

## California Arbovirus Surveillance Bulletin #23

Week 36 Friday, September 7, 2018



### Weekly Update

#### **Humans**

A total of 14 new human cases of West Nile virus (WNV) illness were reported this week from 8 counties: Amador (1), Glenn (1), Kern (1), Los Angeles (6), Riverside (1), Stanislaus (1), Yolo (2), and Yuba (1). **These are the first WNV human cases reported from Amador, Yolo, and Yuba counties this year.** In 2018, a total of 56 human WNV cases have been reported from 21 counties. Of the 56 case patients, 38 (68%) had neuroinvasive illness; no fatalities have been reported. The median age of the individuals is 56 years (range: 1–90 years) and 37 (67%) are male. Dates of symptom onset ranged from May 6 – August 23. In addition to the 56 cases, 17 asymptomatic infections have been reported from Butte (4), Fresno (1), Contra Costa (1), Los Angeles (3), Orange (2), Sacramento (1), San Joaquin (1), Stanislaus (3), and Yolo (1) counties. At this time last year, 108 human WNV cases had been reported from 15 counties.

#### **Dead Birds**

A total of 25 WNV positive dead birds were reported this week from 9 counties: Alameda (1), Contra Costa (1), Orange (2), Placer (3), Riverside (1), Sacramento (8), San Joaquin (1), Santa Clara (4), and Yolo (4). In 2018, a total of 422 WNV positive dead birds have been reported from 18 counties. At this time last year, 298 WNV positive dead birds had been reported from 33 counties.

#### **Mosquito Pools**

##### West Nile virus

A total of 150 WNV positive mosquito pools were reported this week from 13 counties: Butte (2), Fresno (19), Kings (3), Los Angeles (9), Madera (7), Placer (7), Riverside (3), Sacramento (9), San Joaquin (62), Stanislaus (17), Sutter (1), Tulare (6), and Yolo (5). In 2018, 1,606 mosquito pools have tested positive for WNV from 28 counties. At this time last year, 2,828 WNV positive mosquito pools had been reported from 24 counties.

##### St. Louis encephalitis virus

A total of 31 mosquito pools were reported positive for St. Louis encephalitis virus (SLEV) this week from 6 counties: Fresno (2), Kern (1), Kings (6), Madera (1), Riverside (6), and Tulare (15). In 2018, 295 SLEV positive mosquito pools have been reported from 8 counties: Fresno (42), Imperial (3), Kern (57), Kings (20), Los Angeles (1), Madera (2), Riverside (40), and Tulare (130). At this time last year, 109 SLEV positive mosquito pools had been reported from 11 counties.

#### **Sentinel Chickens**

##### West Nile virus

A total of 20 WNV seroconversions were reported this week from 14 flocks located in 7 counties: Butte (1), Colusa (1), Merced (5), Shasta (2), Sutter (8), Yolo (2), and Yuba (1). These are the first WNV positive chickens reported from Yolo County this year. In 2018, 104 WNV positive chickens have been reported from 13 counties. At this time last year, 189 WNV positive chickens had been reported from 12 counties.

##### St. Louis encephalitis virus

One SLEV seroconversion was reported this week from Merced County. **This is the first detection of SLEV activity in Merced County this year.** In 2018, 1 sentinel chicken has tested positive for SLEV from 1 county. At this time last year, 7 SLEV positive chickens had been reported from 2 counties.

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| <b>2017 &amp; 2018 YTD West Nile Virus Comparisons</b> |                |                |
|--|----------------|----------------|
|  | <b>2017</b>    | <b>2018</b>    |
| Total # Dead Bird Reports                              | 5,853          | 6,278          |
| # Positive Counties                                    | 40             | 37             |
| # Human Cases  | 108            | 56             |
| # Positive Dead Birds / # Tested                       | 298 / 1,496    | 422 / 1,664    |
| # Positive Mosquito Pools / # Tested                   | 2,828 / 33,559 | 1,606 / 31,972 |
| # Seroconversions / # Tested                           | 189 / 8,362    | 104 / 7,217    |

