

## California Arbovirus Surveillance Bulletin #25

Week 38 Friday, September 21, 2018



### Weekly Update

#### **Humans**

A total of 21 human cases of West Nile virus (WNV) illness were reported this week from 9 counties: Contra Costa (1), Lake (1), Los Angeles (10), Merced (1), Orange (2), Placer (1), Riverside (1), Stanislaus (2), and Tulare (2). **This is the first human WNV case reported from Lake County this year.** In 2018, a total of 100 human WNV cases have been reported from 25 counties. Of the 100 case patients, 67 (67%) had neuroinvasive illness and 4 (4.0%) fatalities have been reported. The median age of the individuals is 58 years (range: 1–90 years) and 64 (64%) are male. Dates of symptom onset ranged from May 6 – September 7. In addition to the 100 cases, 18 asymptomatic infections have been reported from Butte (4), Contra Costa (2), Fresno (1), Los Angeles (3), Orange (2), Sacramento (1), San Joaquin (1), Stanislaus (3), and Yolo (1) counties. At this time last year, 174 human WNV cases had been reported from 17 counties.

#### **Dead Birds**

A total of 15 WNV positive dead birds were reported this week from 9 counties: Contra Costa (1), Los Angeles (1), Orange (1), Placer (1), Sacramento (2), San Joaquin (1), Santa Clara (4), Tuolumne (1), and Yolo (3). **This is the first WNV positive bird reported from Tuolumne County this year.** In 2018, a total of 445 WNV positive dead birds have been reported from 19 counties. At this time last year, 395 WNV positive dead birds had been reported from 36 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 72 WNV positive mosquito pools were reported this week from 16 counties: Alameda (4), Butte (1), Contra Costa (2), Fresno (5), Kern (1), Kings (2), Los Angeles (15), Madera (2), Merced (4), Placer (1), Riverside (1), Sacramento (5), San Joaquin (17), Shasta (1), Stanislaus (5), and Tulare (6). In 2018, 1,802 mosquito pools have tested positive for WNV from 28 counties. At this time last year, 3,116 WNV positive mosquito pools had been reported from 26 counties.

##### St. Louis encephalitis virus

A total of 23 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 5 counties: Fresno (1), Kings (4), Madera (4), Riverside (4), and Tulare (10). In 2018, 342 SLEV positive mosquito pools have been reported from 8 counties: Fresno (46), Imperial (3), Kern (62), Kings (24), Los Angeles (1), Madera (7), Riverside (47), and Tulare (152). At this time last year, 152 SLEV positive mosquito pools had been reported from 13 counties.

#### **Sentinel Chickens**

##### West Nile virus

A total of 10 WNV seroconversions were reported this week from 8 flocks located in 6 counties: Butte (1) Colusa (3), Contra Costa (2), Merced (2), Santa Clara (1), and Sutter (1). In 2018, 122 WNV positive chickens have been reported from 14 counties. At this time last year, 235 WNV positive chickens had been reported from 14 counties.

##### St. Louis encephalitis virus

No new seroconversions were reported this week. In 2018, 1 sentinel chicken has tested positive for SLEV from Merced County. At this time last year, 7 SLEV positive chickens had been reported from 2 counties.

## California Arbovirus Surveillance Bulletin #25

Week 38 Friday, September 21, 2018

<b>2017 &amp; 2018 YTD West Nile Virus Comparisons</b>		
	<b>2017</b>	<b>2018</b>
Total # Dead Bird Reports	6,369	6,682
# Positive Counties	42	37
# Human Cases	174	100
# Positive Dead Birds / # Tested	395 / 1,650	445 / 1,777
# Positive Mosquito Pools / # Tested	3,116 / 36,962	1,802 / 35,295
# Seroconversions / # Tested	235 / 9,087	122 / 7,938

