

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021



Weekly Update

Humans

One human case of West Nile virus (WNV) illness was reported this week from Kern County. **This is the first human WNV case reported from Kern County this year.** In 2021, a total of three WNV human cases have been reported from three counties. Of the three cases, two (67%) had neuroinvasive illness and one (33%) was fatal. The median age of the cases was 56 years, and two (67%) were male. Dates of symptom onset ranged from June 4 to June 18. In addition to the three cases, one asymptomatic WNV infection has been reported from Kern County. At this time last year, two WNV cases and one asymptomatic infection of WNV had been reported from two counties.

Dead Birds

A total of 16 WNV positive dead birds were reported this week from 3 counties: Los Angeles (4), Sacramento (9), and San Joaquin (3). In 2021, 84 WNV positive dead birds have been reported from 9 counties. At this time last year, 41 WNV positive dead birds had been reported from 9 counties.

Mosquito Pools

West Nile virus

A total of 131 WNV positive mosquito pools were reported this week from 17 counties: Butte (8), Fresno (27), Kern (3), Kings (2), Los Angeles (22), Madera (8), Placer (4), Riverside (1), Sacramento (5), San Joaquin (27), Shasta (8), Sonoma (1), Stanislaus (3), Sutter (2), Tulare (6), Yolo (2), and Yuba (2). **This is the first detection of WNV activity in Yuba County and the first WNV positive mosquitoes from Sonoma County this year.** In 2021, 414 WNV positive mosquito pools have been reported from 19 counties. At this time last year, 251 WNV positive mosquito pools had been reported from 18 counties.

St. Louis encephalitis virus

No mosquito pools tested positive for St. Louis encephalitis virus (SLEV) this week. In 2021, two SLEV positive mosquito pools have been reported from one county. At this time last year, 88 SLEV positive mosquito pools had been reported from 4 counties.

Sentinel Chickens

No seroconversions have been reported in 2021. At this time last year, one WNV seroconversion had been reported from one county.

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.maps.calsurv.org. For national information on WNV and other arboviruses, please visit the CDC websites: www.cdc.gov and www.cdc.gov/arbonet/maps/ADB_Diseases_Map/index.html

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

2020 & 2021 YTD West Nile Virus Comparisons		
	2020	2021
Total # Dead Bird Reports	2,706	3,241
# Positive Counties	20	21
# Human Cases	2	3
# Positive Dead Birds / # Tested	41 / 670	84 / 978
# Positive Mosquito Pools / # Tested	251 / 16,460	414 / 16,528
# Seroconversions / # Tested	1 / 2,784	0 / 2,850

YTD WNV Activity by Element and County, 2021					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Butte				31	
Contra Costa				2	
Fresno	1	1		108	
Kern	1			20	
Kings				3	
Los Angeles			12	49	
Madera				24	
Merced			1		
Placer			2	8	
Riverside				2	
Sacramento			50	25	
San Bernardino			1	1	
San Joaquin			11	66	
San Luis Obispo	1				
Shasta				10	
Sonoma			1	1	
Stanislaus			1	14	
Sutter				4	
Tulare			5	41	
Yolo				3	
Yuba				2	
Totals	3	1	84	414	0

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

TESTING SUMMARIES

Humans

		WNV	SLEV	WEEV
Human Cases	Week	1	0	0
	YTD	3	0	0

Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	39	16
	YTD	978	84

Sentinel Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	243	0	0	0
	YTD	2,850	0	0	0

Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	131 / 1,603	0 / 1,603	0 / 1,445	0 / 118	0 / 118	0 / 118
		YTD	414 / 16,528	2 / 15,470	0 / 14,387	0 / 234	0 / 234	0 / 234