| <b>YTD WNV Activity by Element and County, 2018</b> |           |          |            |                |                   |
|---|-----------|----------|------------|----------------|-------------------|
| County  | Humans    | Horses   | Dead Birds | Mosquito Pools | Sentinel Chickens |
| Alameda   |           |          | 14         | 11             |                   |
| Amador  | 1         |          |            |                |                   |
| Butte   | 6         |          | 3          | 44             | 32                |
| Colusa  |           |          |            |                | 2                 |
| Contra Costa  | 1         |          | 11         | 15             | 13                |
| El Dorado   |           |          | 2          |                |                   |
| Fresno  | 3         |          |            | 101            |                   |
| Glenn   | 2         |          |            | 4              |                   |
| Humboldt  |           |          | 1          |                |                   |
| Imperial  |           |          |            | 1              |                   |
| Kern  | 3         | 1        |            | 38             |                   |
| Kings   |           |          |            | 19             |                   |
| Lake  |           |          |            | 4              | 1                 |
| Los Angeles   | 12        |          | 8          | 32             | 7                 |
| Madera  |           |          |            | 41             |                   |
| Merced  | 1         | 1        |            | 8              | 14                |
| Orange  | 1         |          | 5          | 40             |                   |
| Placer  |           | 1        | 39         | 223            | 3                 |
| Riverside   | 6         |          | 5          | 34             |                   |
| Sacramento  | 1         | 2        | 229        | 275            |                   |
| San Benito  |           |          |            |                | 1                 |
| San Bernardino                                      | 1         |          |            | 9              |                   |
| San Diego   |           |          |            | 3              |                   |
| San Joaquin   | 4         |          | 11         | 418            |                   |
| San Mateo   |           |          | 5          | 2              |                   |
| Santa Clara   |           |          | 43         | 4              | 5                 |
| Santa Cruz  |           |          | 2          |                |                   |
| Shasta  | 1         | 1        | 3          | 7              | 3                 |
| Solano  |           |          |            | 2              |                   |
| Stanislaus  | 6         | 1        | 1          | 93             |                   |
| Sutter  |           |          | 4          | 28             | 19                |
| Tehama  | 1         |          |            |                |                   |
| Tulare  | 1         |          |            | 57             |                   |
| Tuolumne  | 1         |          |            |                |                   |
| Ventura   | 1         |          |            |                |                   |
| Yolo  | 2         |          | 36         | 85             | 2                 |
| Yuba  | 1         |          |            | 8              | 2                 |
| <b>Totals</b>                                       | <b>56</b> | <b>7</b> | <b>422</b> | <b>1,606</b>   | <b>104</b>        |

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## TESTING SUMMARIES

### Humans

|             |      | WNV | SLE | WEE |
|-------------|------|-----|-----|-----|
| Human Cases | Week | 14  | 0   | 0   |
|             | YTD  | 56  | 0   | 0   |

### Dead Birds

|            |      | Number Tested | WNV Positive |
|------------|------|---------------|--------------|
| Dead Birds | Week | 61            | 25           |
|            | YTD  | 1,664         | 422          |

### Chickens

|              |      | Number Tested | WNV Positive | SLEV Positive | WEEV Positive |
|--------------|------|---------------|--------------|---------------|---------------|
| Chicken Sera | Week | 308           | 20           | 1             | 0             |
|              | YTD  | 7,217         | 104          | 1             | 0             |

### Mosquitoes

|                |      | Positive / Total Tested |              |            |           |           |           |
|----------------|------|-------------------------|--------------|------------|-----------|-----------|-----------|
|                |      | WNV                     | SLEV         | WEEV       | CHIK      | DENV      | ZIKA      |
| Mosquito Pools | Week | 150 / 1,300             | 31 / 1,243   | 0 / 1,051  | 0 / 0     | 0 / 0     | 0 / 0     |
|                | YTD  | 1,606 / 31,972          | 295 / 25,356 | 0 / 21,727 | 0 / 1,017 | 0 / 1,017 | 0 / 1,017 |