<b>YTD WNV Activity by Element and County, 2018</b>					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Alameda			16	15	
Amador	1	1			
Butte	6		3	48	33
Colusa					5
Contra Costa	2		12	17	15
El Dorado			2		
Fresno	3			107	
Glenn	2			4	
Humboldt	1		1		
Imperial				1	
Kern	5	1		46	
Kings				21	
Lake	1			4	1
Los Angeles	21		10	49	7
Madera	2			50	
Merced	2	1		12	16
Orange	3		6	62	
Placer	8	1	41	229	4
Riverside	8		5	35	
Sacramento	1	2	234	293	4
San Benito					1
San Bernardino	3			10	
San Diego				3	
San Joaquin	9		12	476	
San Mateo			5	2	
Santa Clara			47	4	6
Santa Cruz			2		
Shasta	1	1	4	8	4
Solano				2	
Stanislaus	8	1	1	104	
Sutter			4	28	20
Tehama	1				
Tulare	3			75	
Tuolumne	1		1		
Ventura	1				
Yolo	6		39	89	4
Yuba	1			8	2
<b>Totals</b>	<b>100</b>	<b>8</b>	<b>445</b>	<b>1,802</b>	<b>122</b>

# California Arbovirus Surveillance Bulletin #25

Week 38 Friday, September 21, 2018

## TESTING SUMMARIES

### Humans

		WNV	SLE	WEE
Human Cases	Week	21	0	0
	YTD	100	0	0

### Dead Birds

		Number Tested	WNV Positive
Dead Birds	Week	49	15
	YTD	1,777	445

### Chickens

		Number Tested	WNV Positive	SLEV Positive	WEEV Positive
Chicken Sera	Week	376	10	0	0
	YTD	7,938	122	1	0

### Mosquitoes

		Positive / Total Tested					
		WNV	SLEV	WEEV	CHIK	DENV	ZIKA
Mosquito Pools	Week	72 / 1,436	23 / 1,350	0 / 1,127	0 / 179	0 / 179	0 / 179
	YTD	1,802 / 35,295	342 / 28,123	0 / 24,027	0 / 1,327	0 / 1,327	0 / 1,327

## New Positives

### Dead Birds

County	Submitting Agency	City	Zip Code	Species	Date Reported	Virus
Contra Costa	Contra Costa MVCD	Oakley	94561	American Crow	9/12/2018	WNV
Los Angeles	Los Angeles Co West VCD	Culver City	90232	American Crow	9/14/2018	WNV
Orange	Orange Co VCD	Tustin	92780	House Sparrow	9/11/2018	WNV
Placer	Placer MVCD	Rocklin	95677	Yellow-billed Magpie	9/12/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95825	House Sparrow	9/12/2018	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95829	American Crow	9/16/2018	WNV
San Joaquin	San Joaquin Co MVCD	Tracy	95376	American Crow	9/13/2018	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94309	American Crow	9/9/2018	WNV
Santa Clara	Santa Clara Co VCD	San Jose	95124	American Crow	9/17/2018	WNV
Santa Clara	Santa Clara Co VCD	Saratoga	95070	American Crow	9/16/2018	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94086	Finch	9/12/2018	WNV
Tuolumne	Tuolumne Co Dept of Env Health	Sonora	95370	California Scrub-Jay	9/4/2018	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	9/11/2018	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	9/11/2018	WNV
Yolo	Sacramento-Yolo MVCD	Davis	95616	American Crow	9/17/2018	WNV

