

California Arbovirus Surveillance Bulletin #19

Week 27 Friday, July 10, 2015



Weekly Update

Humans

No human infections have been reported in 2015. At this time last year, three human cases of West Nile virus (WNV) had been reported from three counties.

Dead Birds

A total of 40 WNV positive dead birds were reported this week from the following 12 counties: Orange (3), Sacramento (6), San Bernardino (1), San Diego (14), San Joaquin (3), Santa Clara (1), Shasta (1), Solano (2), Stanislaus (2), Sutter (5), Tulare (1), and Yuba (1). **This is the first WNV positive dead bird from San Bernardino County this year.** In 2015, 152 birds have tested positive for WNV from 25 counties. At this time last year, 392 WNV positive birds had been detected in 21 counties.

Mosquito Pools

A total of 108 WNV positive mosquito pools were reported this week from the following 16 counties: Butte (12), Fresno (2), Kern (8), Kings (1), Los Angeles (3), Orange (5), Placer (5), Riverside (3), Sacramento (7), San Bernardino (1), San Joaquin (8), Stanislaus (6), Sutter (10), Tulare (24), Yolo (10), and Yuba (3). **These are the first WNV positive mosquito pools detected in Stanislaus County this year.** In 2015, 348 WNV positive mosquito pools have been reported from 21 counties. At this time last year, 330 WNV positive mosquito pools had been detected from 23 counties.

Sentinel Chickens

No new seroconversions were reported this week. In 2015, three WNV positive chickens have been reported from two counties. At this time last year, three WNV seroconversions had been reported from three counties.

2014 & 2015 YTD West Nile Virus Comparisons		
	2014	2015
Total # Dead Bird Reports	4,981	5,123
# Positive Counties	25	31
# Human Cases	3	0
# Positive Dead Birds / # Tested	392 / 1,085	152 / 1,179
# Positive Mosquito Pools / # Tested	330 / 9,467	348 / 12,897
# Seroconversions / # Tested	3 / 5,970	3 / 5,661

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YTD Activity by Element and County, 2015				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda		2		
Butte		1	15	
Contra Costa			2	
El Dorado		1		
Fresno			6	
Glenn		1		
Kern			15	
Kings		1	8	
Los Angeles		2	6	
Madera		1		
Marin		1		
Merced			1	
Orange		4	8	
Placer			10	2
Riverside		5	60	
Sacramento		11	13	
San Bernardino		1	2	
San Diego		49	3	
San Joaquin		4	36	
San Mateo		3		
Santa Barbara			1	
Santa Clara		23		
Shasta		3	1	1
Solano		3		
Sonoma		2		
Stanislaus		6	6	
Sutter		8	15	
Tulare		13	117	
Ventura		1		
Yolo		3	13	
Yuba		3	10	
Totals	0	152	348	3

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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	98	40
	YTD	1,179	152

Chickens & Mosquitoes

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	644	0	0	0
	YTD	5,661	3	0	0
Mosquito Pools	Week	1,353	108	0	0
	YTD	12,897	348	0	0

NEW POSITIVES

Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Orange	Orange Co VCD	Anaheim	92807	American Crow	6/24/2015	WNV
Orange	Orange Co VCD	Yorba Linda	92886	Western Scrub-Jay	6/29/2015	WNV
Orange	Orange Co VCD	Yorba Linda	92886	Western Scrub-Jay	6/29/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95610	Western Scrub-Jay	7/9/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	Western Scrub-Jay	7/1/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95621	Western Scrub-Jay	7/6/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Rancho Cordova	95670	Western Scrub-Jay	7/9/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95822	Western Scrub-Jay	6/30/2015	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	American Crow	7/4/2015	WNV
San Bernardino	San Bernardino VCP	Fontana	92335	American Crow	7/6/2015	WNV
San Diego	San Diego Co VCP	El Cajon	92020	American Crow	7/2/2015	WNV
San Diego	San Diego Co VCP	La Mesa	91941	American Crow	6/29/2015	WNV
San Diego	San Diego Co VCP	La Mesa	91941	Cooper's Hawk	7/2/2015	WNV
San Diego	San Diego Co VCP	Oceanside	92054	American Crow	6/29/2015	WNV
San Diego	San Diego Co VCP	Oceanside	92054	American Crow	7/2/2015	WNV
San Diego	San Diego Co VCP	Oceanside	92054	American Crow	7/6/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	7/1/2015	WNV
San Diego	San Diego Co VCP	Ramona	92065	American Crow	7/1/2015	WNV