## New Positives

### Dead Birds

| County       | Submitting Agency      | City          | Zip Code | Species              | Date Reported | Virus |
|--------------|------------------------|---------------|----------|----------------------|---------------|-------|
| Alameda      | Alameda Co MAD         | Livermore     | 94551    | American Crow        | 9/7/2018      | WNV   |
| Contra Costa | Contra Costa MVCD      | Discovery Bay | 94505    | American Crow        | 8/30/2018     | WNV   |
| Orange       | Orange Co VCD          | Cypress       | 90630    | American Crow        | 8/26/2018     | WNV   |
| Orange       | Orange Co VCD          | Fullerton     | 92833    | American Crow        | 8/30/2018     | WNV   |
| Placer       | Placer MVCD            | Granite Bay   | 95746    | American Crow        | 8/31/2018     | WNV   |
| Placer       | Placer MVCD            | Lincoln       | 95648    | Unknown              | 9/4/2018      | WNV   |
| Placer       | Placer MVCD            | Rocklin       | 95677    | California Scrub-Jay | 9/1/2018      | WNV   |
| Riverside    | Northwest Mosquito VCD | Riverside     | 92506    | American Crow        | 8/21/2018     | WNV   |
| Sacramento   | Sacramento-Yolo MVCD   | Carmichael    | 95608    | Yellow-billed Magpie | 8/30/2018     | WNV   |

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|-------------|----------------------|-----------------|-------|----------------------|-----------|-----|
| Sacramento  | Sacramento-Yolo MVCD | Folsom          | 95630 | American Crow        | 9/3/2018  | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Rancho Cordova  | 95670 | Cooper's Hawk        | 8/30/2018 | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Sacramento      | 95820 | Mourning Dove        | 9/1/2018  | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Sacramento      | 95821 | Yellow-billed Magpie | 9/1/2018  | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Sacramento      | 95833 | American Crow        | 8/29/2018 | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Sacramento      | 95835 | Mourning Dove        | 9/3/2018  | WNV |
| Sacramento  | Sacramento-Yolo MVCD | Wilton          | 95693 | American Crow        | 8/28/2018 | WNV |
| San Joaquin | San Joaquin Co MVCD  | Tracy           | 95377 | California Scrub-Jay | 8/31/2018 | WNV |
| Santa Clara | Santa Clara Co VCD   | San Jose        | 95124 | American Crow        | 9/3/2018  | WNV |
| Santa Clara | Santa Clara Co VCD   | san Martin      | 95046 | American Crow        | 9/6/2018  | WNV |
| Santa Clara | Santa Clara Co VCD   | Santa Clara     | 95051 | American Crow        | 9/4/2018  | WNV |
| Santa Clara | Santa Clara Co VCD   | Sunnyvale       | 94086 | American Crow        | 8/28/2018 | WNV |
| Yolo        | Sacramento-Yolo MVCD | Davis           | 95616 | American Crow        | 8/29/2018 | WNV |
| Yolo        | Sacramento-Yolo MVCD | Davis           | 95616 | American Crow        | 8/30/2018 | WNV |
| Yolo        | Sacramento-Yolo MVCD | West Sacramento | 95691 | California Scrub-Jay | 8/30/2018 | WNV |
| Yolo        | Sacramento-Yolo MVCD | Woodland        | 95776 | American Crow        | 9/1/2018  | WNV |