**California Arbovirus Surveillance Bulletin #25**  
 Week 38 Friday, September 21, 2018

**Mosquitoes**

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Alameda	ALCO343386	20570	Cx. pipiens	Fremont	3	CO2	9/14/18	WNV
Alameda	ALCO343386	20571	Cx. tarsalis	Fremont	2	CO2	9/14/18	WNV
Alameda	ALCO343386	20572	Cx. erythrothorax	Fremont	8	CO2	9/14/18	WNV
Alameda	ALCO832668	20518	Cx. tarsalis	Fremont	5	CO2	9/5/18	WNV
Butte	BUCO145	367	Cx. tarsalis	Palermo	50	CO2	9/12/18	WNV
Contra Costa	CNTR7202	524	Cx. tarsalis	Bethel Island	50	CO2	9/17/18	WNV
Contra Costa	CNTR7359	483	Cx. tarsalis	Oakley	50	CO2	9/11/18	WNV
Fresno	CNSL1512	348	Cx. quinquefasciatus	Clovis	50	GRVD	9/14/18	WNV
Fresno	CNSL5053	344	Cx. quinquefasciatus	Sanger	12	GRVD	9/13/18	SLEV
Fresno	FRWS300058	348	Cx. tarsalis		39	BGSENT	9/12/18	WNV
Fresno	FRWS300075	343	Cx. quinquefasciatus		35	BGSENT	9/12/18	WNV
Fresno	FRWS300144	344	Cx. quinquefasciatus		50	BGSENT	9/12/18	WNV
Fresno	FRWS30063	350	Cx. quinquefasciatus		15	BGSENT	9/12/18	WNV
Kern	DLNO25	229	Cx. quinquefasciatus	Delano	16	GRVD	9/18/18	WNV
Kings	KNGS3022	245	Cx. tarsalis	Hanford	50	CO2	9/13/18	SLEV
Kings	KNGS4444	223	Cx. tarsalis		17	BGSENT	9/10/18	WNV
Kings	KNGS4445	230	Cx. tarsalis		20	BGSENT	9/10/18	WNV
Kings	KNGS8033	231	Cx. pipiens	Hanford	50	CO2	9/10/18	SLEV
Kings	KNGS8033	232	Cx. pipiens	Hanford	31	CO2	9/10/18	SLEV
Kings	KNGS8033	233	Cx. tarsalis	Hanford	50	CO2	9/10/18	SLEV
Los Angeles	GRLA2021	5834	Cx. quinquefasciatus	Reseda	50	GRVD	9/12/18	WNV
Los Angeles	GRLA2031	5837	Cx. quinquefasciatus	Northridge	24	GRVD	9/12/18	WNV
Los Angeles	GRLA2032	5836	Cx. quinquefasciatus	Northridge	46	GRVD	9/12/18	WNV
Los Angeles	GRLA2312	831	Cx. quinquefasciatus	San Pedro	39	GRVD	9/11/18	WNV
Los Angeles	GRLA2346	865	Cx. quinquefasciatus	Montebello	50	GRVD	9/13/18	WNV
Los Angeles	GRLA2521	5851	Cx. quinquefasciatus	Los Feliz	24	BGSENT	9/14/18	WNV
Los Angeles	GRLA2540	5838	Cx. quinquefasciatus	Porter Ranch	50	GRVD	9/12/18	WNV
Los Angeles	GRLA2555	5832	Cx. quinquefasciatus	Encino	24	GRVD	9/12/18	WNV
Los Angeles	GRLA2580	5817	Cx. quinquefasciatus	Sherman Oaks	50	GRVD	9/11/18	WNV
Los Angeles	GRLA2635	5831	Cx. quinquefasciatus	Van Nuys	49	GRVD	9/12/18	WNV
Los Angeles	GRLA2636	5830	Cx. quinquefasciatus	Van Nuys	50	GRVD	9/12/18	WNV
Los Angeles	GRLA2650	5821	Cx. quinquefasciatus	Encino	50	GRVD	9/11/18	WNV
Los Angeles	GRLA2655	5820	Cx. quinquefasciatus	Encino	50	GRVD	9/11/18	WNV
Los Angeles	GRLA2953	858	Cx. quinquefasciatus	Santa Fe Springs	50	GRVD	9/13/18	WNV
Los Angeles	GRLA2955	868	Cx. quinquefasciatus	Cerritos	31	CO2	9/13/18	WNV
Madera	MADR192	299	Cx. tarsalis	Madera	35	CO2	9/12/18	WNV
Madera	MADR266	295	Cx. quinquefasciatus		50	CO2	9/13/18	SLEV
Madera	MADR3334	277	Cx. tarsalis	Madera	50	CO2	9/11/18	SLEV
Madera	MADR3334	288	Cx. tarsalis	Madera	16	CO2	9/13/18	SLEV
Madera	MADR3334	290	Cx. quinquefasciatus	Madera	31	CO2	9/13/18	SLEV
Madera	MADR896	283	Cx. tarsalis	Mendota	50	CO2	9/11/18	WNV
Merced	MERC201513	401	Cx. pipiens	Atwater	50	BGSENT	9/6/18	WNV
Merced	MERC201765	455	Cx. pipiens	Atwater	43	CO2	9/20/18	WNV
Merced	MERC711	442	Cx. tarsalis	Merced	45	CO2	9/20/18	WNV
Merced	MERC711	444	Cx. pipiens	Merced	50	CO2	9/20/18	WNV
Placer	PLCR186707	2326	Cx. tarsalis	Roseville	1	OTHER	9/20/18	WNV
Riverside	COAV17	3897	Cx. tarsalis	Mecca	50	CO2	9/18/18	SLEV
Riverside	COAV17	3898	Cx. tarsalis	Mecca	50	CO2	9/18/18	SLEV

