

Report Highlight:

- Six human cases of WNV have been reported in NJ (Bergen, Essex, Hudson, Hunterdon, Somerset and Ocean).
- A total of 649 mosquito pools have tested positive for WNV. This is higher than the number of pools reported during the same period in 2017.
- One equine case of EEE was reported in Monmouth County. There have been no human EEE cases reported in 2018.
- A total of 9 mosquito pools have tested positive for EEE.

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 ^a

Mosquito-borne diseases			Tickborne Diseases		
	2018 ^b	2017		2018 ^b	2017
Chikungunya	5	12	Anaplasmosis	55	154
Dengue	6	25	Babesiosis	147	193
Eastern equine encephalitis	-	-	Ehrlichiosis	62	102
Malaria	41	125	Lyme disease	2108	5107
West Nile	6	8	Powassan	-	4
Zika	7	37	Spotted fever group rickettsioses	88	137

^a 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.

^b Cumulative through week 34: August 19-25, 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):

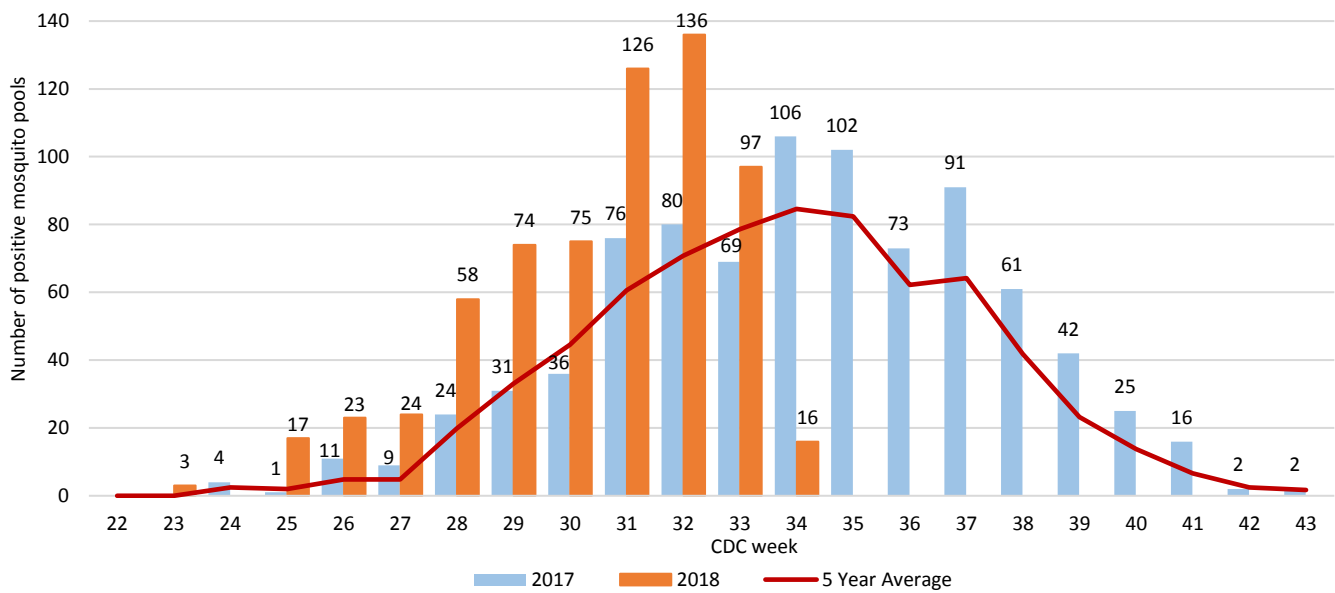
- A total of 649 mosquito pools have tested positive for WNV. This is 45 percent higher than the cumulative number of positive pools at week 34 in 2017.
- 88% ($n=568$) of the positive pools were *Culex sp.*
- 55% of the WNV positive pools this season were reported weeks 31 to 33. This is 60% higher than the cumulative number of positive pools reported at the same time last year and higher than the 5-year average of WNV positive pools reported during the same period.
- As of week 34, Bergen, Morris, Gloucester and Hunterdon counties have the highest number of positive pools identified (43% of cumulative total pools). These Counties are reporting a moderate increase in WNV positive pools identified this season compared with 2017.