### Mosquitoes

| County | Site Code  | Pool # | Species              | City         | # in Pool | Trap Type | Collected | Virus |
|--------|------------|--------|----------------------|--------------|-----------|-----------|-----------|-------|
| Butte  | BUCO127    | 344    | Cx. tarsalis         | Oroville     | 50        | CO2       | 9/3/18    | WNV   |
| Butte  | BUCO127    | 345    | Cx. tarsalis         | Oroville     | 50        | CO2       | 9/3/18    | WNV   |
| Fresno | CNSL1117   | 330    | Cx. quinquefasciatus | Fresno       | 40        | GRVD      | 8/31/18   | WNV   |
| Fresno | CNSL1773   | 321    | Cx. quinquefasciatus | Clovis       | 50        | GRVD      | 8/30/18   | WNV   |
| Fresno | CNSL1895   | 323    | Cx. quinquefasciatus | Clovis       | 16        | GRVD      | 8/30/18   | WNV   |
| Fresno | CNSL8087   | 320    | Cx. quinquefasciatus | Clovis       | 16        | GRVD      | 8/29/18   | WNV   |
| Fresno | FRWS100006 | 295    | Cx. tarsalis         | Dos Palos    | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS100007 | 292    | Cx. quinquefasciatus | Firebaugh    | 34        | OTHER     | 9/5/18    | SLEV  |
| Fresno | FRWS200003 | 286    | Cx. tarsalis         | Dos Palos    | 31        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS300031 | 297    | Cx. tarsalis         |              | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS300031 | 299    | Cx. tarsalis         |              | 34        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS3104   | 289    | Cx. tarsalis         | Firebaugh    | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS3201   | 290    | Cx. quinquefasciatus | Firebaugh    | 32        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS3201   | 291    | Cx. tarsalis         | Firebaugh    | 46        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS400017 | 309    | Cx. tarsalis         | Mendota      | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS400017 | 310    | Cx. tarsalis         | Mendota      | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS400017 | 311    | Cx. tarsalis         | Mendota      | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS4102   | 304    | Cx. tarsalis         | Kerman       | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS4102   | 305    | Cx. tarsalis         | Kerman       | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS4102   | 306    | Cx. quinquefasciatus | Kerman       | 50        | CO2       | 9/5/18    | WNV   |
| Fresno | FRWS4104   | 302    | Cx. quinquefasciatus | Kerman       | 30        | GRVD      | 9/5/18    | WNV   |
| Fresno | FRWS4110   | 308    | Cx. tarsalis         | Mendota      | 50        | CO2       | 9/5/18    | SLEV  |
| Fresno | FRWS5110   | 301    | Cx. quinquefasciatus | Tranquillity | 35        | GRVD      | 9/5/18    | WNV   |
| Kern   | WEST6290   | 72     | Cx. tarsalis         | Lost Hills   | 50        | CO2       | 9/5/18    | SLEV  |
| Kings  | KNGS3022   | 210    | Cx. tarsalis         | Hanford      | 50        | CO2       | 8/28/18   | SLEV  |
| Kings  | KNGS4444   | 197    | Cx. pipiens          |              | 30        | BGSENT    | 8/27/18   | SLEV  |
| Kings  | KNGS4445   | 198    | Cx. pipiens          |              | 18        | BGSENT    | 8/27/18   | SLEV  |
| Kings  | KNGS4445   | 200    | Cx. pipiens          |              | 19        | BGSENT    | 8/27/18   | SLEV  |
| Kings  | KNGS4447   | 201    | Cx. pipiens          |              | 47        | BGSENT    | 8/27/18   | WNV   |
| Kings  | KNGS4447   | 203    | Cx. pipiens          |              | 32        | BGSENT    | 8/27/18   | SLEV  |
| Kings  | KNGS55011  | 222    | Cx. tarsalis         | Hanford      | 14        | BGSENT    | 8/30/18   | SLEV  |

