

## California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019



### Weekly Update

#### **Humans**

**A fatal human case of West Nile virus (WNV) illness was reported this week from Imperial County; this is the first human WNV case reported in California in 2019.** At this time last year, 10 human cases of WNV illness had been reported from 6 counties.

#### **Dead Birds**

A total of 2 WNV positive dead birds were reported this week from Sacramento (1) and Tulare (1) counties. **This is the first detection of WNV in Sacramento County this year.** In 2019, a total of 20 WNV positive dead birds have been reported from 7 counties. At this time last year, 67 WNV positive dead birds had been reported from 13 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 111 WNV positive mosquito pools were reported this week from 10 counties: Fresno (13), Kern (6), Kings (3), Riverside (32), Sacramento (1), San Bernardino (2), San Joaquin (3), Stanislaus (1), Tulare (48), and Yuba (2). **This is the first detection of WNV activity in Kings and Stanislaus counties this year, and the first WNV positive mosquitoes from Sacramento County.** In 2019, a total of 582 WNV positive mosquito pools have been reported from 13 counties. At this time last year, 171 WNV positive mosquito pools had been reported from 15 counties.

##### St. Louis encephalitis virus

This week, a total of 6 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) from 3 counties: Fresno (1), Kern (1), and Tulare (4). In 2019, a total of 33 SLEV positive mosquito pools have been reported from 4 counties: Fresno (7), Kern (12), Riverside (5), and Tulare (9). At this time last year, 70 SLEV positive mosquito pools had been reported from 4 counties.

#### **Sentinel Chickens**

No seroconversions have been reported in 2019. At this time last year, 7 WNV seroconversions had been reported from 1 county.

## California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019

<b>2018 &amp; 2019 YTD West Nile Virus Comparisons</b>		
	<b>2018</b>	<b>2019</b>
Total # Dead Bird Reports	3,562	2,859
# Positive Counties	21	16
# Human Cases	10	1
# Positive Dead Birds / # Tested	67 / 809	20 / 836
# Positive Mosquito Pools / # Tested	171 / 17,239	582 / 16,814
# Seroconversions / # Tested	7 / 4,453	0 / 3,727

<b>YTD WNV Activity by Element and County, 2019</b>				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Fresno		2	58	
Imperial	1			
Kern			16	
Kings			3	
Los Angeles		2		
Merced			1	
Orange		7	1	
Riverside			316	
Sacramento		1	1	
San Bernardino			4	
San Diego		1		
San Joaquin		2	13	
Stanislaus			1	
Tulare		5	164	
Ventura			1	
Yuba			3	
<b>Totals</b>	<b>1</b>	<b>20</b>	<b>582</b>	<b>0</b>

# California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019

## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	1	0	0
	YTD	1	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	47	2
	YTD	836	20

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	443	0	0	0
	YTD	3,727	0	0	0

### Mosquitoes

		Positive / Total Tested						
Mosquito Pools	Week	WNV	SLEV	WEEV	CHIK	DENV	ZIKA	
		Week	111 / 2,073	6 / 1,889	0 / 1,782	0 / 0	0 / 0	0 / 0
		YTD	582 / 16,814	33 / 15,341	0 / 14,528	0 / 131	0 / 131	0 / 131

## POSITIVES

### Dead Birds

County	Agency	City	Zip	Species	Date Reported	Virus
Sacramento	Sacramento-Yolo MVCD	Elverta	95626	Yellow-billed Magpie	7/3/2019	WNV
Tulare	Delta VCD	Visalia	93277	California Scrub-Jay	7/11/2019	WNV

### Mosquito pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Fresno	CNSL1139	203	Cx. quinquefasciatus	Fresno	50	GRVD	7/3/19	WNV
Fresno	CNSL1297	184	Cx. quinquefasciatus	Clovis	12	GRVD	7/2/19	WNV
Fresno	CNSL1380	207	Cx. quinquefasciatus	Fresno	46	GRVD	7/3/19	WNV
Fresno	CNSL1381	206	Cx. quinquefasciatus	Fresno	50	GRVD	7/3/19	WNV
Fresno	CNSL1521	205	Cx. quinquefasciatus	Fresno	50	GRVD	7/3/19	WNV
Fresno	CNSL1724	209	Cx. quinquefasciatus	Clovis	19	GRVD	7/3/19	SLEV
Fresno	CNSL1724	209	Cx. quinquefasciatus	Clovis	19	GRVD	7/3/19	WNV
Fresno	CNSL1825	202	Cx. quinquefasciatus	Fresno	50	GRVD	7/3/19	WNV
Fresno	CNSL1945	194	Cx. quinquefasciatus	Clovis	23	GRVD	7/2/19	WNV

