

## California Arbovirus Surveillance Bulletin #13

Week 26 Friday, June 28, 2019



### Weekly Update

#### **Humans**

No human infections have been reported in 2019. At this time last year, 9 human cases of West Nile virus (WNV) disease had been reported from 6 counties.

#### **Dead Birds**

A total of 8 WNV positive dead birds were reported this week from 3 counties: Fresno (2), Los Angeles (2), and Tulare (4). **This is the first detection of WNV in Los Angeles County, and the first WNV positive birds from Fresno and Tulare counties this year.** In 2019, a total of 13 WNV positive dead birds have been reported from 6 counties. At this time last year, 35 WNV positive dead birds had been reported from 12 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 131 WNV positive mosquito pools were reported this week from 7 counties: Fresno (19), Kern (2), Merced (1), Riverside (68), San Bernardino (1), San Joaquin (3), and Tulare (37). **This is the first detection of WNV activity in Merced County this year.** In 2019, a total of 354 WNV positive mosquito pools have been reported from 9 counties. At this time last year, 47 WNV positive mosquito pools had been reported from 8 counties.

##### St. Louis encephalitis virus

A total of 8 mosquito pools were reported positive this week for St. Louis encephalitis virus (SLEV) from 3 counties: Fresno (1), Kern (4), and Riverside (3). **This is the first detection of SLEV activity in Kern county this year.** In 2019, a total of 16 SLEV positive mosquito pools have been reported from 4 counties: Fresno (5), Kern (4), Riverside (4), and Tulare (3). At this time last year, 29 SLEV positive mosquito pools had been reported from 3 counties.

#### **Sentinel Chickens**

No seroconversions have been reported in 2019.

2018 & 2019 YTD West Nile Virus Comparisons		
	2018	2019
Total # Dead Bird Reports	3,045	2,449
# Positive Counties	17	10
# Human Cases	9	0
# Positive Dead Birds / # Tested	35 / 695	13 / 709
# Positive Mosquito Pools / # Tested	47 / 12,966	351 / 13,425
# Seroconversions / # Tested	0 / 3,687	0 / 3,039

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YTD WNV Activity by Element and County, 2019				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Fresno		2	28	
Kern			3	
Los Angeles		2		
Merced			1	
Orange		2	1	
Riverside			245	
San Bernardino			2	
San Diego		1		
San Joaquin		2	8	
Tulare		4	63	
<b>Totals</b>	<b>0</b>	<b>13</b>	<b>351</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	75	8
	YTD	709	13

#### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	323	0	0	0
	YTD	3,039	0	0	0

#### Mosquitoes

		Positive / Total Tested						
Mosquito Pools		WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	131 / 1,955	8 / 1,712	0 / 1,587	0 / 0	0 / 0	0 / 0
		YTD	351 / 13,425	16 / 12,236	0 / 11,636	0 / 131	0 / 131	0 / 131

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**POSITIVES**

**Dead Birds**

County	Agency	City	Zip Code	Species	Date Reported	Virus
Fresno	Fresno MVCD	Fresno	93704	American Crow	6/24/2019	WNV
Fresno	Fresno MVCD	Fresno	93704	Unknown - songbird	6/25/2019	WNV
Los Angeles	Los Angeles Co Veterinarian	Beverly Hills	90212	American Crow	6/24/2019	WNV
Los Angeles	Los Angeles Co Veterinarian	Beverly Hills	90212	American Crow	6/24/2019	WNV
Tulare	Delta VCD	Visalia	93277	American Crow	6/25/2019	WNV
Tulare	Delta VCD	Visalia	93277	California Scrub-Jay	6/25/2019	WNV
Tulare	Delta VCD	Visalia	93277	Unknown	6/20/2019	WNV
Tulare	Delta VCD	Visalia	93292	Starling	6/20/2019	WNV

