	9/15/2017	WNV
Riverside	Northwest Mosquito VCD	Norco	92860	American Crow	9/21/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Courtland	95615	Western Scrub-Jay	9/22/2017	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	Western Scrub-Jay	9/22/2017	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	9/20/2017	WNV
San Bernardino	San Bernardino VCP	Yucaipa	92399	American Crow	9/21/2017	WNV
San Diego	San Diego Co VCP	Aguanga	92536	American Crow	9/25/2017	WNV
San Diego	San Diego Co VCP	Alpine	91901	American Crow	9/25/2017	WNV
San Diego	San Diego Co VCP	Carlsbad	92011	American Crow	9/25/2017	WNV
San Diego	San Diego Co VCP	jamul	91935	American Crow	9/25/2017	WNV
San Luis Obispo	San Luis Obispo Public Health Lab	Atascadero	93422	Western Scrub-Jay	9/18/2017	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95993	American Crow	9/19/2017	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Contra Costa	CNTR2616	459	Cx. tarsalis	Knightsen	50	CO2	9/26/17	WNV
Fresno	FRWS300013	591	Cx. quinquefasciatus	Firebaugh	50	BGSENT	9/20/17	WNV
Fresno	FRWS410001	618	Cx. quinquefasciatus	Kerman	36	GRVD	9/26/17	SLEV
Fresno	FRWS410001	618	Cx. quinquefasciatus	Kerman	36	GRVD	9/26/17	WNV
Fresno	FRWS4102	613	Cx. quinquefasciatus	Kerman	50	CO2	9/26/17	SLEV