## California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019

Fresno	CNSL2479	200	Cx. quinquefasciatus	Sanger	50	GRVD	7/3/19	WNV
Fresno	CNSL8008	191	Cx. quinquefasciatus	Clovis	20	GRVD	7/2/19	WNV
Fresno	CNSL8039	204	Cx. quinquefasciatus	Fresno	44	GRVD	7/3/19	WNV
Fresno	CNSL9083	211	Cx. quinquefasciatus	Clovis	50	GRVD	7/3/19	WNV
Fresno	CNSL9191	197	Cx. quinquefasciatus	Fresno	30	GRVD	7/2/19	WNV
Kern	KERN2015	363	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/5/19	WNV
Kern	KERN2020	359	Cx. quinquefasciatus	Bakersfield	50	GRVD	7/3/19	WNV
Kern	KERN2033	347	Cx. quinquefasciatus	Bakersfield	44	GRVD	7/2/19	WNV
Kern	KERN35	362	Cx. tarsalis	Bakersfield	50	CO2	7/3/19	SLEV
Kern	WEST6269	92	Cx. tarsalis	Buttonwillow	50	CO2	7/10/19	WNV
Kern	WEST6274	89	Cx. tarsalis	Bakersfield	50	CO2	7/10/19	WNV
Kern	WEST6275	93	Cx. tarsalis	Bakersfield	50	CO2	7/10/19	WNV
Kings	KNGS3020	238	Cx. tarsalis	Corcoran	50	CO2	7/3/19	WNV
Kings	KNGS4408	217	Cx. pipiens	Lemoore	13	BGSENT	7/3/19	WNV
Kings	KNGS55121	210	Cx. tarsalis	Hanford	39	BGSENT	7/2/19	WNV
Riverside	COAV0	3741	Cx. quinquefasciatus		26	GRVD	7/9/19	WNV
Riverside	COAV0	3773	Cx. quinquefasciatus		50	GRVD	7/9/19	WNV
Riverside	COAV0	3804	Cx. quinquefasciatus		32	GRVD	7/10/19	WNV
Riverside	COAV0	3889	Cx. quinquefasciatus		28	CO2	7/11/19	WNV
Riverside	COAV0	3893	Cx. quinquefasciatus		27	GRVD	7/11/19	WNV
Riverside	COAV0	3894	Cx. quinquefasciatus		25	GRVD	7/11/19	WNV
Riverside	COAV200	3781	Cx. quinquefasciatus	Mecca	9	GRVD	7/9/19	WNV
Riverside	COAV200	3799	Cx. tarsalis	Mecca	20	CO2	7/9/19	WNV
Riverside	COAV208	3839	Cx. quinquefasciatus	Palm Springs	40	CO2	7/10/19	WNV
Riverside	COAV302	3857	Cx. quinquefasciatus	Rancho Mirage	45	GRVD	7/11/19	WNV
Riverside	COAV302	3858	Cx. quinquefasciatus	Rancho Mirage	16	CO2	7/11/19	WNV
Riverside	COAV321	3859	Cx. quinquefasciatus	Rancho Mirage	31	GRVD	7/11/19	WNV
Riverside	COAV322	3835	Cx. quinquefasciatus	Cathedral City	15	GRVD	7/10/19	WNV
Riverside	COAV346	3825	Cx. quinquefasciatus	Thermal	14	GRVD	7/9/19	WNV
Riverside	COAV407	3840	Cx. quinquefasciatus	Palm Springs	50	GRVD	7/10/19	WNV
Riverside	COAV407	3841	Cx. quinquefasciatus	Palm Springs	48	GRVD	7/10/19	WNV
Riverside	COAV413	3849	Cx. quinquefasciatus	Palm Desert	20	GRVD	7/11/19	WNV
Riverside	COAV419	3776	Cx. quinquefasciatus	La Quinta	34	CO2	7/9/19	WNV
Riverside	COAV420	3743	Cx. quinquefasciatus	La Quinta	29	GRVD	7/9/19	WNV
Riverside	COAV421	3819	Cx. quinquefasciatus	Indio	50	GRVD	7/9/19	WNV
Riverside	COAV421	3820	Cx. quinquefasciatus	Indio	32	CO2	7/9/19	WNV
Riverside	COAV427	3891	Cx. quinquefasciatus	Palm Desert	47	GRVD	7/11/19	WNV
Riverside	COAV430	3769	Cx. quinquefasciatus	Indio	50	GRVD	7/9/19	WNV
Riverside	COAV431	3842	Cx. quinquefasciatus	Palm Springs	13	GRVD	7/10/19	WNV
Riverside	COAV533	3784	Cx. quinquefasciatus	Mecca	23	CO2	7/9/19	WNV
Riverside	COAV56	3832	Cx. tarsalis	Mecca	50	CO2	7/9/19	WNV
Riverside	COAV56	3834	Cx. quinquefasciatus	Mecca	19	CO2	7/9/19	WNV
Riverside	COAV58	3787	Cx. tarsalis	Mecca	45	CO2	7/9/19	WNV
Riverside	COAV608	3783	Cx. tarsalis	Mecca	13	CO2	7/9/19	WNV
Riverside	COAV709	3811	Cx. quinquefasciatus	Cathedral City	6	BGSENT	7/10/19	WNV
Riverside	COAV711	3810	Cx. quinquefasciatus	Cathedral City	5	BGSENT	7/10/19	WNV
Riverside	COAV728	3807	Cx. quinquefasciatus	Palm Springs	9	BGSENT	7/10/19	WNV
Sacramento	SAYO233015	2380	Cx. pipiens	Sacramento	5	GRVD	7/9/19	WNV
San Bernardino	WVAL4208	1563	Cx. quinquefasciatus	Ontario	50	BGSENT	7/11/19	WNV
San Bernardino	WVAL6005	1460	Cx. quinquefasciatus	Ontario	50	GRVD	7/9/19	WNV
San Joaquin	SJCM8000	806	Cx. pipiens	Manteca	18	CO2	7/9/19	WNV
San Joaquin	SJCM8100	776	Cx. tarsalis	Tracy	35	CO2	7/9/19	WNV
San Joaquin	SJCM8199	813	Cx. pipiens	Manteca	49	CO2	7/9/19	WNV
Stanislaus	TRLK1509	415	Cx. pipiens	Turlock	41	CO2	7/9/19	WNV