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San Diego	San Diego Co VCP	San Diego	92105	American Crow	7/1/2015	WNV
San Diego	San Diego Co VCP	San Diego	92124	American Crow	7/6/2015	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	6/29/2015	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	6/29/2015	WNV
San Diego	San Diego Co VCP	San Diego	92130	American Crow	6/29/2015	WNV
San Diego	San Diego Co VCP	Spring Valley	91977	American Crow	7/2/2015	WNV
San Joaquin	San Joaquin Co MVCD	Lodi	95242	Snowy Egret	7/9/2015	WNV
San Joaquin	San Joaquin Co MVCD	Manteca	95336	Western Scrub-Jay	7/8/2015	WNV
San Joaquin	San Joaquin Co MVCD	Manteca	95336	Western Scrub-Jay	7/9/2015	WNV
Santa Clara	Santa Clara Co VCD	Los Altos	94024	Western Scrub-Jay	6/29/2015	WNV
Shasta	Shasta MVCD	Shasta	96001	Western Scrub-Jay	7/7/2015	WNV
Solano	Solano Co MAD	Benicia	94510	American Crow	7/6/2015	WNV
Solano	Solano Co MAD	Dixon	95620	Western Scrub-Jay	7/2/2015	WNV
Stanislaus	East Side MAD	Modesto	95350	Western Scrub-Jay	7/6/2015	WNV
Stanislaus	Turlock MAD	Crows Landing Rd.	95313	Unknown	7/8/2015	WNV
Sutter	Sutter-Yuba MVCD	Sutter	95982	American Crow	6/29/2015	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95991	American Crow	7/6/2015	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95991	Western Scrub-Jay	7/7/2015	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95993	American Crow	6/30/2015	WNV
Sutter	Sutter-Yuba MVCD	Yuba City	95993	American Robin	7/6/2015	WNV
Tulare	Delta VCD	Three Rivers	93271	Western Scrub-Jay	7/8/2015	WNV
Yuba	Sutter-Yuba MVCD	Olivehurst	95961	American Crow	7/6/2015	WNV

Mosquitoes

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO113	125	Cx. tarsalis	Gridley	50	CO2	7/1/2015	WNV
Butte	BUCO113	127	Cx. tarsalis	Gridley	50	CO2	7/1/2015	WNV
Butte	BUCO113	144	Cx. pipiens	Gridley	50	CO2	7/1/2015	WNV
Butte	BUCO27	122	Cx. tarsalis	Gridley	50	CO2	7/1/2015	WNV
Butte	BUCO27	124	Cx. pipiens	Gridley	50	CO2	7/1/2015	WNV
Butte	BUCO49	134	Cx. tarsalis	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO49	135	Cx. tarsalis	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO49	136	Cx. tarsalis	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO49	138	Cx. pipiens	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO91	139	Cx. tarsalis	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO91	140	Cx. tarsalis	Biggs	50	CO2	7/7/2015	WNV
Butte	BUCO91	143	Cx. pipiens	Biggs	50	CO2	7/7/2015	WNV
Fresno	CNSL1695	83	Cx. quinquefasciatus	Fresno	23	GRVD	7/7/2015	WNV
Fresno	FRNO121	43	Cx. quinquefasciatus	Fresno	50	GRVD	7/1/2015	WNV
Kern	KERN2002	231	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/1/2015	WNV
Kern	KERN2015	241	Cx. quinquefasciatus	Bakersfield	30	GRVD	7/2/2015	WNV
Kern	KERN2018	228	Cx. quinquefasciatus	Bakersfield	42	GRVD	7/1/2015	WNV
Kern	KERN2020	214	Cx. quinquefasciatus	Bakersfield	22	GRVD	6/30/2015	WNV
Kern	KERN2021	240	Cx. quinquefasciatus	Wasco	50	GRVD	7/2/2015	WNV
Kern	KERN2031	237	Cx. quinquefasciatus	Bakersfield	45	GRVD	7/2/2015	WNV
Kern	KERN2044	232	Cx. quinquefasciatus	Bakersfield	32	CO2	7/1/2015	WNV

