

### Report Highlight:

- To date in 2017, a total of 372 mosquito pools in 20 Counties have tested positive for WNV. This is a 57 percent increase in the number of positive pools reported during the same period in 2016.
- There have been no human cases of WNV in 2017.
- To date in 2017, four mosquito pools have tested positive for EEE.
- There have been no human or animal cases of EEE in 2017.

### Human Testing

New Jersey Administrative Code (N.J.A.C.) Title 8 Chapter 57 mandates public health reporting of specified vector-borne diseases to prevent further disease spread.

#### Human Cases<sup>a</sup>

| Mosquito-borne diseases     |                   |            | Tick-borne Diseases          |                   |            |
|-----------------------------|-------------------|------------|------------------------------|-------------------|------------|
|                             | 2017 <sup>b</sup> | 2016 Cases |                              | 2017 <sup>b</sup> | 2016 Cases |
| Chikungunya                 | 3                 | 11         | Babesiosis                   | 110               | 174        |
| Dengue                      | 3                 | 92         | Ehrlichiosis/Anaplasmosis    | 163               | 193        |
| Eastern equine encephalitis | -                 | 1          | Lyme disease                 | 2974              | 4350       |
| West Nile                   | -                 | 13         | Powassan                     | 2                 | -          |
| Zika                        | 20                | 238        | Rocky Mountain spotted fever | 67                | 64         |

<sup>a</sup> Data for 2017 reflect confirmed and probable cases that have been approved by NJDOH. This does not include cases under investigation. All 2017 numbers are preliminary and are subject to change.

<sup>b</sup> Cumulative through week 34: August 20-26, 2017.

### Mosquito Testing\*

The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.

#### West Nile virus (WNV):

- To date this year, 372 mosquito pools in 20 Counties have tested positive for WNV. This is 57 percent higher than the cumulative number of positive pools at week 34 last year. Cumberland County has not reported any WNV positive pools.
- 94% ( $n=349$ ) of the pools positive were *Culex spp.*
- As of week 34, Union, Bergen, Hudson, Hunterdon and Middlesex Counties have the highest number of WNV positive pools identified to date.
- Cape May, Ocean and Warren Counties continue to identify WNV positive pools early this season compared with 2016. As of week 34 last year, these counties had no positive pools.

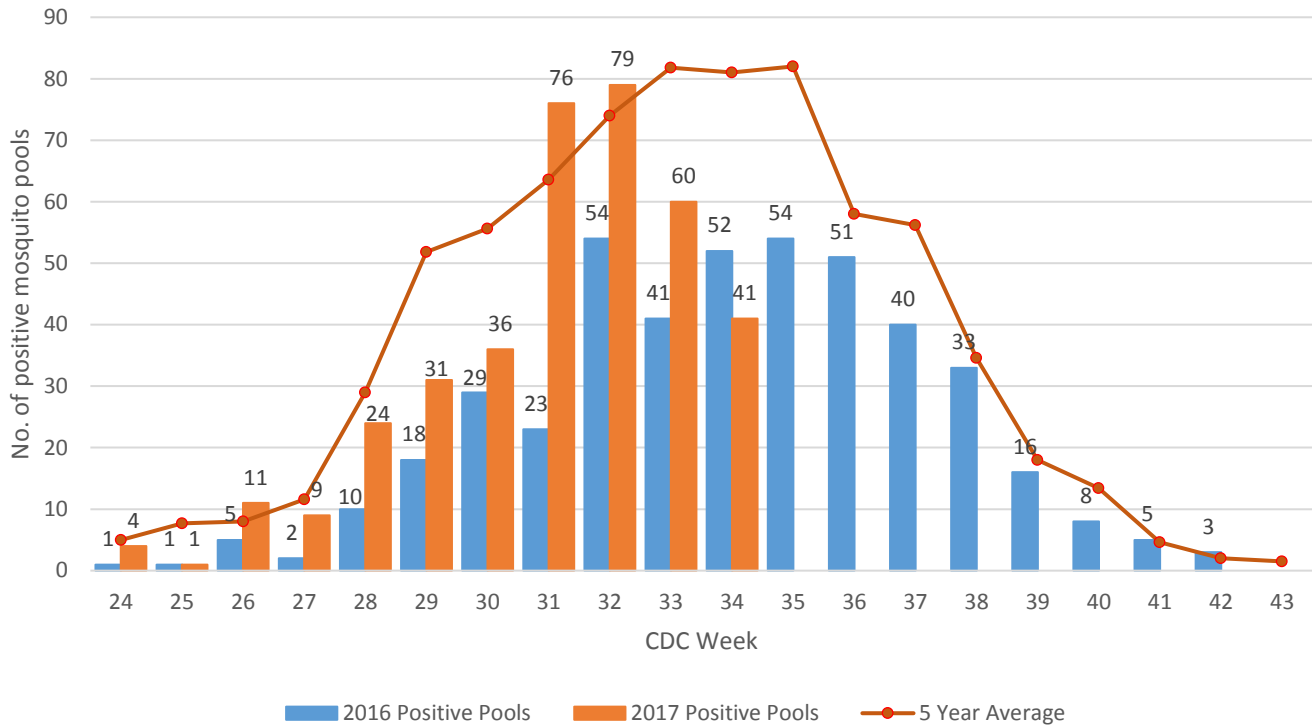
\* Test results may be incomplete; Counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL, CMBSL3 and US Army Public Health as of Aug 29, 2017