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

Fresno	FRWS5103	619	Cx. tarsalis	Tranquility	12	OTHER	9/26/17	WNV
Inyo	INYO1008	94	Cx. tarsalis	Lone Pine	30	CO2	9/19/17	WNV
Kern	DLNO102	246	Cx. quinquefasciatus	McFarland	20	GRVD	9/22/17	SLEV
Kern	DLNO62	240	Cx. quinquefasciatus	McFarland	50	CO2	9/21/17	SLEV
Los Angeles	GRLA2247	821	Cx. quinquefasciatus	Pico Rivera	50	GRVD	9/22/17	WNV
Los Angeles	GRLA2419	5780	Cx. quinquefasciatus	Panorama City	50	GRVD	9/20/17	WNV
Los Angeles	GRLA2552	5787	Cx. quinquefasciatus	Glendale	12	GRVD	9/21/17	WNV
Los Angeles	GRLA2637	5778	Cx. quinquefasciatus	Van Nuys	26	CO2	9/20/17	WNV
Los Angeles	GRLA2651	5775	Cx. quinquefasciatus	Encino	44	CO2	9/20/17	WNV
Los Angeles	GRLA2889	806	Cx. quinquefasciatus	Lakewood	48	GRVD	9/21/17	WNV
Los Angeles	GRLA2890	807	Cx. quinquefasciatus	Lakewood	50	GRVD	9/21/17	WNV
Los Angeles	GRLA2952	810	Cx. quinquefasciatus	South Whittier	48	GRVD	9/22/17	WNV
Los Angeles	GRLA2953	813	Cx. quinquefasciatus	Santa Fe Springs	50	GRVD	9/22/17	WNV
Los Angeles	GRLA2955	815	Cx. quinquefasciatus	Cerritos	33	GRVD	9/22/17	WNV
Los Angeles	GRLA2957	803	Cx. quinquefasciatus	Hawaiian Gardens	50	GRVD	9/21/17	WNV
Los Angeles	GRLA3034	5783	Cx. quinquefasciatus	North Hills	18	GRVD	9/20/17	WNV
Los Angeles	GRLA3035	5782	Cx. quinquefasciatus	North Hills	50	GRVD	9/20/17	WNV
Los Angeles	GRLA3047	789	Cx. quinquefasciatus	Downey	50	GRVD	9/20/17	WNV
Los Angeles	GRLA3049	801	Cx. quinquefasciatus	Downey	40	GRVD	9/20/17	WNV
Los Angeles	GRLA3051	805	Cx. quinquefasciatus	Signal Hill	50	GRVD	9/21/17	WNV
Los Angeles	GRLA3054	800	Cx. quinquefasciatus	Bell Gardens	50	GRVD	9/20/17	WNV
Los Angeles	GRLA3055	798	Cx. quinquefasciatus	Maywood	42	GRVD	9/20/17	WNV
Los Angeles	GRLA3056	796	Cx. quinquefasciatus	Cudahy	50	GRVD	9/20/17	WNV
Los Angeles	GRLA3058	793	Cx. quinquefasciatus	Lynwood	50	GRVD	9/20/17	WNV
Los Angeles	GRLA3060	814	Cx. quinquefasciatus	Norwalk	44	GRVD	9/22/17	WNV
Los Angeles	LACW1004	320	Cx. quinquefasciatus	Lawndale	34	GRVD	9/19/17	WNV
Los Angeles	SGVA16	2251	Cx. quinquefasciatus	Monterey Park	8	BGSENT	9/18/17	WNV
Orange	ORCO1020	4143	Cx. quinquefasciatus	Seal Beach	50	GRVD	9/19/17	WNV
Orange	ORCO1037	4217	Cx. quinquefasciatus	La Habra	23	GRVD	9/21/17	WNV
Orange	ORCO1042	4197	Cx. quinquefasciatus	Yorba Linda	29	GRVD	9/20/17	WNV
Orange	ORCO18	4148	Cx. quinquefasciatus	Lake Forest	41	GRVD	9/19/17	WNV
Orange	ORCO202	4240	Cx. quinquefasciatus	Fullerton	49	GRVD	9/21/17	WNV
Orange	ORCO236	4228	Cx. quinquefasciatus	Garden Grove	11	GRVD	9/21/17	WNV
Orange	ORCO29	4169	Cx. quinquefasciatus	Santa Ana	42	CO2	9/20/17	WNV
Orange	ORCO52	4208	Cx. quinquefasciatus	Anaheim	5	GRVD	9/21/17	WNV
Placer	PLCR1070	2220	Cx. tarsalis	Roseville	50	OTHER	9/26/17	WNV
Placer	PLCR197207	2260	Cx. tarsalis		50	CO2	9/28/17	WNV
Placer	PLCR516	2228	Cx. tarsalis	Roseville	24	CO2	9/26/17	WNV
Riverside	NWST145	337	Cx. quinquefasciatus	Riverside	37	CO2	9/13/17	WNV
Riverside	NWST26	334	Cx. tarsalis	Corona	45	CO2	9/13/17	WNV
Sacramento	SAYO232012	6359	Cx. pipiens	Elk Grove	41	CO2	9/26/17	WNV
Sacramento	SAYO232029	6186	Cx. tarsalis	Elk Grove	50	CO2	9/22/17	WNV
Sacramento	SAYO232029	6188	Cx. tarsalis	Elk Grove	50	CO2	9/22/17	WNV
Sacramento	SAYO232029	6190	Cx. tarsalis	Elk Grove	22	CO2	9/22/17	WNV
Sacramento	SAYO233009	6361	Cx. tarsalis	Elk Grove	34	CO2	9/26/17	WNV
Sacramento	SAYO243032	6424	Cx. pipiens	Elk Grove	50	CO2	9/26/17	WNV
Sacramento	SAYO244007	6207	Cx. pipiens	Wilton	50	CO2	9/22/17	WNV
Sacramento	SAYO255007	6198	Cx. tarsalis	Herald	50	CO2	9/22/17	WNV
San Bernardino	SANB164	1029	Cx. stigmatosoma	Colton	9	CO2	9/20/17	WNV
San Bernardino	WVAL7002	2152	Cx. quinquefasciatus	Montclair	25	GRVD	9/19/17	WNV
San Joaquin	SJCM8206	2694	Cx. tarsalis	Lodi	100	CO2	9/25/17	WNV
San Joaquin	SJCM8206	2695	Cx. tarsalis	Lodi	100	CO2	9/25/17	WNV
San Joaquin	SJCM8206	2696	Cx. tarsalis	Lodi	100	CO2	9/25/17	WNV
San Joaquin	SJCM8206	2699	Cx. pipiens	Lodi	100	CO2	9/25/17	WNV

