

### Report Highlight:

- Three human cases of WNV have been reported in NJ (Essex, Hudson and Hunterdon).
- A total of 452 mosquito pools have tested positive for WNV. This is higher than the number of pools reported during the same period in 2017.
- Five mosquito pools have tested positive for EEE. There have been no human or equine EEE cases reported in 2018.
- The number of tick related ED visits continues to decline following seasonal trends observed in past 5 years.

### 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			Tickborne Diseases		
	2018 <sup>b</sup>	2017		2018 <sup>b</sup>	2017
Chikungunya	5	12	Anaplasmosis	50	154
Dengue	5	25	Babesiosis	123	193
Eastern equine encephalitis	-	-	Ehrlichiosis	49	102
Malaria	36	125	Lyme disease	1916	5107
West Nile	3	8	Powassan	-	4
Zika	6	37	Spotted fever group rickettsioses	74	137

<sup>a</sup> Data for 2018 reflect confirmed and probable cases that have been approved by NJDOH. This does not include cases under investigation. All 2018 numbers are preliminary and are subject to change.

<sup>b</sup> Cumulative through week 32: August 5-11, 2018.

### 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):

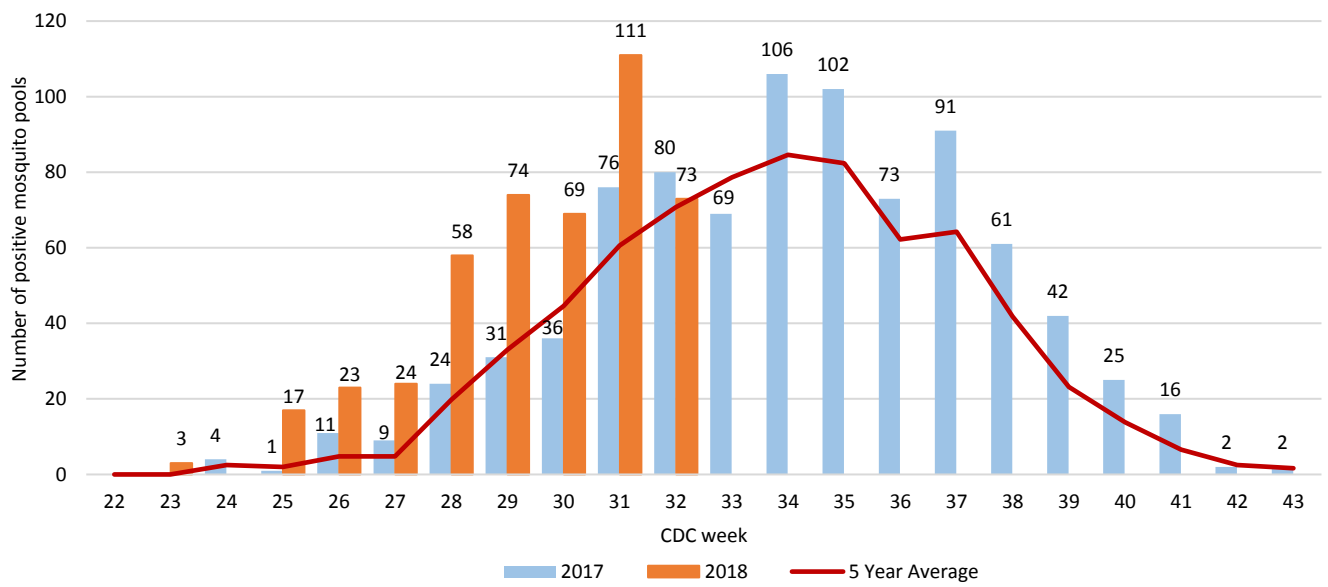
- All NJ counties have reported WNV positive pools. A total of 452 mosquito pools have tested positive for WNV. This is 66 percent higher than the cumulative number of positive pools at week 32 in 2017.
- 88% (n=399) of the positive pools were *Culex sp.*
- A record number of 111 WNV positive pools was reported in week 31. This is 46% higher than the number of positive pools reported at week 31 last year and 82% higher than the 5-year average of WNV positive pools during the same period.
- Compared with the last 5 years, Gloucester, Mercer, Morris, Monmouth, Somerset and Warren counties are reporting a moderate increase in WNV positive pools identified this season.