**Mosquito pools**

County	Site Code	Pool #	City	Species	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1215	99	Fresno	Cx. quinquefasciatus	36	GRVD	6/18/2019	WNV
Fresno	CNSL1305	101	Fresno	Cx. quinquefasciatus	50	GRVD	6/18/2019	WNV
Fresno	CNSL1957	102	Fresno	Cx. quinquefasciatus	50	BGSENT	6/18/2019	WNV
Fresno	CNSL2003	117	Sanger	Cx. quinquefasciatus	17	GRVD	6/19/2019	WNV
Fresno	CNSL2003	119	Sanger	Cx. tarsalis	39	BGSENT	6/19/2019	WNV
Fresno	CNSL2020	120	Clovis	Cx. quinquefasciatus	19	GRVD	6/19/2019	WNV
Fresno	CNSL2499	96	Sanger	Cx. tarsalis	20	BGSENT	6/18/2019	WNV
Fresno	CNSL9190	141	Friant	Cx. quinquefasciatus	21	GRVD	6/21/2019	WNV
Fresno	FRNO116	205	Fresno	Cx. quinquefasciatus	40	GRVD	6/25/2019	SLEV
Fresno	FRNO116	205	Fresno	Cx. quinquefasciatus	40	GRVD	6/25/2019	WNV
Fresno	FRNO15	207	Fresno	Cx. quinquefasciatus	50	GRVD	6/25/2019	WNV
Fresno	FRNO165	211		Cx. quinquefasciatus	33	GRVD	6/25/2019	WNV
Fresno	FRNO179	228		Cx. quinquefasciatus	50	GRVD	6/27/2019	WNV
Fresno	FRNO179	229		Cx. quinquefasciatus	50	GRVD	6/27/2019	WNV
Fresno	FRNO207	198	Fresno	Cx. quinquefasciatus	50	GRVD	6/20/2019	WNV
Fresno	FRNO229	214	Fresno	Cx. quinquefasciatus	50	GRVD	6/26/2019	WNV
Fresno	FRNO235	217	Fresno	Cx. quinquefasciatus	50	BGSENT	6/26/2019	WNV
Fresno	FRNO238	213		Cx. quinquefasciatus	41	GRVD	6/26/2019	WNV
Fresno	FRNO35	220	Fresno	Cx. quinquefasciatus	28	GRVD	6/27/2019	WNV
Fresno	FRNO64	230	Fresno	Cx. quinquefasciatus	43	GRVD	6/27/2019	WNV
Kern	KERN11	285	Bakersfield	Cx. quinquefasciatus	45	GRVD	6/21/2019	SLEV
Kern	KERN2002	268	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/20/2019	WNV
Kern	KERN2018	260	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/19/2019	WNV
Kern	KERN2025	280	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/21/2019	SLEV
Kern	KERN2028	258	Bakersfield	Cx. quinquefasciatus	50	GRVD	6/19/2019	SLEV
Kern	KERN92	275	Bakersfield	Cx. quinquefasciatus	26	CO2	6/20/2019	SLEV
Merced	MERC201521	214	Winton	Cx. tarsalis	11	CO2	6/25/2019	WNV
Riverside	COAV0	3389		Cx. quinquefasciatus	28	GRVD	6/21/2019	WNV
Riverside	COAV0	3394		Cx. quinquefasciatus	17	GRVD	6/21/2019	WNV
Riverside	COAV0	3399		Cx. quinquefasciatus	29	GRVD	6/24/2019	WNV
Riverside	COAV0	3400		Cx. quinquefasciatus	8	GRVD	6/24/2019	WNV
Riverside	COAV0	3421		Cx. quinquefasciatus	39	CO2	6/25/2019	WNV
Riverside	COAV0	3449		Cx. quinquefasciatus	50	GRVD	6/25/2019	WNV
Riverside	COAV0	3450		Cx. quinquefasciatus	20	GRVD	6/25/2019	WNV
Riverside	COAV0	3452		Cx. quinquefasciatus	14	GRVD	6/25/2019	WNV
Riverside	COAV0	3562		Cx. quinquefasciatus	14	CO2	6/27/2019	WNV
Riverside	COAV121	3465	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV121	3466	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV121	3467	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV121	3469	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV121	3574	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	WNV
Riverside	COAV121	3575	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	WNV
Riverside	COAV121	3576	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	SLEV
Riverside	COAV121	3576	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	WNV
Riverside	COAV121	3577	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	WNV
Riverside	COAV121	3578	Mecca	Cx. tarsalis	50	OTHER	6/27/2019	WNV
Riverside	COAV122	3497	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV