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|             |            |      |                      |                 |    |        |         |      |
|-------------|------------|------|----------------------|-----------------|----|--------|---------|------|
| Kings       | KNGS55122  | 215  | Cx. pipiens          | Hanford         | 23 | BGSENT | 8/29/18 | WNV  |
| Kings       | KNGS8022   | 206  | Cx. tarsalis         | Lemoore         | 49 | CO2    | 8/27/18 | WNV  |
| Los Angeles | GRLA2023   | 5761 | Cx. quinquefasciatus | Reseda          | 16 | GRVD   | 8/28/18 | WNV  |
| Los Angeles | GRLA2032   | 5762 | Cx. quinquefasciatus | Northridge      | 39 | GRVD   | 8/28/18 | WNV  |
| Los Angeles | GRLA2346   | 770  | Cx. quinquefasciatus | Montebello      | 50 | GRVD   | 8/28/18 | WNV  |
| Los Angeles | GRLA2555   | 5759 | Cx. quinquefasciatus | Encino          | 35 | GRVD   | 8/28/18 | WNV  |
| Los Angeles | GRLA2574   | 5775 | Cx. quinquefasciatus | Sherman Oaks    | 50 | GRVD   | 8/30/18 | WNV  |
| Los Angeles | GRLA2650   | 5778 | Cx. quinquefasciatus | Encino          | 50 | GRVD   | 8/30/18 | WNV  |
| Los Angeles | GRLA3034   | 5782 | Cx. quinquefasciatus | North Hills     | 42 | GRVD   | 8/30/18 | WNV  |
| Los Angeles | GRLA3066   | 5771 | Cx. quinquefasciatus | North Hollywood | 50 | BGSENT | 8/29/18 | WNV  |
| Los Angeles | GRLA3102   | 5767 | Cx. quinquefasciatus | Studio City     | 27 | GRVD   | 8/29/18 | WNV  |
| Madera      | MADR12     | 226  | Cx. quinquefasciatus | Madera          | 50 | CO2    | 8/29/18 | WNV  |
| Madera      | MADR192    | 222  | Cx. quinquefasciatus | Madera          | 30 | CO2    | 8/29/18 | WNV  |
| Madera      | MADR195    | 223  | Cx. quinquefasciatus | Madera          | 47 | CO2    | 8/29/18 | WNV  |
| Madera      | MADR198    | 225  | Cx. tarsalis         | Madera          | 25 | CO2    | 8/29/18 | WNV  |
| Madera      | MADR265    | 239  | Cx. quinquefasciatus | Madera          | 37 | CO2    | 8/31/18 | SLEV |
| Madera      | MADR307    | 244  | Cx. tarsalis         | Madera          | 36 | CO2    | 8/31/18 | WNV  |
| Madera      | MADR894    | 220  | Cx. tarsalis         | Mendota         | 50 | CO2    | 8/28/18 | WNV  |
| Madera      | MADR904    | 218  | Cx. quinquefasciatus | Madera          | 50 | CO2    | 8/28/18 | WNV  |
| Placer      | PLCR1023   | 2014 | Cx. tarsalis         | Roseville       | 10 | CO2    | 9/4/18  | WNV  |
| Placer      | PLCR110    | 1957 | Cx. stigmatosoma     | Roseville       | 28 | CO2    | 8/29/18 | WNV  |
| Placer      | PLCR516    | 2018 | Cx. tarsalis         | Roseville       | 16 | CO2    | 9/4/18  | WNV  |
| Placer      | PLCR525    | 2040 | Cx. tarsalis         | Lincoln         | 50 | CO2    | 9/5/18  | WNV  |
| Placer      | PLCR525    | 2041 | Cx. tarsalis         | Lincoln         | 23 | CO2    | 9/5/18  | WNV  |
| Placer      | PLCR86     | 2002 | Cx. pipiens          | Rocklin         | 49 | CO2    | 9/4/18  | WNV  |
| Placer      | PLCR86     | 2004 | Cx. stigmatosoma     | Rocklin         | 24 | CO2    | 9/4/18  | WNV  |
| Riverside   | COAV17     | 3702 | Cx. tarsalis         | Mecca           | 35 | CO2    | 9/5/18  | SLEV |
| Riverside   | COAV34     | 3697 | Cx. tarsalis         | Mecca           | 34 | CO2    | 9/5/18  | SLEV |
| Riverside   | COAV35     | 3689 | Cx. tarsalis         | Mecca           | 50 | CO2    | 9/5/18  | SLEV |
| Riverside   | COAV35     | 3690 | Cx. tarsalis         | Mecca           | 50 | CO2    | 9/5/18  | SLEV |
| Riverside   | COAV35     | 3690 | Cx. tarsalis         | Mecca           | 50 | CO2    | 9/5/18  | WNV  |
| Riverside   | COAV35     | 3692 | Cx. tarsalis         | Mecca           | 35 | CO2    | 9/5/18  | SLEV |
| Riverside   | COAV540    | 3701 | Cx. tarsalis         | Mecca           | 50 | CO2    | 9/5/18  | SLEV |
| Riverside   | NWST261    | 141  | Cx. quinquefasciatus | Riverside       | 50 | CO2    | 8/30/18 | WNV  |
| Riverside   | NWST58     | 139  | Cx. quinquefasciatus | Riverside       | 35 | CO2    | 8/29/18 | WNV  |
| Sacramento  | SAYO201006 | 5636 | Cx. tarsalis         | Sacramento      | 50 | CO2    | 9/5/18  | WNV  |
| Sacramento  | SAYO213017 | 5614 | Cx. pipiens          | Sacramento      | 46 | GRVD   | 9/5/18  | WNV  |
| Sacramento  | SAYO213048 | 5616 | Cx. pipiens          | Sacramento      | 5  | CO2    | 9/5/18  | WNV  |
| Sacramento  | SAYO214020 | 5512 | Cx. pipiens          | Rancho Cordova  | 11 | GRVD   | 8/31/18 | WNV  |
| Sacramento  | SAYO222032 | 5525 | Cx. pipiens          | Sacramento      | 9  | GRVD   | 9/5/18  | WNV  |
| Sacramento  | SAYO243001 | 5413 | Cx. pipiens          | Elk Grove       | 50 | CO2    | 8/30/18 | WNV  |
| Sacramento  | SAYO243009 | 5563 | Cx. tarsalis         | Elk Grove       | 32 | CO2    | 9/5/18  | WNV  |
| Sacramento  | SAYO243009 | 5565 | Cx. pipiens          | Elk Grove       | 50 | CO2    | 9/5/18  | WNV  |
| Sacramento  | SAYO243009 | 5567 | Cx. pipiens          | Elk Grove       | 13 | GRVD   | 9/5/18  | WNV  |
| San Joaquin | SJCM8004   | 2169 | Cx. tarsalis         | Lodi            | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8004   | 2170 | Cx. tarsalis         | Lodi            | 39 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8004   | 2171 | Cx. pipiens          | Lodi            | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8005   | 2082 | Cx. tarsalis         | Stockton        | 48 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8009   | 2084 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8018   | 2153 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8018   | 2154 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8018   | 2155 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8018   | 2156 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |
| San Joaquin | SJCM8018   | 2157 | Cx. tarsalis         | Stockton        | 50 | CO2    | 9/5/18  | WNV  |