#### WNV Positive Mosquito Pools

County	Week 32		Cumulative Total (week 32)	
	2018*	2017	2018*	2017
Bergen		14	67	44
Morris	17	5	54	17
Gloucester	10	4	39	16
Somerset	3	1	34	9
Mercer	1		32	4
Hunterdon	10	5	30	21
Hudson		10	28	37
Warren		1	26	9
Middlesex		5	25	23
Camden	4	3	20	10
Union	17	21	20	41
Monmouth		1	18	3
Burlington	4	5	15	13
Ocean	2	2	11	6
Atlantic	3		9	1
Essex			6	3
Cape May		2	5	7
Cumberland			4	
Passaic			4	2
Salem	2		3	2
Sussex		1	2	4
<b>Total</b>	<b>73</b>	<b>80</b>	<b>452</b>	<b>272</b>

\* 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 August 15, 2018

West Nile Virus Positive Mosquito Pools, NJ



**Eastern equine encephalitis virus (EEE)**

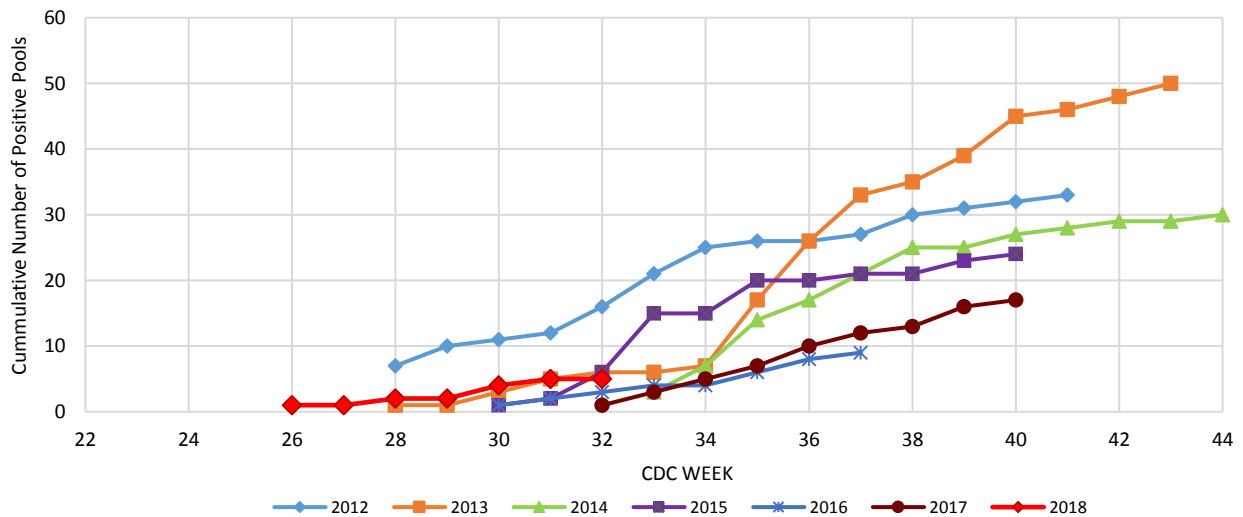
- To date, 1084 mosquito pools from 15 counties have been tested for EEE.
- One EEE positive mosquito pool from Burlington County tested positive in week 32.
- A total of 5 mosquito pools have tested positive for EEE this season. This is the earliest EEE positive pools have been identified in the state in the past 7 years (see chart below).
- All EEE positive pools were *Culiseta melanura* species.

EEE Positive Mosquito Pools

County	Week 32		Cumulative Total (week 32)	
	2018	2017	2018	2017
Camden			3	
Burlington	1		1	
Salem			1	
Atlantic				
Cape May				
Cumberland				
Gloucester				
Monmouth				
<b>Total</b>	<b>1</b>	<b>-</b>	<b>5</b>	<b>-</b>

Week 32: August 6-12, 2017; August 5-11, 2018

EEE Positive Mosquito Pools in NJ, 2012-2018



**Other viruses:**

Mosquito pools from 8 counties (Atlantic, Burlington, Cape May, Middlesex, Ocean, Salem and Sussex) have been tested for other arboviruses. No positive mosquito pools were identified.

**Cumulative 2018 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					18		18		18	
Bergen					1		1		1	
Burlington	32		10							
Cape May	489								223	
Middlesex					2		2		2	
Ocean			4		29		29		29	
Salem			1							
Sussex			3		1		1		1	
<b>Total</b>	521	-	18	-	51	-	51	-	274	-

<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 2018

Numbers in green shaded columns represent positive pools in 2018

**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 2018.
- Routine avian testing has been discontinued but is available upon request at PHEL.

**WNV/EEE Positive Test Results**

	Week 32		Cum. Total (Year)	
	2018	2017	2018	2017
Equine (EEE)				
Equine (WNV)				
Avian				
Other				
<b>Total</b>	-	-	-	-

Week 32: August 6-12, 2017; August 5-11, 2018

**Surveillance Maps\***

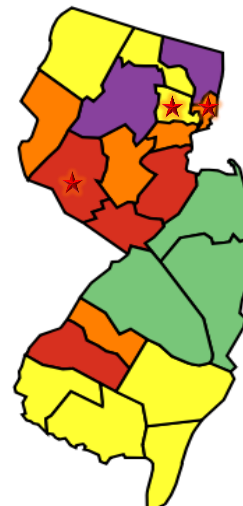
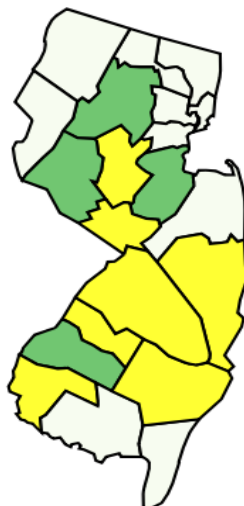
**Week 32 WNV Activity (2018)**