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Riverside	COAV122	3498	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV122	3499	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV122	3500	Mecca	Cx. tarsalis	50	CO2	6/25/2019	SLEV
Riverside	COAV122	3501	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV123	3510	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV123	3511	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV123	3513	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV123	3514	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV200	3457	Mecca	Cx. quinquefasciatus	25	GRVD	6/25/2019	WNV
Riverside	COAV208	3494	Palm Springs	Cx. quinquefasciatus	50	GRVD	6/25/2019	WNV
Riverside	COAV208	3495	Palm Springs	Cx. quinquefasciatus	50	CO2	6/25/2019	WNV
Riverside	COAV208	3518	Palm Springs	Cx. quinquefasciatus	50	GRVD	6/26/2019	WNV
Riverside	COAV208	3519	Palm Springs	Cx. quinquefasciatus	50	CO2	6/26/2019	WNV
Riverside	COAV208	3520	Palm Springs	Cx. quinquefasciatus	50	CO2	6/26/2019	WNV
Riverside	COAV208	3521	Palm Springs	Cx. quinquefasciatus	50	CO2	6/26/2019	WNV
Riverside	COAV302	3566	Rancho Mirage	Cx. quinquefasciatus	50	GRVD	6/27/2019	WNV
Riverside	COAV302	3567	Rancho Mirage	Cx. quinquefasciatus	50	GRVD	6/27/2019	WNV
Riverside	COAV302	3568	Rancho Mirage	Cx. quinquefasciatus	32	GRVD	6/27/2019	WNV
Riverside	COAV302	3569	Rancho Mirage	Cx. quinquefasciatus	55	GRVD	6/27/2019	WNV
Riverside	COAV321	3540	Rancho Mirage	Cx. quinquefasciatus	48	GRVD	6/27/2019	WNV
Riverside	COAV322	3523	Cathedral City	Cx. quinquefasciatus	19	GRVD	6/26/2019	WNV
Riverside	COAV322	3531	Cathedral City	Cx. quinquefasciatus	26	BGSENT	6/26/2019	WNV
Riverside	COAV346	3410	Thermal	Cx. quinquefasciatus	40	GRVD	6/25/2019	WNV
Riverside	COAV407	3516	Palm Springs	Cx. quinquefasciatus	50	GRVD	6/26/2019	WNV
Riverside	COAV412	3539	Rancho Mirage	Cx. quinquefasciatus	42	GRVD	6/27/2019	WNV
Riverside	COAV419	3434	La Quinta	Cx. quinquefasciatus	42	GRVD	6/25/2019	WNV
Riverside	COAV419	3436	La Quinta	Cx. quinquefasciatus	40	CO2	6/25/2019	WNV
Riverside	COAV420	3442	La Quinta	Cx. quinquefasciatus	14	GRVD	6/25/2019	WNV
Riverside	COAV420	3443	La Quinta	Cx. quinquefasciatus	50	CO2	6/25/2019	WNV
Riverside	COAV421	3386	Indio	Cx. quinquefasciatus	10	GRVD	6/21/2019	WNV
Riverside	COAV421	3406	Indio	Cx. quinquefasciatus	50	GRVD	6/25/2019	WNV
Riverside	COAV423	3408	Indio	Cx. quinquefasciatus	43	GRVD	6/25/2019	WNV
Riverside	COAV430	3454	Indio	Cx. quinquefasciatus	50	GRVD	6/25/2019	WNV
Riverside	COAV431	3492	Palm Springs	Cx. quinquefasciatus	29	GRVD	6/26/2019	WNV
Riverside	COAV431	3533	Palm Springs	Cx. quinquefasciatus	6	BGSENT	6/26/2019	WNV
Riverside	COAV45	3470	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV45	3471	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV45	3473	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV46	3506	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV46	3507	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV46	3508	Mecca	Cx. tarsalis	50	CO2	6/25/2019	SLEV
Riverside	COAV46	3509	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV48	3475	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV48	3476	Mecca	Cx. tarsalis	43	CO2	6/25/2019	WNV
Riverside	COAV55	3453	Mecca	Cx. tarsalis	38	CO2	6/25/2019	WNV
Riverside	COAV56	3479	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV56	3480	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV57	3502	Mecca	Cx. tarsalis	50	CO2	6/25/2019	WNV
Riverside	COAV608	3463	Mecca	Cx. tarsalis	47	CO2	6/25/2019	WNV
Riverside	COAV611	3461	Mecca	Cx. tarsalis	33	CO2	6/25/2019	WNV
Riverside	COAV713	3529	Cathedral City	Cx. quinquefasciatus	8	BGSENT	6/26/2019	WNV
San Bernardino	WVAL2024	1259	Chino Hills	Cx. quinquefasciatus	31	GRVD	6/25/2019	WNV
San Joaquin	SJCM7000	618	manteca	Cx. tarsalis	50	CO2	6/25/2019	WNV
San Joaquin	SJCM8003	548	Tracy	Cx. tarsalis	16	CO2	6/25/2019	WNV
San Joaquin	SJCM8160	613	Lodi	Cx. tarsalis	50	CO2	6/25/2019	WNV
Tulare	DLTA8414	1076	Visalia	Cx. quinquefasciatus	18	GRVD	6/18/2019	WNV
Tulare	DLTA8419	1118	Goshen	Cx. quinquefasciatus	22	GRVD	6/19/2019	WNV
Tulare	DLTA8426	1221	Visalia	Cx. quinquefasciatus	17	GRVD	6/21/2019	WNV
Tulare	DLTA8426	1284	Visalia	Cx. quinquefasciatus	44	GRVD	6/25/2019	WNV
Tulare	DLTA8427	1104	Visalia	Cx. quinquefasciatus	10	GRVD	6/19/2019	WNV
Tulare	DLTA8435	1091	Visalia	Cx. quinquefasciatus	22	BGSENT	6/19/2019	WNV
Tulare	DLTA8435	1117	Visalia	Cx. quinquefasciatus	45	GRVD	6/19/2019	WNV
Tulare	DLTA8436	1040	Visalia	Cx. quinquefasciatus	14	GRVD	6/18/2019	WNV
Tulare	DLTA8436	1045	Visalia	Cx. quinquefasciatus	42	GRVD	6/18/2019	WNV
Tulare	DLTA8436	1108	Visalia	Cx. quinquefasciatus	22	GRVD	6/19/2019	WNV
Tulare	DLTA8436	1151	Visalia	Cx. quinquefasciatus	10	BGSENT	6/20/2019	WNV