## California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019

Tulare	DLTA6236	1581	Cx. tarsalis	Kingsburg	41	CO2	7/10/19	WNV
Tulare	DLTA6404	1505	Cx. tarsalis	Dinuba	42	CO2	7/9/19	WNV
Tulare	DLTA6404	1510	Cx. quinquefasciatus	Dinuba	19	CO2	7/9/19	WNV
Tulare	DLTA6508	1682	Cx. quinquefasciatus	Orosi	14	BGSENT	7/11/19	WNV
Tulare	DLTA8414	1569	Cx. quinquefasciatus	Visalia	21	GRVD	7/9/19	WNV
Tulare	DLTA8422	1533	Cx. quinquefasciatus	Goshen	50	BGSENT	7/9/19	WNV
Tulare	DLTA8422	1650	Cx. quinquefasciatus	Goshen	50	GRVD	7/11/19	WNV
Tulare	DLTA8423	1524	Cx. quinquefasciatus	Visalia	50	BGSENT	7/9/19	WNV
Tulare	DLTA8423	1527	Cx. quinquefasciatus	Visalia	50	BGSENT	7/9/19	WNV
Tulare	DLTA8423	1543	Cx. quinquefasciatus	Visalia	50	BGSENT	7/9/19	WNV
Tulare	DLTA8423	1656	Cx. quinquefasciatus	Visalia	22	GRVD	7/11/19	SLEV
Tulare	DLTA8424	1549	Cx. quinquefasciatus	Visalia	49	GRVD	7/9/19	WNV
Tulare	DLTA8424	1652	Cx. quinquefasciatus	Visalia	50	GRVD	7/11/19	WNV
Tulare	DLTA8424	1653	Cx. quinquefasciatus	Visalia	11	GRVD	7/11/19	WNV
Tulare	DLTA8426	1554	Cx. quinquefasciatus	Visalia	23	GRVD	7/9/19	WNV
Tulare	DLTA8427	1523	Cx. quinquefasciatus	Visalia	27	BGSENT	7/9/19	WNV
Tulare	DLTA8427	1561	Cx. quinquefasciatus	Visalia	50	GRVD	7/9/19	WNV
Tulare	DLTA8427	1562	Cx. quinquefasciatus	Visalia	37	GRVD	7/9/19	WNV
Tulare	DLTA8434	1603	Cx. quinquefasciatus	Visalia	50	BGSENT	7/10/19	WNV
Tulare	DLTA8434	1604	Cx. quinquefasciatus	Visalia	37	BGSENT	7/10/19	WNV
Tulare	DLTA8435	1597	Cx. quinquefasciatus	Visalia	15	GRVD	7/10/19	WNV
Tulare	DLTA8435	1635	Cx. quinquefasciatus	Visalia	37	GRVD	7/11/19	WNV
Tulare	DLTA8519	1621	Cx. quinquefasciatus	Visalia	50	GRVD	7/10/19	WNV
Tulare	DLTA8519	1622	Cx. quinquefasciatus	Visalia	50	GRVD	7/10/19	WNV
Tulare	DLTA8520	1596	Cx. quinquefasciatus	Visalia	13	GRVD	7/10/19	WNV
Tulare	DLTA8520	1641	Cx. quinquefasciatus	Visalia	50	GRVD	7/11/19	WNV
Tulare	DLTA8521	1615	Cx. quinquefasciatus	Visalia	20	GRVD	7/10/19	WNV
Tulare	DLTA8528	1667	Cx. quinquefasciatus	Visalia	36	GRVD	7/11/19	WNV