## California Arbovirus Surveillance Bulletin #25

Week 38 Friday, September 21, 2018

Riverside	COAV30	3944	Cx. quinquefasciatus	Mecca	50	CO2	9/18/18	SLEV
Riverside	COAV30	3947	Cx. quinquefasciatus	Mecca	50	CO2	9/18/18	SLEV
Riverside	COAV610	3949	Cx. tarsalis		50	CO2	9/18/18	WNV
Sacramento	SAYO203037	6130	Cx. pipiens	Elverta	3	CO2	9/18/18	WNV
Sacramento	SAYO233041	5960	Cx. pipiens	Elk Grove	17	GRVD	9/12/18	WNV
Sacramento	SAYO233100	5945	Cx. tarsalis	Elk Grove	1	GRVD	9/12/18	WNV
Sacramento	SAYO233100	5946	Cx. pipiens	Elk Grove	18	CO2	9/12/18	WNV
Sacramento	SAYO271007	6061	Cx. tarsalis	Isleton	50	CO2	9/14/18	WNV
San Joaquin	SJCM8004	2603	Cx. pipiens	Lodi	50	CO2	9/18/18	WNV
San Joaquin	SJCM8018	2489	Cx. tarsalis	Stockton	50	CO2	9/18/18	WNV
San Joaquin	SJCM8018	2491	Cx. tarsalis	Stockton	50	CO2	9/18/18	WNV
San Joaquin	SJCM8018	2492	Cx. tarsalis	Stockton	50	CO2	9/18/18	WNV
San Joaquin	SJCM8018	2497	Cx. pipiens	Stockton	37	CO2	9/18/18	WNV
San Joaquin	SJCM8070	2671	Cx. tarsalis	Galt	12	CO2	9/20/18	WNV
San Joaquin	SJCM8077	2515	Cx. pipiens	Stockton	12	CO2	9/18/18	WNV
San Joaquin	SJCM8078	2486	Cx. tarsalis	Stockton	50	CO2	9/18/18	WNV
San Joaquin	SJCM8079	2556	Cx. pipiens	Manteca	50	CO2	9/18/18	WNV
San Joaquin	SJCM8083	2552	Cx. pipiens	Escalon	50	CO2	9/18/18	WNV
San Joaquin	SJCM8160	2560	Cx. tarsalis	Lodi	50	CO2	9/18/18	WNV
San Joaquin	SJCM8160	2563	Cx. tarsalis	Lodi	41	CO2	9/18/18	WNV
San Joaquin	SJCM8191	2526	Cx. tarsalis	Lodi	50	CO2	9/18/18	WNV
San Joaquin	SJCM8201	2684	Cx. tarsalis	Lockford	12	CO2	9/20/18	WNV
San Joaquin	SJCM8203	2572	Cx. tarsalis	Lodi	50	CO2	9/18/18	WNV
San Joaquin	SJCM8208	2647	Cx. tarsalis	Lodi	50	CO2	9/20/18	WNV
San Joaquin	SJCM8208	2649	Cx. pipiens	Lodi	45	CO2	9/20/18	WNV
Shasta	SHAS110	668	Cx. pipiens	Redding	12	CO2	9/18/18	WNV
Stanislaus	TRLK1615	1508	Cx. tarsalis	Modesto	50	CO2	9/18/18	WNV
Stanislaus	TRLK1616	1503	Cx. tarsalis	Modesto	50	CO2	9/18/18	WNV
Stanislaus	TRLK1673	1520	Cx. tarsalis	Patterson	49	CO2	9/18/18	WNV
Stanislaus	TRLK18280	1482	Cx. pipiens	Turlock	50	CO2	9/14/18	WNV