#### WNV Positive Mosquito Pools

| County       | Week 34   |           | Cumulative Total (week 34) |            |
|--------------|-----------|-----------|----------------------------|------------|
|              | 2017*     | 2016      | 2017*                      | 2016       |
| Union        | 13        | 3         | 58                         | 44         |
| Bergen       |           | 12        | 57                         | 51         |
| Hudson       |           | 4         | 43                         | 20         |
| Hunterdon    | 8         | 4         | 35                         | 11         |
| Middlesex    | 4         | 4         | 32                         | 16         |
| Gloucester   | 1         | 5         | 26                         | 23         |
| Somerset     | 7         | 4         | 21                         | 7          |
| Morris       |           |           | 17                         | 2          |
| Burlington   | 1         | 2         | 16                         | 6          |
| Camden       |           | 1         | 13                         | 5          |
| Warren       |           |           | 12                         |            |
| Mercer       | 2         | 3         | 10                         | 9          |
| Cape May     |           |           | 7                          |            |
| Ocean        | 1         |           | 7                          |            |
| Salem        | 4         | 1         | 6                          | 1          |
| Essex        |           | 1         | 3                          | 2          |
| Monmouth     |           | 2         | 3                          | 14         |
| Sussex       |           |           | 3                          | 3          |
| Passaic      |           | 5         | 2                          | 17         |
| Atlantic     |           | 1         | 1                          | 6          |
| Cumberland   |           |           |                            |            |
| <b>Total</b> | <b>41</b> | <b>52</b> | <b>372</b>                 | <b>237</b> |

Week 34: August 21-27, 2016; August 20-26, 2017

West Nile Virus Positive Mosquito Pools, NJ (2016 -2017)



**Eastern equine encephalitis virus (EEE):**

- To date, mosquito pools from 14 counties have been tested for EEE.
- To date, 4 mosquito pools in 3 Counties (Burlington, Cumberland and Salem) have tested positive for EEE.
- This is the first EEE positive mosquito pool identified in Salem County since 2012.

EEE Positive Mosquito Pools

| County       | Week 34  |          | Cumulative Total (week 34) |          |
|--------------|----------|----------|----------------------------|----------|
|              | 2017     | 2016     | 2017                       | 2016     |
| Atlantic     |          |          |                            | 1        |
| Bergen       |          |          |                            |          |
| Burlington   |          |          | 2                          |          |
| Camden       |          |          |                            |          |
| Cape May     |          |          |                            | 2        |
| Cumberland   | 1        |          | 1                          |          |
| Essex        |          |          |                            |          |
| Gloucester   |          |          |                            |          |
| Hudson       |          |          |                            |          |
| Hunterdon    |          |          |                            |          |
| Mercer       |          |          |                            |          |
| Middlesex    |          |          |                            | 2        |
| Monmouth     |          |          |                            | 1        |
| Morris       |          |          |                            |          |
| Ocean        |          |          |                            |          |
| Passaic      |          |          |                            |          |
| Salem        | 1        |          | 1                          |          |
| Somerset     |          |          |                            |          |
| Sussex       |          |          |                            |          |
| Union        |          |          |                            |          |
| Warren       |          |          |                            |          |
| <b>Total</b> | <b>2</b> | <b>-</b> | <b>4</b>                   | <b>6</b> |

Week 34: August 21-27, 2016; August 20-26, 2017

**Other viruses:**

To date in 2017, mosquito pools from 4 counties (Burlington, Cape May, Mercer and Sussex) have been tested for other arboviruses. No positive mosquito pools were identified.