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|-------------|----------|------|--------------|------------|----|-----|--------|-----|
| San Joaquin | SJCM8018 | 2158 | Cx. tarsalis | Stockton   | 44 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8018 | 2159 | Cx. pipiens  | Stockton   | 23 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8022 | 2100 | Cx. pipiens  | Holt       | 17 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8029 | 2211 | Cx. tarsalis | Farmington | 49 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8029 | 2212 | Cx. pipiens  | Farmington | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8037 | 2180 | Cx. tarsalis | Lathrop    | 20 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8037 | 2181 | Cx. pipiens  | Lathrop    | 29 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8041 | 2136 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8041 | 2137 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8041 | 2138 | Cx. pipiens  | Lodi       | 47 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8045 | 2133 | Cx. tarsalis | Thornton   | 28 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8049 | 2122 | Cx. pipiens  | Stockton   | 12 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8056 | 2174 | Cx. tarsalis | Manteca    | 44 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8078 | 2160 | Cx. tarsalis | Stockton   | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8079 | 2191 | Cx. pipiens  | Manteca    | 51 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8097 | 2148 | Cx. tarsalis | Banta      | 30 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8100 | 2131 | Cx. tarsalis | Tracy      | 11 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8143 | 2151 | Cx. tarsalis | Stockton   | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8160 | 2112 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8160 | 2113 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8160 | 2114 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8160 | 2115 | Cx. tarsalis | Lodi       | 10 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8161 | 2183 | Cx. pipiens  | Ripon      | 42 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8199 | 2163 | Cx. tarsalis | Manteca    | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8199 | 2164 | Cx. tarsalis | Manteca    | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8199 | 2166 | Cx. pipiens  | Manteca    | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8199 | 2167 | Cx. pipiens  | Manteca    | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8199 | 2168 | Cx. pipiens  | Manteca    | 41 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8200 | 2218 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8200 | 2219 | Cx. tarsalis | Lodi       | 7  | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8203 | 2105 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8203 | 2106 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8203 | 2110 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8206 | 2139 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8206 | 2146 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8208 | 2214 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8208 | 2215 | Cx. tarsalis | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8208 | 2216 | Cx. tarsalis | Lodi       | 44 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8208 | 2217 | Cx. pipiens  | Lodi       | 24 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2232 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2234 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2235 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2236 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2237 | Cx. pipiens  | Lodi       | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8209 | 2238 | Cx. pipiens  | Lodi       | 46 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8210 | 2227 | Cx. pipiens  | Escalon    | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8210 | 2228 | Cx. pipiens  | Escalon    | 39 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8218 | 2203 | Cx. tarsalis | Escalon    | 19 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8218 | 2204 | Cx. pipiens  | Escalon    | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8218 | 2205 | Cx. pipiens  | Escalon    | 50 | CO2 | 9/7/18 | WNV |
| San Joaquin | SJCM8219 | 2130 | Cx. pipiens  | Stockton   | 26 | CO2 | 9/5/18 | WNV |
| San Joaquin | SJCM8226 | 2120 | Cx. pipiens  | Stockton   | 29 | CO2 | 9/5/18 | WNV |
| Stanislaus  | TRLK1304 | 1320 | Cx. tarsalis | Patterson  | 3  | CO2 | 9/5/18 | WNV |
| Stanislaus  | TRLK1615 | 1272 | Cx. tarsalis | Modesto    | 50 | CO2 | 9/5/18 | WNV |