Stanislaus	TRLK322	1573	Cx. tarsalis	Vernalis	50	CO2	9/18/18	WNV
Tulare	DLNO72	221	Cx. quinquefasciatus	Delano	50	CO2	9/13/18	WNV
Tulare	DLTA6404	3419	Cx. tarsalis	Dinuba	24	CO2	9/19/18	SLEV
Tulare	DLTA6404	3425	Cx. tarsalis	Dinuba	10	CO2	9/19/18	WNV
Tulare	DLTA6408	3370	Cx. quinquefasciatus	Dinuba	40	GRVD	9/14/18	WNV
Tulare	DLTA6408	3371	Cx. quinquefasciatus	Dinuba	12	GRVD	9/14/18	WNV
Tulare	DLTA8422	3356	Cx. quinquefasciatus	Goshen	50	BGSENT	9/14/18	SLEV
Tulare	DLTA8422	3358	Cx. quinquefasciatus	Goshen	50	BGSENT	9/14/18	SLEV
Tulare	DLTA8422	3359	Cx. quinquefasciatus	Goshen	50	BGSENT	9/14/18	SLEV
Tulare	DLTA8423	3392	Cx. quinquefasciatus	Visalia	50	BGSENT	9/18/18	SLEV
Tulare	DLTA8425	3402	Cx. quinquefasciatus	Visalia	50	BGSENT	9/18/18	SLEV
Tulare	DLTA8425	3442	Cx. quinquefasciatus	Visalia	22	BGSENT	9/20/18	SLEV
Tulare	DLTA8434	3365	Cx. quinquefasciatus	Visalia	20	GRVD	9/14/18	SLEV
Tulare	DLTA8522	3453	Cx. quinquefasciatus	Visalia	12	GRVD	9/20/18	WNV
Tulare	DLTA9403	3432	Cx. quinquefasciatus	Visalia	28	BGSENT	9/19/18	SLEV
Tulare	DLTA9501	3399	Cx. quinquefasciatus	Farmersville	23	CO2	9/18/18	SLEV
Tulare	DLTA9505	3364	Cx. quinquefasciatus	Visalia	17	GRVD	9/14/18	WNV

## California Arbovirus Surveillance Bulletin #25

Week 38 Friday, September 21, 2018

### Sentinel Chickens

County	Site Code	City	Date Bled	Virus	Band 01	Band 02	Band 03
Butte	BUCO0007	Chico	9/11/2018	WNV	1543		
Colusa	CLSA0001	Colusa	9/11/2018	WNV	1567	1568	1569
Contra Costa	CNTR2302	Martinez	9/10/2018	WNV	1443		
Contra Costa	CNTR7402	Oakley	9/10/2018	WNV	1417		
Merced	MERC0002	Dos Palos	9/14/2018	WNV	1810		
Merced	MERC0006	Merced	9/14/2018	WNV	1824		
Santa Clara	STCL3966	San Martin	9/10/2018	WNV	2042		
Sutter	SUYA0015	Robbins	9/13/2018	WNV	1353		

## 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.

---

*Website Information:* For updated information on WNV and SLEV 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/arbovet/maps/ADB\\_Diseases\\_Map/index.html](https://wwwn.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html)

*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).*