NEW POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Los Angeles	San Gabriel Valley MVCD	Covina	91722	American Crow	7/21/2021	WNV
Los Angeles	San Gabriel Valley MVCD	Covina	91722	Unknown - Crow or Raven	7/16/2021	WNV
Los Angeles	San Gabriel Valley MVCD	West Covina	91791	Unknown - Crow or Raven	7/19/2021	WNV
Los Angeles	San Gabriel Valley MVCD	West Covina	91791	Unknown - Crow or Raven	7/20/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	American Crow	7/19/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Northern Mockingbird	7/15/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Elk Grove	95624	House Finch	7/14/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Gold River	95670	American Crow	7/19/2021	WNV

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

Sacramento	Sacramento-Yolo MVCD	Orangevale	95662	California Scrub-Jay	7/15/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95827	American Crow	7/19/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95831	Black Phoebe	7/19/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95838	California Scrub-Jay	7/19/2021	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95838	Yellow-billed Magpie	7/19/2021	WNV
San Joaquin	San Joaquin Co MVCD	Manteca	95336	California Scrub-Jay	7/22/2021	WNV
San Joaquin	San Joaquin Co MVCD	Manteca	95336	California Scrub-Jay	7/22/2021	WNV
San Joaquin	San Joaquin Co MVCD	Tracy	95377	American Crow	7/14/2021	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO174	233	Cx. tarsalis	Chico	50	CO2	7/14/21	WNV
Butte	BUCO174	234	Cx. tarsalis	Chico	50	CO2	7/14/21	WNV
Butte	BUCO174	235	Cx. tarsalis	Chico	50	CO2	7/14/21	WNV
Butte	BUCO22	171	Cx. tarsalis	Oroville	50	CO2	7/6/21	WNV
Butte	BUCO38	218	Cx. tarsalis	Oroville	50	CO2	7/14/21	WNV
Butte	BUCO38	219	Cx. tarsalis	Oroville	50	CO2	7/14/21	WNV
Butte	BUCO78	206	Cx. tarsalis	Oroville	50	CO2	7/13/21	WNV
Butte	BUCO89	221	Cx. tarsalis	Paradise	50	CO2	7/15/21	WNV
Fresno	CNSL1656	690	Cx. quinquefasciatus	Clovis	48	GRVD	7/15/21	WNV
Fresno	CNSL1713	689	Cx. quinquefasciatus	Fresno	20	GRVD	7/15/21	WNV
Fresno	CNSL1757	691	Cx. quinquefasciatus	Fresno	28	GRVD	7/15/21	WNV
Fresno	CNSL2522	680	Cx. quinquefasciatus	Sanger	50	GRVD	7/14/21	WNV
Fresno	CNSL2523	251	Cx. tarsalis	Sanger	12	CO2	7/14/21	WNV
Fresno	CNSL2523	252	Cx. quinquefasciatus	Sanger	23	GRVD	7/14/21	WNV
Fresno	CNSL2529	682	Cx. quinquefasciatus	Sanger	18	GRVD	7/14/21	WNV
Fresno	CNSL2529	683	Cx. tarsalis	Sanger	50	CO2	7/14/21	WNV
Fresno	CNSL2561	255	Cx. quinquefasciatus	Sanger	39	GRVD	7/14/21	WNV
Fresno	CNSL2576	678	Cx. quinquefasciatus	Clovis	18	GRVD	7/14/21	WNV
Fresno	CNSL2583	679	Cx. quinquefasciatus	Clovis	22	GRVD	7/14/21	WNV
Fresno	CNSL3116	672	Cx. stigmatosoma	Sanger	50	CO2	7/13/21	WNV
Fresno	CNSL3299	249	Cx. quinquefasciatus	Reedley	47	GRVD	7/14/21	WNV
Fresno	CNSL4151	260	Cx. quinquefasciatus	Selma	38	GRVD	7/15/21	WNV
Fresno	CNSL4285	258	Cx. quinquefasciatus	Selma	36	GRVD	7/15/21	WNV
Fresno	CNSL4287	687	Cx. stigmatosoma	Fresno	12	GRVD	7/15/21	WNV
Fresno	CNSL4287	688	Cx. tarsalis	Fresno	42	CO2	7/15/21	WNV
Fresno	CNSL6320	227	Cx. quinquefasciatus	Riverdale	50	CO2	7/13/21	WNV
Fresno	CNSL6324	696	Cx. quinquefasciatus	Riverdale	50	GRVD	7/16/21	WNV
Fresno	CNSL8165	274	Cx. quinquefasciatus	Clovia	22	GRVD	7/16/21	WNV
Fresno	CNSL9046	110	Cx. quinquefasciatus	Clovis	50	GRVD	7/13/21	WNV
Fresno	FRNO270	355	Cx. quinquefasciatus	Fresno	50	GRVD	7/21/21	WNV
Fresno	FRNO270	356	Cx. quinquefasciatus	Fresno	41	GRVD	7/21/21	WNV
Fresno	FRNO36	327	Cx. quinquefasciatus	Fresno	22	GRVD	7/14/21	WNV
Fresno	FRNO87	329	Cx. quinquefasciatus	Fresno	40	GRVD	7/14/21	WNV
Fresno	FRWS100006	174	Cx. tarsalis	Dos Palos	50	CO2	7/20/21	WNV
Fresno	FRWS400003	163	Cx. quinquefasciatus	Mendota	25	GRVD	7/20/21	WNV
Kern	KERN2051	248	Cx. quinquefasciatus	Bakersfield	45	GRVD	7/16/21	WNV