WNV Positive Mosquito Pools

County	Week 34		Cumulative Total (week 34)	
	2018*	2017	2018*	2017
Bergen		15	92	72
Morris		2	73	19
Gloucester	9	7	57	32
Hunterdon		8	56	35
Somerset		7	42	21
Hudson		9	41	52
Middlesex		4	38	32
Union		13	38	58
Mercer		7	35	15
Monmouth		3	35	7
Warren		3	30	15
Camden	3	10	26	29
Burlington	4	1	22	16
Ocean		1	14	7
Essex		1	12	4
Atlantic			11	1
Cape May		5	10	14
Passaic			5	2
Sussex		6	5	10
Cumberland			4	
Salem		4	3	6
Total	16	106	649	447

* 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 28, 2018

West Nile Virus Positive Mosquito Pools, NJ



Eastern equine encephalitis virus (EEE)

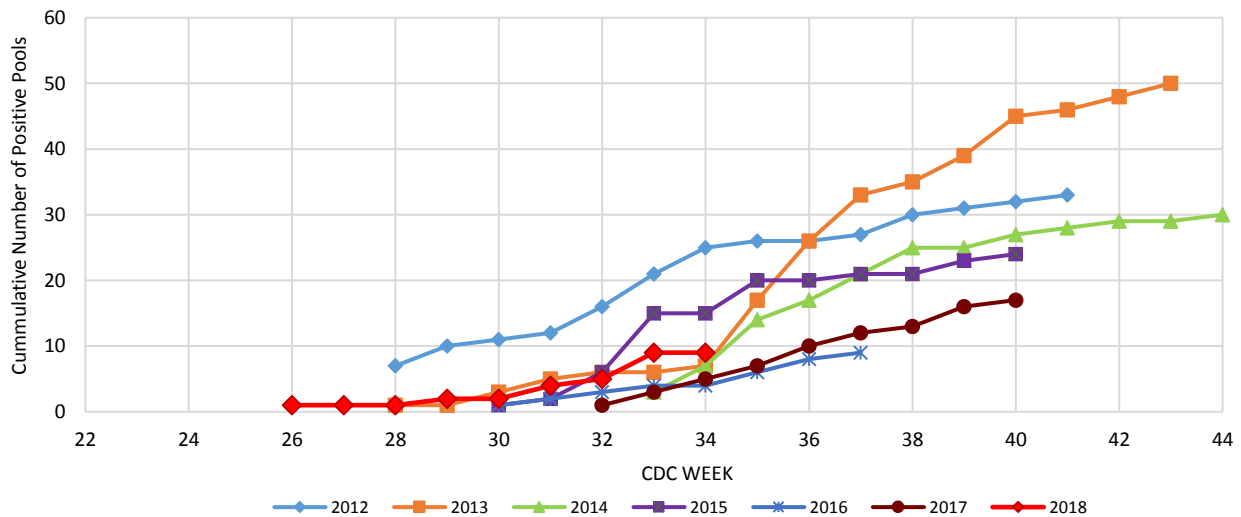
- To date, 1381 mosquito pools from 15 counties have been tested for EEE.
- A total of nine mosquito pools have tested positive for EEE this season.
- The first EEE positive pool was reported in week 26. This is the earliest EEE positive pool identified in the state in the past 7 years (see chart below).
- All EEE positive pools were *Culiseta melanura* species.

EEE Positive Mosquito Pools

County	Week 34		Cumulative Total (week 34)	
	2018	2017	2018	2017
Camden			4	
Burlington		1	3	2
Salem		1	2	1
Atlantic				
Cape May				1
Cumberland				1
Gloucester				
Monmouth				
Total	-	2	9	5

Week 34: August 20-26, 2017; August 19-25, 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^a)

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Positives	Pools	Positives	Pools	Positives	Pools	Positives	Pools	Positives
Atlantic					22		22		22	
Bergen					1		1		1	
Burlington	34		11							
Cape May	620								342	
Middlesex					2		2		2	
Ocean			4		34		34		34	
Salem			3							
Sussex			3		1		1		1	
Total	654	-	21	-	60	-	60	-	402	-

^a 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.

- One equine case of EEE was reported from Monmouth County in week 33 (onset August 17th, euthanized August 18th). The 5-year-old mare was vaccinated in 2017.
- Routine avian testing has been discontinued but is available upon request at PHEL.