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

Stanislaus	TRLK1616	1239	Cx. pipiens	Modesto	50	CO2	9/26/17	WNV
Stanislaus	TRLK1673	1188	Cx. pipiens	Patterson	50	CO2	9/26/17	WNV
Stanislaus	TRLK1712	1250	Cx. tarsalis	Newman	22	CO2	9/26/17	SLEV
Stanislaus	TRLK17252	1148	Cx. pipiens	Denair	50	CO2	9/26/17	WNV
Stanislaus	TRLK312	1128	Cx. tarsalis	Newman	50	CO2	9/21/17	WNV
Stanislaus	TRLK312	1199	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK312	1203	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK312	1204	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK312	1207	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK312	1207	Cx. tarsalis	Newman	50	CO2	9/26/17	WNV
Stanislaus	TRLK312	1214	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK312	1215	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK548	1222	Cx. tarsalis	Newman	50	CO2	9/27/17	SLEV
Stanislaus	TRLK548	1223	Cx. tarsalis	Newman	50	CO2	9/26/17	SLEV
Stanislaus	TRLK9732	1233	Cx. tarsalis	Newman	50	CO2	9/26/17	WNV
Tulare	DLNO96	243	Cx. quinquefasciatus	Earlimart	50	CO2	9/21/17	SLEV
Tulare	DLTA8413	2763	Cx. quinquefasciatus	Visalia	38	CO2	9/21/17	WNV
Tulare	DLTA8419	2807	Cx. quinquefasciatus	Goshen	27	GRVD	9/27/17	WNV
Tulare	DLTA9412	2782	Cx. quinquefasciatus	Visalia	30	GRVD	9/21/17	WNV
Tulare	DLTA9512	2758	Cx. quinquefasciatus	Farmersville	50	GRVD	9/20/17	WNV
Yolo	SAYO135006	6282	Cx. pipiens	Woodland	7	GRVD	9/26/17	WNV

Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03	Band 04
Butte	BUCO0002	Oroville	9/19/2017	WNV	1131			
Butte	BUCO0004	Gridley	9/19/2017	WNV	1139			
Contra Costa	CNTR2302	Martinez	9/18/2017	WNV	1249			
Lake	LAKE1000	Upper Lake	9/19/2017	WNV	1299			
Los Angeles	ANTV7263	Lancaster	9/13/2017	WNV	1070			
Los Angeles	ANTV7263	Lancaster	9/13/2017	SLEV	1074			
Los Angeles	LACW1025	Westlake Village	9/20/2017	WNV	2606	2607		
Placer	PLCR0757	Auburn	9/21/2017	WNV	1439	1440		
Shasta	SHAS9702	Millville	9/21/2017	WNV	2961	2962	2993	2994
Solano	SOLA0125	Cordelia	9/18/2017	WNV	1678	1679	1682	
Solano	SOLA0015	Winters	9/18/2017	WNV	1663	1664	1670	
Sutter	SUYA0014	Sutter	9/21/2017	WNV	1745			
Sutter	SUYA0015	Robbins	9/21/2017	WNV	1730			
Sutter	SUYA0084	Yuba City	9/21/2017	WNV	1702			
Tehama	TEHA0001	Red Bluff	9/19/2017	WNV	1811	1814	1816	1817
Yuba	SUYA0010	Olivehurst	9/21/2017	WNV	1715	1720	1721	

California Arbovirus Surveillance Bulletin #26

Week 39 Friday, September 29, 2017

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 Arbovirus Research and Training laboratory (DART) for West Nile virus by the singleplex qRT-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 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 submitted to DART are tested for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex qRT-PCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested for chikungunya, dengue, and Zika viral RNA by a separate qRT-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.