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

Kern	KERN33	232	Cx. quinquefasciatus	Arvin	50	CO2	7/13/21	WNV
Kern	KERN42	233	Cx. tarsalis	Bakersfield	38	CO2	7/13/21	WNV
Kings	KNGS3083	33	Cx. tarsalis	Lemoore	50	CO2	7/13/21	WNV
Kings	KNGS3106	42	Cx. tarsalis	Lemoore	50	CO2	7/15/21	WNV
Los Angeles	GRLA2017	5433	Cx. quinquefasciatus	Studio City	50	GRVD	7/15/21	WNV
Los Angeles	GRLA2035	5417	Cx. quinquefasciatus	Tarzana	28	GRVD	7/13/21	WNV
Los Angeles	GRLA2270	370	Cx. quinquefasciatus	Bellflower	44	GRVD	7/13/21	WNV
Los Angeles	SGVA1000	645	Cx. quinquefasciatus	Azusa	50	GRVD	7/21/21	WNV
Los Angeles	SGVA1117	607	Cx. quinquefasciatus	West Covina	50	GRVD	7/15/21	WNV
Los Angeles	SGVA1193	613	Cx. quinquefasciatus	Irwindale	50	GRVD	7/20/21	WNV
Los Angeles	SGVA1227	612	Cx. quinquefasciatus	San Dimas	23	GRVD	7/20/21	WNV
Los Angeles	SGVA1228	625	Cx. quinquefasciatus	San Simas	50	GRVD	7/20/21	WNV
Los Angeles	SGVA1229	610	Cx. quinquefasciatus	San Dimas	50	GRVD	7/20/21	WNV
Los Angeles	SGVA15	611	Cx. quinquefasciatus	Glendora	50	GRVD	7/20/21	WNV
Los Angeles	SGVA286	628	Cx. quinquefasciatus	Baldwin Park	50	GRVD	7/20/21	WNV
Los Angeles	SGVA316	642	Cx. quinquefasciatus	Duarte	50	GRVD	7/20/21	WNV
Los Angeles	SGVA396	590	Cx. quinquefasciatus	Pasadena	36	GRVD	7/15/21	WNV
Los Angeles	SGVA477	632	Cx. quinquefasciatus	West Covina	50	GRVD	7/20/21	WNV
Los Angeles	SGVA501	626	Cx. quinquefasciatus	Irwindale	17	BGSENT	7/20/21	WNV
Los Angeles	SGVA62	615	Cx. quinquefasciatus	Covina	50	GRVD	7/20/21	WNV
Los Angeles	SGVA64	630	Cx. quinquefasciatus	West Covina	50	GRVD	7/20/21	WNV
Los Angeles	SGVA686	633	Cx. quinquefasciatus	West Covina	50	GRVD	7/20/21	WNV
Los Angeles	SGVA875	596	Cx. quinquefasciatus	Walnut	25	GRVD	7/15/21	WNV