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Kern	KERN3026	251	Cx. quinquefasciatus	Arvin	50	CO2	7/2/2015	WNV
Kings	KNGS4402	178	Cx. tarsalis	Lemoore	21	BGSENT	7/1/2015	WNV
Los Angeles	GRLA2511	5441	Cx. quinquefasciatus	Los Angeles	50	GRVD	6/30/2015	WNV
Los Angeles	GRLA3035	5454	Cx. quinquefasciatus	North Hills	50	GRVD	7/2/2015	WNV
Los Angeles	GRLA3056	355	Cx. quinquefasciatus	Cudahy	50	GRVD	6/30/2015	WNV
Orange	ORCO1010	1629	Cx. quinquefasciatus	Huntington Beach	47	GRVD	6/24/2015	WNV
Orange	ORCO1033	1674	Cx. quinquefasciatus	Tustin	20	GRVD	6/30/2015	WNV
Orange	ORCO1033	1824	Cx. quinquefasciatus	Tustin	24	GRVD	7/7/2015	WNV
Orange	ORCO205	1820	Cx. quinquefasciatus	Tustin	49	GRVD	7/7/2015	WNV
Orange	ORCO84	1823	Cx. quinquefasciatus	Orange	43	GRVD	7/7/2015	WNV
Placer	PLCR1113	704	Cx. tarsalis	Pleasant Grove	50	CO2	7/7/2015	WNV
Placer	PLCR1113	705	Cx. tarsalis	Pleasant Grove	17	CO2	7/7/2015	WNV
Placer	PLCR17	718	Cx. tarsalis	Sheridan	50	CO2	7/7/2015	WNV
Placer	PLCR17	719	Cx. tarsalis	Sheridan	50	CO2	7/7/2015	WNV
Placer	PLCR191373	716	Cx. tarsalis		50	CO2	7/7/2015	WNV
Riverside	COAV344	2098	Cx. quinquefasciatus	La Quinta	23	CO2	7/9/2015	WNV
Riverside	COAV416	2058	Cx. quinquefasciatus	La Quinta	18	GRVD	7/7/2015	WNV
Riverside	COAV416	2061	Cx. quinquefasciatus	La Quinta	36	CO2	7/7/2015	WNV
Sacramento	SAYO204036	1854	Cx. pipiens	Sacramento	10	CO2	7/7/2015	WNV
Sacramento	SAYO214013	1852	Cx. pipiens	Carmichael	21	GRVD	7/7/2015	WNV
Sacramento	SAYO214040	1900	Cx. pipiens	Rancho Cordova	26	GRVD	7/7/2015	WNV
Sacramento	SAYO222001	1875	Cx. pipiens	Sacramento	19	GRVD	7/8/2015	WNV
Sacramento	SAYO232033	1801	Cx. pipiens	Elk Grove	50	CO2	7/7/2015	WNV
Sacramento	SAYO232033	1803	Cx. pipiens	Elk Grove	23	GRVD	7/7/2015	WNV
Sacramento	SAYO271007	1713	Cx. tarsalis	Isleton	50	CO2	7/2/2015	WNV
San Bernardino	SANB40	260	Cx. quinquefasciatus	Ontario	21	CO2	7/8/2015	WNV
San Joaquin	SJCM8018	1025	Cx. tarsalis	Stockton	53	CO2	7/7/2015	WNV
San Joaquin	SJCM8021	998	Cx. tarsalis	Lodi	9	CO2	7/7/2015	WNV
San Joaquin	SJCM8026	1019	Cx. pipiens	Stockton	11	CO2	7/7/2015	WNV
San Joaquin	SJCM8026	1020	Cx. tarsalis	Stockton	50	CO2	7/7/2015	WNV
San Joaquin	SJCM8026	1021	Cx. tarsalis	Stockton	37	CO2	7/7/2015	WNV
San Joaquin	SJCM8159	1004	Cx. tarsalis	Stockton	11	CO2	7/7/2015	WNV
San Joaquin	SJCM9906	995	Cx. tarsalis	French Camp	22	CO2	7/7/2015	WNV
San Joaquin	SJCM9906	996	Cx. pipiens	French Camp	19	CO2	7/7/2015	WNV
Stanislaus	EAST1013	15045	Cx. tarsalis	Modesto	39	CO2	6/30/2015	WNV
Stanislaus	EAST1013	15056	Cx. tarsalis	Modesto	40	CO2	7/7/2015	WNV
Stanislaus	EAST1093	15050	Cx. pipiens	Oakdale	14	CO2	7/1/2015	WNV
Stanislaus	TRLK1305	482	Cx. tarsalis	Westley	41	CO2	7/7/2015	WNV
Stanislaus	TRLK1516	464	Cx. pipiens	Modesto	27	CO2	7/2/2015	WNV
Stanislaus	TRLK541	453	Cx. pipiens	Turlock	16	CO2	7/2/2015	WNV
Sutter	SUYA14	147	Cx. tarsalis	Sutter	50	REST	7/6/2015	WNV
Sutter	SUYA16	159	Cx. tarsalis	Pleasant Grove	50	REST	7/6/2015	WNV
Sutter	SUYA16	175	Cx. tarsalis	Pleasant Grove	41	REST	7/7/2015	WNV
Sutter	SUYA24	144	Cx. tarsalis	Yuba City	50	REST	7/6/2015	WNV
Sutter	SUYA27	172	Cx. tarsalis	Tierra Buena	45	CO2	7/6/2015	WNV
Sutter	SUYA30	152	Cx. tarsalis	Live Oak	50	REST	7/6/2015	WNV
Sutter	SUYA30	153	Cx. tarsalis	Live Oak	50	REST	7/6/2015	WNV
Sutter	SUYA63	149	Cx. tarsalis	Live Oak	50	REST	7/6/2015	WNV
Sutter	SUYA63	150	Cx. tarsalis	Live Oak	30	REST	7/6/2015	WNV
Sutter	SUYA84	151	Cx. tarsalis	Yuba City	37	REST	7/6/2015	WNV
Tulare	DLTA7730	524	Cx. quinquefasciatus	Woodlake	50	GRVD	7/7/2015	WNV