**Cumulative 2017 Mosquito Pool Testing (Other Viruses<sup>a</sup>)**

| County       | SLE   |           | LAC   |           | CHIKV |           | DENV  |           | ZIKV  |           |
|--------------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
|              | Pools | Positives | Pools | Positives | Pools | Positives | Pools | Positives | Pools | Positives |
| Atlantic     |       |           |       |           |       |           |       |           |       |           |
| Bergen       |       |           |       |           |       |           |       |           |       |           |
| Burlington   | 13    | 0         | 14    | 0         |       |           |       |           |       |           |
| Camden       |       |           |       |           |       |           |       |           |       |           |
| Cape May     | 492   | 0         |       |           | 339   | 0         |       | 0         | 339   | 0         |
| Cumberland   |       |           |       |           |       |           |       |           |       |           |
| Essex        |       |           |       |           |       |           |       |           |       |           |
| Gloucester   |       |           |       |           |       |           |       |           |       |           |
| Hudson       |       |           |       |           |       |           |       |           |       |           |
| Hunterdon    |       |           |       |           |       |           |       |           |       |           |
| Mercer       |       |           |       |           | 8     | 0         | 8     | 0         | 8     | 0         |
| Middlesex    |       |           |       |           |       |           |       |           |       |           |
| Monmouth     |       |           |       |           |       |           |       |           |       |           |
| Morris       |       |           |       |           |       |           |       |           |       |           |
| Ocean        |       |           |       |           |       |           |       |           |       |           |
| Passaic      |       |           |       |           |       |           |       |           |       |           |
| Salem        |       |           |       |           |       |           |       |           |       |           |
| Somerset     |       |           |       |           |       |           |       |           |       |           |
| Sussex       |       |           | 23    | 0         |       |           |       |           |       |           |
| Union        |       |           |       |           |       |           |       |           |       |           |
| Warren       |       |           |       |           |       |           |       |           |       |           |
| <b>Total</b> | 505   | 0         | 37    | 0         | 347   | 0         | 8     | 0         | 347   | 0         |

<sup>a</sup> St. Louis encephalitis virus (SLE), La Crosse encephalitis virus (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)

Numbers in white columns represent number of pools tested to date in 2017

Numbers in blue shaded columns represent positive pools in 2017

**Equine/Avian /Other Animal Testing**

- Equine testing for WNV and EEE is conducted at the New Jersey Department of Agriculture's Animal Health and Diagnostic Laboratory.
- No animals have tested positive for WNV or EEE in 2017.
- Routine avian testing was discontinued in 2016 but is available upon request at PHEL. In 2017, 2 birds tested negative for WNV.

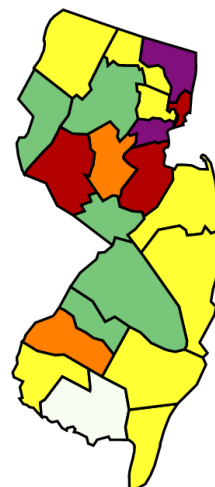
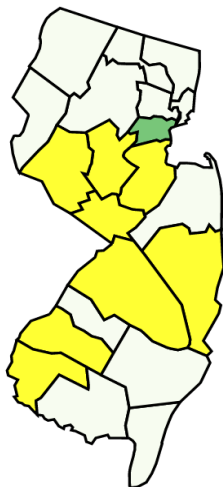
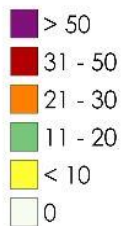
**WNV/EEE Positive Test Results**

|              | Week 34 |      | Cum. Total (Year) |      |
|--------------|---------|------|-------------------|------|
|              | 2017    | 2016 | 2017              | 2016 |
| Equine (EEE) |         |      |                   | 4    |
| Avian        |         |      |                   |      |
| Other        |         |      |                   |      |
| <b>Total</b> | -       | -    | -                 | 4    |

Week 34 WNV Activity (2017)

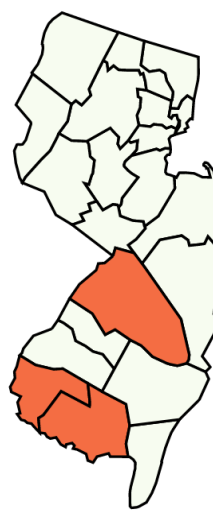
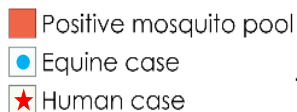
Cumulative WNV Activity 2017

WNV Positive Pools



2016 EEE Activity

Cumulative EEE Activity 2017



\* Data reflects mosquito test results received from PHEL, CMBSL3 and US Army Public Health as of Aug 29, 2017

For More Information

- NJDOH Communicable Disease Service: <http://nj.gov/health/cd/topics/vectorborne.shtml>
- NJDEP Office of Mosquito Control Coordination: <http://www.nj.gov/dep/mosquito/>
- NJDA Division of Animal Health: <http://www.nj.gov/agriculture/divisions/ah/>
- Rutgers Center for Vector Biology: <http://vectorbio.rutgers.edu/>