Los Angeles	SGVA952	622	Cx. quinquefasciatus	San Dimas	50	GRVD	7/20/21	WNV
Los Angeles	SGVA953	623	Cx. quinquefasciatus	Covina	40	GRVD	7/20/21	WNV
Los Angeles	SGVA996	657	Cx. quinquefasciatus	South Pasadena	50	GRVD	7/21/21	WNV
Madera	MADR178	154	Cx. quinquefasciatus	Madera	50	CO2	7/13/21	WNV
Madera	MADR204	140	Cx. tarsalis	Madera	50	CO2	7/14/21	WNV
Madera	MADR227	153	Cx. tarsalis	Madera	50	CO2	7/13/21	WNV
Madera	MADR3334	156	Cx. quinquefasciatus	Madera	50	CO2	7/13/21	WNV
Madera	MADR3334	158	Cx. tarsalis	Madera	50	CO2	7/13/21	WNV
Madera	MADR603	159	Cx. tarsalis	Firebaugh	50	CO2	7/16/21	WNV
Madera	MADR692	129	Cx. tarsalis	Madera	50	CO2	7/7/21	WNV
Madera	MADR697	160	Cx. tarsalis	Firebaugh	50	CO2	7/16/21	WNV
Placer	PLCR197802	812	Cx. tarsalis	Elverta	50	CO2	7/20/21	WNV
Placer	PLCR198707	840	Cx. tarsalis	Lincoln	50	CO2	7/20/21	WNV
Placer	PLCR25	854	Cx. tarsalis	Lincoln	50	CO2	7/20/21	WNV
Placer	PLCR525	819	Cx. tarsalis	Lincoln	6	CO2	7/20/21	WNV
Riverside	RIVR7	33	Cx. tarsalis	Nuevo	50	CO2	7/14/21	WNV
Sacramento	SAYO204013	2384	Cx. tarsalis	Citrus Heights	6	CO2	7/16/21	WNV
Sacramento	SAYO204020	2509	Cx. tarsalis	Sacramento	1	GRVD	7/20/21	WNV
Sacramento	SAYO214030	2291	Cx. pipiens	Fair Oaks	5	GRVD	7/16/21	WNV
Sacramento	SAYO253014	2276	Cx. tarsalis	Galt	46	CO2	7/16/21	WNV
Sacramento	SAYO255007	2330	Cx. tarsalis	Herald	6	CO2	7/16/21	WNV
San Joaquin	SJCM7025	940	Cx. pipiens	Tracy	9	GRVD	7/20/21	WNV
San Joaquin	SJCM8000	950	Cx. pipiens	Manteca	33	CO2	7/20/21	WNV
San Joaquin	SJCM8018	919	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	920	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	921	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	922	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