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Tulare	DLTA8422	558	Cx. quinquefasciatus	Goshen	41	GRVD	7/9/2015	WNV
Tulare	DLTA8422	559	Cx. quinquefasciatus	Goshen	25	GRVD	7/9/2015	WNV
Tulare	DLTA8422	561	Cx. quinquefasciatus	Goshen	50	GRVD	7/9/2015	WNV
Tulare	DLTA8422	562	Cx. quinquefasciatus	Goshen	11	GRVD	7/9/2015	WNV
Tulare	DLTA8422	564	Cx. quinquefasciatus	Goshen	31	GRVD	7/9/2015	WNV
Tulare	DLTA8423	531	Cx. quinquefasciatus	Visalia	44	GRVD	7/7/2015	WNV
Tulare	DLTA8424	517	Cx. quinquefasciatus	Visalia	18	GRVD	7/7/2015	WNV
Tulare	DLTA8425	520	Cx. quinquefasciatus	Visalia	45	GRVD	7/7/2015	WNV
Tulare	DLTA8426	519	Cx. quinquefasciatus	Visalia	50	GRVD	7/7/2015	WNV
Tulare	DLTA8427	518	Cx. quinquefasciatus	Visalia	50	GRVD	7/7/2015	WNV
Tulare	DLTA8519	515	Cx. quinquefasciatus	Visalia	50	GRVD	7/7/2015	WNV
Tulare	DLTA8520	529	Cx. quinquefasciatus	Visalia	29	GRVD	7/7/2015	WNV
Tulare	DLTA8521	528	Cx. quinquefasciatus	Visalia	35	GRVD	7/7/2015	WNV
Tulare	DLTA8522	527	Cx. quinquefasciatus	Visalia	18	GRVD	7/7/2015	WNV
Tulare	DLTA8527	550	Cx. quinquefasciatus	Visalia	50	GRVD	7/9/2015	WNV
Tulare	DLTA8527	552	Cx. quinquefasciatus	Visalia	36	GRVD	7/9/2015	WNV
Tulare	DLTA8527	553	Cx. quinquefasciatus	Visalia	50	GRVD	7/9/2015	WNV
Tulare	DLTA8527	556	Cx. quinquefasciatus	Visalia	50	GRVD	7/9/2015	WNV
Tulare	DLTA8527	557	Cx. quinquefasciatus	Visalia	10	GRVD	7/9/2015	WNV
Tulare	DLTA8528	525	Cx. quinquefasciatus	Visalia	50	GRVD	7/7/2015	WNV
Tulare	DLTA9604	568	Cx. quinquefasciatus	Exeter	20	GRVD	7/9/2015	WNV
Tulare	DLTA9610	575	Cx. quinquefasciatus	Exeter	43	GRVD	7/9/2015	WNV
Tulare	DLTA9611	569	Cx. quinquefasciatus	Exeter	26	GRVD	7/9/2015	WNV
Yolo	SAYO103007	1984	Cx. tarsalis	Dunnigan	50	CO2	7/9/2015	WNV
Yolo	SAYO103007	1985	Cx. tarsalis	Dunnigan	50	CO2	7/9/2015	WNV
Yolo	SAYO114001	1751	Cx. tarsalis	Zamora	50	CO2	7/2/2015	WNV
Yolo	SAYO114001	1957	Cx. tarsalis	Zamora	50	CO2	7/9/2015	WNV
Yolo	SAYO114001	1960	Cx. tarsalis	Zamora	50	CO2	7/9/2015	WNV
Yolo	SAYO115008	1951	Cx. tarsalis	Zamora	50	CO2	7/9/2015	WNV
Yolo	SAYO116002	1745	Cx. tarsalis	Knights Landing	5	GRVD	7/2/2015	WNV
Yolo	SAYO135005	1909	Cx. tarsalis	Woodland	39	CO2	7/7/2015	WNV
Yolo	SAYO136010	1967	Cx. tarsalis	Woodland	50	CO2	7/9/2015	WNV
Yolo	SAYO136010	1968	Cx. tarsalis	Woodland	50	CO2	7/9/2015	WNV
Yuba	SUYA10	156	Cx. tarsalis	Olivehurst	28	REST	7/6/2015	WNV
Yuba	SUYA8	182	Cx. tarsalis	Marysville	35	CO2	7/7/2015	WNV
Yuba	SUYA97	154	Cx. tarsalis	Marysville	35	REST	7/6/2015	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.

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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