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|            |            |      |                      |                 |    |        |         |      |
|------------|------------|------|----------------------|-----------------|----|--------|---------|------|
| Stanislaus | TRLK1616   | 1265 | Cx. tarsalis         | Modesto         | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK1712   | 1288 | Cx. tarsalis         | Newman          | 36 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK18179  | 1344 | Cx. tarsalis         | Modesto         | 15 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK18255  | 1315 | Cx. pipiens          | Hickman         | 30 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK2      | 1330 | Cx. tarsalis         | Vernalis        | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK312    | 1303 | Cx. tarsalis         | Newman          | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK312    | 1304 | Cx. tarsalis         | Newman          | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK312    | 1307 | Cx. tarsalis         | Newman          | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK319    | 1287 | Cx. pipiens          | Newman          | 26 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK322    | 1333 | Cx. tarsalis         | Vernalis        | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK322    | 1336 | Cx. tarsalis         | Vernalis        | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK437    | 1341 | Cx. tarsalis         | Patterson       | 46 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK549    | 1310 | Cx. tarsalis         | Newman          | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK9712   | 1318 | Cx. tarsalis         | Crows Landing   | 50 | CO2    | 9/5/18  | WNV  |
| Stanislaus | TRLK9712   | 1319 | Cx. tarsalis         | Crows Landing   | 47 | CO2    | 9/5/18  | WNV  |
| Sutter     | SUYA44     | 346  | Cx. tarsalis         | Pleasant Grove  | 41 | CO2    | 9/5/18  | WNV  |
| Tulare     | DLTA6404   | 3139 | Cx. quinquefasciatus | Dinuba          | 16 | CO2    | 9/5/18  | SLEV |
| Tulare     | DLTA6404   | 3140 | Cx. tarsalis         | Dinuba          | 26 | CO2    | 9/5/18  | WNV  |
| Tulare     | DLTA6404   | 3144 | Cx. tarsalis         | Dinuba          | 40 | CO2    | 9/5/18  | SLEV |
| Tulare     | DLTA6404   | 3149 | Cx. tarsalis         | Dinuba          | 50 | CO2    | 9/5/18  | SLEV |
| Tulare     | DLTA6404   | 3150 | Cx. tarsalis         | Dinuba          | 37 | CO2    | 9/5/18  | SLEV |
| Tulare     | DLTA6405   | 3136 | Cx. quinquefasciatus | Dinuba          | 15 | CO2    | 9/5/18  | WNV  |
| Tulare     | DLTA6405   | 3137 | Cx. tarsalis         | Dinuba          | 23 | CO2    | 9/5/18  | SLEV |
| Tulare     | DLTA6407   | 3191 | Cx. quinquefasciatus | Dinuba          | 43 | GRVD   | 9/5/18  | SLEV |
| Tulare     | DLTA6407   | 3191 | Cx. quinquefasciatus | Dinuba          | 43 | GRVD   | 9/5/18  | WNV  |
| Tulare     | DLTA6408   | 3120 | Cx. quinquefasciatus | Dinuba          | 32 | GRVD   | 8/30/18 | WNV  |
| Tulare     | DLTA6417   | 3186 | Cx. quinquefasciatus | Dinuba          | 30 | GRVD   | 9/5/18  | WNV  |
| Tulare     | DLTA8419   | 3183 | Cx. quinquefasciatus | Goshen          | 50 | GRVD   | 9/5/18  | SLEV |
| Tulare     | DLTA8425   | 3164 | Cx. quinquefasciatus | Visalia         | 50 | BGSENT | 9/5/18  | SLEV |
| Tulare     | DLTA8427   | 3187 | Cx. quinquefasciatus | Visalia         | 41 | GRVD   | 9/5/18  | SLEV |
| Tulare     | DLTA8434   | 3171 | Cx. quinquefasciatus | Visalia         | 50 | BGSENT | 9/5/18  | SLEV |
| Tulare     | DLTA8435   | 3167 | Cx. quinquefasciatus | Visalia         | 18 | BGSENT | 9/5/18  | SLEV |
| Tulare     | DLTA9402   | 3162 | Cx. quinquefasciatus | Visalia         | 34 | BGSENT | 9/5/18  | SLEV |
| Tulare     | DLTA9411   | 3169 | Cx. quinquefasciatus | Visalia         | 23 | BGSENT | 9/5/18  | SLEV |
| Tulare     | DLTA9501   | 3128 | Cx. quinquefasciatus | Farmersville    | 34 | CO2    | 8/31/18 | SLEV |
| Tulare     | DLTA9506   | 3117 | Cx. quinquefasciatus | Visalia         | 10 | BGSENT | 8/30/18 | SLEV |
| Tulare     | DLTA9512   | 3179 | Cx. quinquefasciatus | Farmersville    | 25 | GRVD   | 9/5/18  | WNV  |
| Yolo       | SAYO103007 | 5650 | Cx. pipiens          | Dunnigan        | 50 | CO2    | 9/5/18  | WNV  |
| Yolo       | SAYO115008 | 5627 | Cx. tarsalis         | Woodland        | 50 | CO2    | 9/5/18  | WNV  |
| Yolo       | SAYO116002 | 5630 | Cx. tarsalis         | Knights Landing | 29 | CO2    | 9/5/18  | WNV  |
| Yolo       | SAYO136008 | 5454 | Cx. tarsalis         | Davis           | 50 | CO2    | 8/31/18 | WNV  |
| Yolo       | SAYO136010 | 5467 | Cx. tarsalis         | Woodland        | 50 | CO2    | 8/31/18 | WNV  |