Tulare	DLTA8529	1644	Cx. quinquefasciatus	Visalia	44	GRVD	7/11/19	WNV
Tulare	DLTA8530	1532	Cx. quinquefasciatus	Visalia	17	GRVD	7/9/19	WNV
Tulare	DLTA8531	1531	Cx. quinquefasciatus	Visalia	20	GRVD	7/9/19	WNV
Tulare	DLTA8531	1536	Cx. quinquefasciatus	Visalia	24	GRVD	7/9/19	SLEV
Tulare	DLTA8531	1536	Cx. quinquefasciatus	Visalia	24	GRVD	7/9/19	WNV
Tulare	DLTA8533	1619	Cx. quinquefasciatus	Visalia	30	BGSENT	7/10/19	WNV
Tulare	DLTA8533	1634	Cx. quinquefasciatus	Visalia	10	GRVD	7/11/19	WNV
Tulare	DLTA9401	1674	Cx. quinquefasciatus	Visalia	50	BGSENT	7/11/19	WNV
Tulare	DLTA9401	1675	Cx. quinquefasciatus	Visalia	50	BGSENT	7/11/19	WNV
Tulare	DLTA9401	1676	Cx. quinquefasciatus	Visalia	25	BGSENT	7/11/19	WNV
Tulare	DLTA9402	1654	Cx. quinquefasciatus	Visalia	22	GRVD	7/11/19	WNV
Tulare	DLTA9411	1609	Cx. quinquefasciatus	Visalia	50	BGSENT	7/10/19	WNV
Tulare	DLTA9411	1611	Cx. quinquefasciatus	Visalia	50	BGSENT	7/10/19	WNV
Tulare	DLTA9504	1630	Cx. quinquefasciatus	Visalia	11	GRVD	7/11/19	SLEV
Tulare	DLTA9504	1630	Cx. quinquefasciatus	Visalia	11	GRVD	7/11/19	WNV
Tulare	DLTA9505	1566	Cx. quinquefasciatus	Visalia	18	GRVD	7/9/19	WNV
Tulare	DLTA9505	1591	Cx. quinquefasciatus	Visalia	11	GRVD	7/10/19	WNV
Tulare	DLTA9505	1666	Cx. quinquefasciatus	Visalia	17	GRVD	7/11/19	WNV
Tulare	DLTA9506	1167	Cx. quinquefasciatus	Visalia	36	GRVD	6/20/19	SLEV
Tulare	DLTA9506	1623	Cx. quinquefasciatus	Visalia	50	BGSENT	7/10/19	WNV
Tulare	DLTA9506	1624	Cx. quinquefasciatus	Visalia	50	BGSENT	7/10/19	WNV
Tulare	DLTA9604	1683	Cx. quinquefasciatus	Exeter	11	BGSENT	7/11/19	WNV
Tulare	DLTA9606	1537	Cx. quinquefasciatus	Farmersville	31	GRVD	7/9/19	WNV
Tulare	DLTA9610	1686	Cx. tarsalis	Exeter	16	BGSENT	7/11/19	WNV
Yuba	SUYA37	124	Cx. tarsalis	Marysville	50	CO2	7/9/19	WNV
Yuba	SUYA39	132	Cx. tarsalis	Marysville	50	CO2	7/9/19	WNV

## California Arbovirus Surveillance Bulletin #15

Week 28 Friday, July 12, 2019

### 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://www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](https://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)*