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Tulare	DLTA8530	1297	Visalia	Cx. quinquefasciatus	13	GRVD	6/26/2019	WNV
Tulare	DLTA8531	1038	Visalia	Cx. quinquefasciatus	27	GRVD	6/18/2019	WNV
Tulare	DLTA8531	1145	Visalia	Cx. quinquefasciatus	17	BGSENT	6/20/2019	WNV
Tulare	DLTA8532	1157	Visalia	Cx. quinquefasciatus	18	GRVD	6/20/2019	WNV
Tulare	DLTA9401	1056	Visalia	Cx. quinquefasciatus	31	GRVD	6/18/2019	WNV
Tulare	DLTA9401	1191	Visalia	Cx. tarsalis	48	BGSENT	6/20/2019	WNV
Tulare	DLTA9401	1193	Visalia	Cx. tarsalis	50	BGSENT	6/20/2019	WNV
Tulare	DLTA9401	1194	Visalia	Cx. tarsalis	40	BGSENT	6/20/2019	WNV
Tulare	DLTA9401	1195	Visalia	Cx. tarsalis	15	BGSENT	6/20/2019	WNV
Tulare	DLTA9402	1154	Visalia	Cx. quinquefasciatus	17	GRVD	6/20/2019	WNV
Tulare	DLTA9402	1233	Visalia	Cx. quinquefasciatus	50	GRVD	6/21/2019	WNV
Tulare	DLTA9402	1234	Visalia	Cx. quinquefasciatus	31	GRVD	6/21/2019	WNV
Tulare	DLTA9403	1338	Visalia	Cx. quinquefasciatus	16	BGSENT	6/26/2019	WNV
Tulare	DLTA9411	1106	Visalia	Cx. quinquefasciatus	20	GRVD	6/19/2019	WNV
Tulare	DLTA9411	1160	Visalia	Cx. quinquefasciatus	18	GRVD	6/20/2019	WNV
Tulare	DLTA9411	1298	Visalia	Cx. quinquefasciatus	21	GRVD	6/26/2019	WNV
Tulare	DLTA9412	1061	Visalia	Cx. quinquefasciatus	23	GRVD	6/18/2019	WNV
Tulare	DLTA9412	1170	Visalia	Cx. quinquefasciatus	21	GRVD	6/20/2019	WNV
Tulare	DLTA9415	1088	Visalia	Cx. quinquefasciatus	30	CO2	6/19/2019	WNV
Tulare	DLTA9505	1161	Visalia	Cx. quinquefasciatus	42	GRVD	6/20/2019	WNV
Tulare	DLTA9505	1162	Visalia	Cx. quinquefasciatus	10	GRVD	6/20/2019	WNV
Tulare	DLTA9505	1223	Visalia	Cx. quinquefasciatus	32	GRVD	6/21/2019	WNV
Tulare	DLTA9506	1046	Visalia	Cx. quinquefasciatus	47	GRVD	6/18/2019	WNV
Tulare	DLTA9506	1155	Visalia	Cx. quinquefasciatus	14	BGSENT	6/20/2019	WNV
Tulare	DLTA9506	1167	Visalia	Cx. quinquefasciatus	36	GRVD	6/20/2019	WNV
Tulare	DLTA9602	1126	Exeter	Cx. quinquefasciatus	13	GRVD	6/19/2019	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 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 by phone (510) 412-6253 or email: [tina.feiszli@cdph.ca.gov](mailto:tina.feiszli@cdph.ca.gov).*

*Website Information: For updated information on WNV in California, please visit the California WNV website, [www.westnile.ca.gov](http://www.westnile.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 websites: [www.cdc.gov](http://www.cdc.gov) and [https://wwwn.cdc.gov/aronet/maps/ADB\\_Diseases\\_Map/index.html](https://wwwn.cdc.gov/aronet/maps/ADB_Diseases_Map/index.html)*