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### Sentinel Chickens

| County | Site Code  | City            | Date Bled | Virus | Band 01 | Band 02 | Band 03 |
|--------|------------|-----------------|-----------|-------|---------|---------|---------|
| Butte  | BUCO0006   | Chico           | 8/28/2018 | WNV   | 1531    |         |         |
| Colusa | CLSA0001   | Colusa          | 8/27/2018 | WNV   | 1570    |         |         |
| Merced | MERC0001   | Merced          | 8/17/2018 | SLEV  | 1801    |         |         |
| Merced | MERC0002   | Dos Palos       | 8/31/2018 | WNV   | 1812    |         |         |
| Merced | MERC0003   | Gustine         | 8/31/2018 | WNV   | 1816    | 1817    |         |
| Merced | MERC0501   | El Nido         | 8/31/2018 | WNV   | 1830    |         |         |
| Merced | MERC0006   | Merced          | 8/31/2018 | WNV   | 1823    |         |         |
| Shasta | SHAS9702   | Millville       | 8/31/2018 | WNV   | 1753    | 1758    |         |
| Sutter | SUYA0014   | Sutter          | 8/30/2018 | WNV   | 1363    | 1364    |         |
| Sutter | SUYA0015   | Robbins         | 8/30/2018 | WNV   | 1350    | 1351    |         |
| Sutter | SUYA0030   | Live Oak        | 8/30/2018 | WNV   | 1374    |         |         |
| Sutter | SUYA0084   | Yuba City       | 8/30/2018 | WNV   | 1327    | 1329    | 1331    |
| Yolo   | SAYO103013 | Dunnigan        | 9/4/2018  | WNV   | 1919    |         |         |
| Yolo   | SAYO116006 | Knights Landing | 9/4/2018  | WNV   | 1923    |         |         |
| Yuba   | SUYA0010   | Olivehurst      | 8/30/2018 | WNV   | 1344    |         |         |

### 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)

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