San Joaquin	SJCM8018	924	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	925	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	926	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	927	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	928	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	929	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	930	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	931	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8018	932	Cx. tarsalis	Stockton	48	CO2	7/20/21	WNV
San Joaquin	SJCM8027	1008	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8027	1009	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8083	987	Cx. pipiens	Escalon	50	CO2	7/20/21	WNV
San Joaquin	SJCM8083	988	Cx. pipiens	Escalon	50	CO2	7/20/21	WNV
San Joaquin	SJCM8100	1045	Cx. pipiens	Tracy	10	CO2	7/22/21	WNV
San Joaquin	SJCM8143	908	Cx. tarsalis	Stockton	52	CO2	7/20/21	WNV
San Joaquin	SJCM8199	999	Cx. tarsalis	Manteca	28	CO2	7/20/21	WNV
San Joaquin	SJCM8206	913	Cx. tarsalis	Lodi	50	CO2	7/20/21	WNV
San Joaquin	SJCM8208	1036	Cx. pipiens	Lodi	43	CO2	7/22/21	WNV
San Joaquin	SJCM8223	1046	Cx. tarsalis	Stockton	52	CO2	7/22/21	WNV
San Joaquin	SJCM8233	1023	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
San Joaquin	SJCM8233	1024	Cx. tarsalis	Stockton	50	CO2	7/20/21	WNV
Shasta	SHAS10020	323	Cx. tarsalis	Anderson	49	CO2	7/20/21	WNV
Shasta	SHAS10140	341	Cx. tarsalis	Anderson	35	CO2	7/20/21	WNV
Shasta	SHAS148	342	Cx. tarsalis	Cottonwood	38	CO2	7/20/21	WNV
Shasta	SHAS242	360	Cx. tarsalis	Cottonwood	36	CO2	7/21/21	WNV
Shasta	SHAS293	347	Cx. tarsalis	Redding	24	CO2	7/20/21	WNV
Shasta	SHAS346	357	Cx. tarsalis	Anderson	38	CO2	7/20/21	WNV
Shasta	SHAS410	345	Cx. tarsalis	Cottonwood	50	CO2	7/20/21	WNV
Shasta	SHAS707	368	Cx. pipiens	Shasta Lake	25	CO2	7/21/21	WNV
Sonoma	MARN563	189	Cx. erythrothorax	Petaluma	28	CO2	7/20/21	WNV
Stanislaus	TRLK432	412	Cx. pipiens	Turlock	50	CO2	7/20/21	WNV
Stanislaus	TRLK526	424	Cx. pipiens	Denair	50	CO2	7/20/21	WNV
Stanislaus	TRLK526	425	Cx. pipiens	Denair	50	CO2	7/20/21	WNV
Sutter	SUYA30	216	Cx. tarsalis	Live Oak	22	REST	7/19/21	WNV
Sutter	SUYA63	217	Cx. tarsalis	Live Oak	34	REST	7/19/21	WNV
Tulare	DLTA8422	648	Cx. quinquefasciatus	Goshen	17	GRVD	7/16/21	WNV
Tulare	TLRE192412	85	Cx. quinquefasciatus	Visalia	50	GRVD	7/16/21	WNV
Tulare	TLRE192508	80	Cx. quinquefasciatus	Visalia	50	GRVD	7/16/21	WNV
Tulare	TLRE192517	79	Cx. quinquefasciatus	Visalia	50	GRVD	7/16/21	WNV
Tulare	TLRE202412	53	Cx. quinquefasciatus	Tulare	50	GRVD	7/13/21	WNV
Tulare	TLRE232333	78	Cx. quinquefasciatus	Alpaugh	30	GRVD	7/16/21	WNV
Yolo	SAYO135006	2261	Cx. pipiens	Woodland	1	GRVD	7/16/21	WNV
Yolo	SAYO136010	2282	Cx. tarsalis	Woodland	50	CO2	7/16/21	WNV
Yuba	SUYA37	229	Cx. tarsalis	Marysville	49	CO2	7/21/21	WNV
Yuba	SUYA40	224	Cx. tarsalis	Linda	50	CO2	7/21/21	WNV

California Arbovirus Surveillance Bulletin #13

Week 29 Friday, July 23, 2021

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 with a plaque reduction neutralization test (PRNT).

Dead Birds

Oral swab samples collected from bird carcasses are tested at the UC Davis Arbovirus Research and Training laboratory (DART) or at a local agency for West Nile virus by RT-qPCR.

Sentinel Chickens:

Dried blood spot samples from sentinel chickens are tested at the California Department of Public Health Vector-Borne Disease Laboratory for IgG antibodies to West Nile, St. Louis encephalitis, and western equine encephalomyelitis viruses by an EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are tested at DART or at a local agency for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex RT-qPCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested at DART for chikungunya, dengue, and Zika viral RNA by a separate RT-qPCR.

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: Tina.Feiszli@cdph.ca.gov.