**Cumulative WNV Activity 2018**

**WNV Positive Pools**

- > 50
- 31 - 50
- 21 - 30
- 10 - 20
- < 10

- WNV human case
- WNV equine case

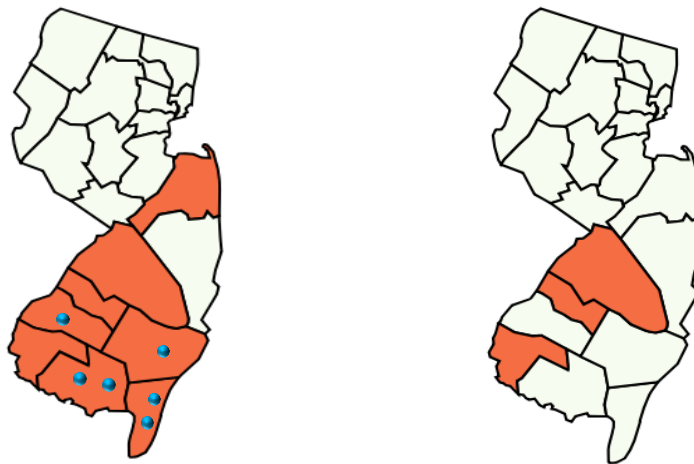


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2017 EEE Activity

Cumulative EEE Activity 2018

- Positive mosquito pool
- Equine case
- ★ Human case

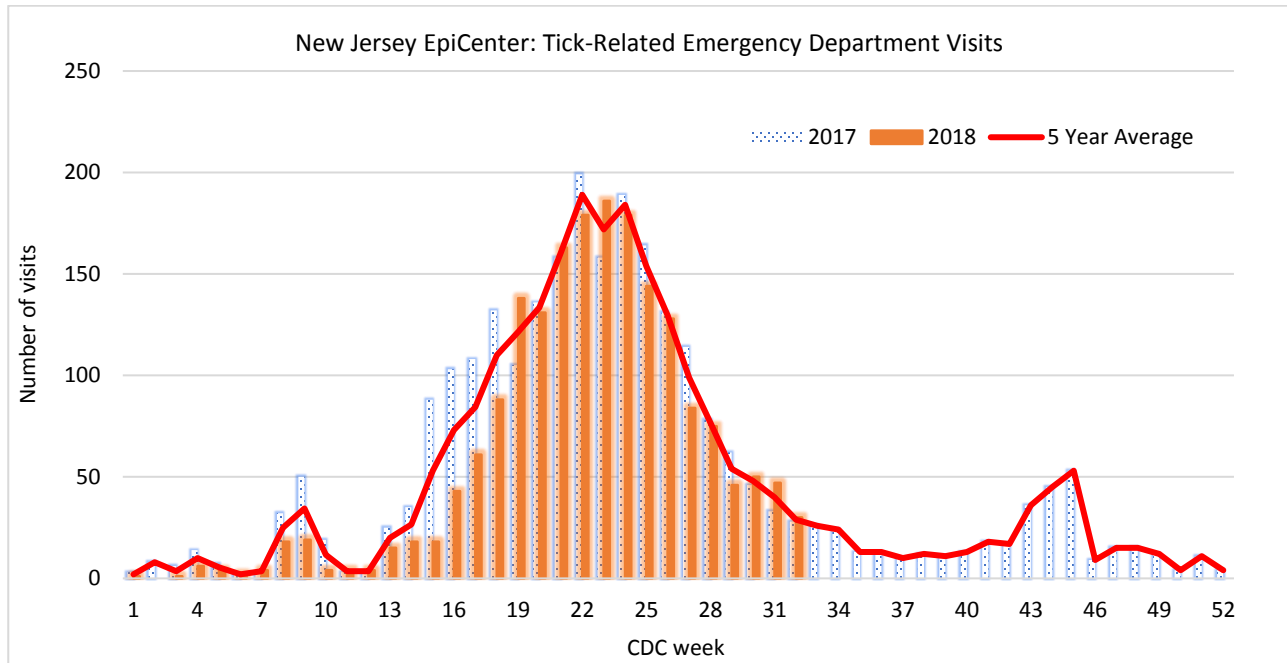


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### Syndromic Surveillance for Tick-related Emergency Department Visits

EpiCenter is a syndromic surveillance system developed and maintained by Health Monitoring Systems, Inc, for monitoring by health departments in the United States. New Jersey’s EpiCenter receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing ED computer systems.

The chart below represents NJ residents seen at emergency departments state wide with a tick-bite complaint or signs/symptoms associated with a reported tick-bite.



*Data reflects ED visits downloaded from EpiCenter as of August 14, 2018*

### 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/>