WNV/EEE Positive Test Results

	Week 34		Cum. Total (Year)	
	2018	2017	2018	2017
Equine (EEE)		1	1	1
Equine (WNV)				
Avian				
Other				
Total	-	1	1	1

Week 34: August 20-26, 2017; August 19-25, 2018

Surveillance Maps*

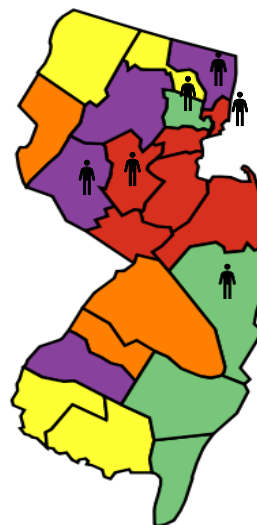
Week 34 WNV Activity (2018)

Cumulative WNV Activity 2018

WNV Positive Pools

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

- WNV human case
- WNV equine case

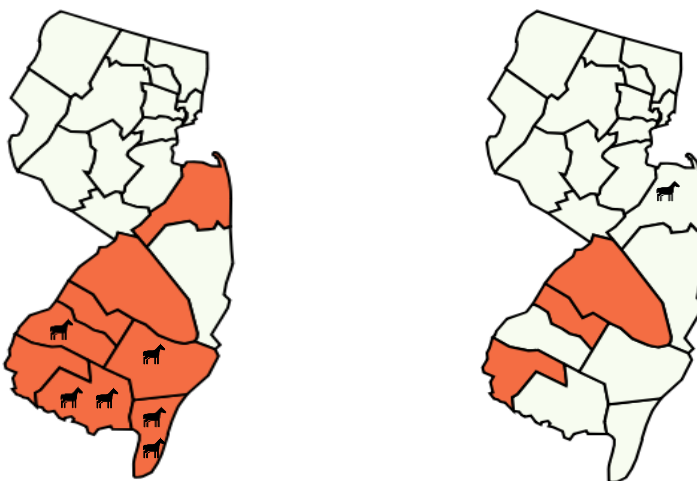


*Testing results may be incomplete. Data reflects mosquito test results received from PHEL, CMBSL3 and US Army Public Health as of August 28, 2018

2017 EEE Activity

Cumulative EEE Activity 2018

- Positive mosquito pool
- Equine case
- Human case

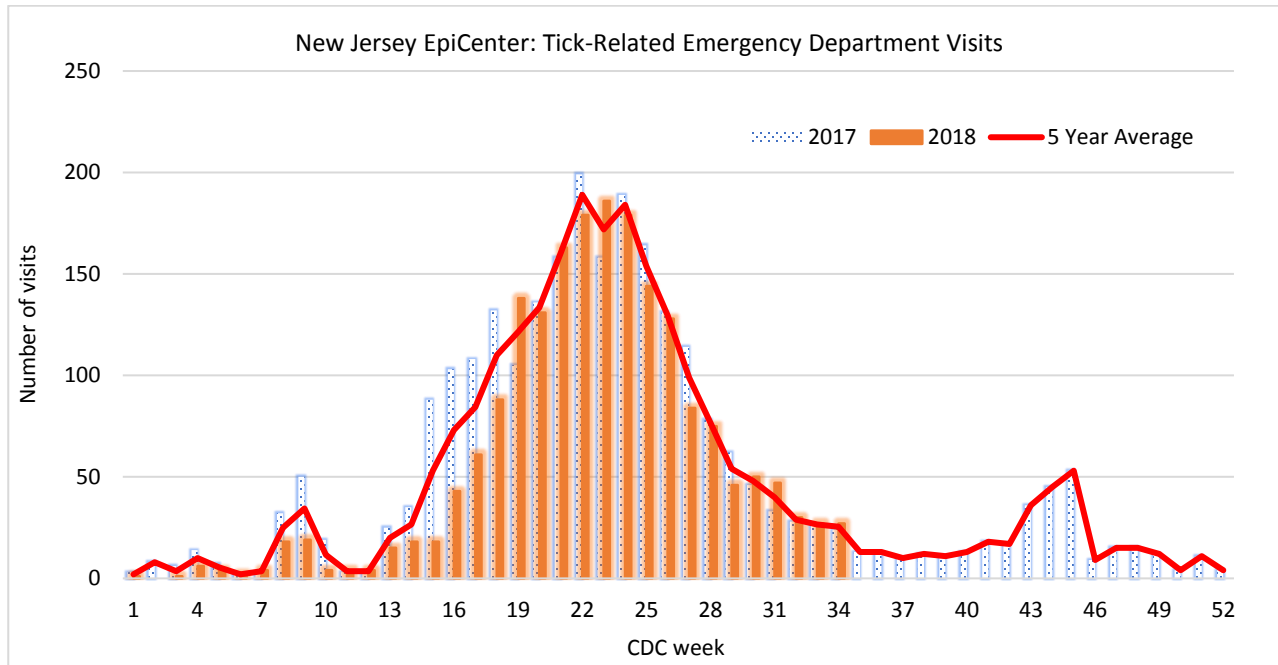


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Syndromic Surveillance for Tick-related Emergency Department Visits

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 28, 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/>