

Report Highlight:

- Nine human cases of WNV have been reported in NJ (Bergen (2), Cape May, Essex, Hudson, Hunterdon (2), Ocean and Somerset)
- A total of 767 mosquito pools have tested positive for WNV.
- Two equine cases of EEE have been reported (Camden and Monmouth). There have been no human EEE cases reported in 2018.
- A total of 10 mosquito pools have tested positive for EEE.
- There is a slight increase in tick related ED visits in week 35 compared with previous weeks.

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	60	154
Dengue	6	25	Babesiosis	153	193
Eastern equine encephalitis	-	-	Ehrlichiosis	62	102
Malaria	49	125	Lyme disease	2248	5107
West Nile	9	8	Powassan	-	4
Zika	7	37	Spotted fever group rickettsioses	92	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 35: Aug 26- Sep 1, 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 767 mosquito pools have tested positive for WNV. This is 40 percent higher than the cumulative number of positive pools at week 35 in 2017.
- 88% ($n=671$) of the positive pools were *Culex sp.*
- 63% of the WNV positive pools this season were reported weeks in 31 to 34. This is 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 35, Bergen county has reported over 100 WNV positive pools. This is 3 weeks earlier compared with 2017.
- Overall, 15 counties are reporting increased WNV activity this season compared with 2017.

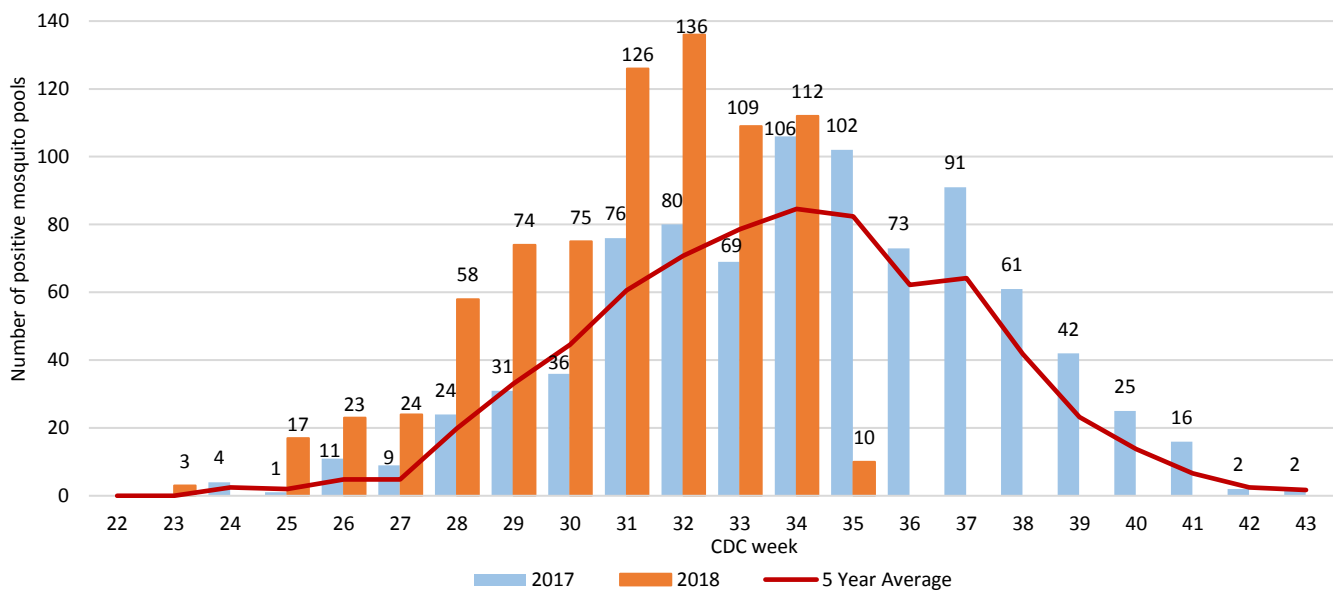
* Test results may be incomplete; Counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL, CMBSL3 and US Army Public Health as of Sept 6, 2018

WNV Positive Mosquito Pools

County	Week 35		Cumulative Total (week 35)	
	2018*	2017	2018*	2017
Bergen		9	103	81
Morris		1	90	20
Gloucester	1	15	72	47
Hunterdon		11	71	46
Hudson		4	49	56
Somerset		6	47	27
Union		16	45	74
Monmouth		4	43	11
Mercer		2	39	17
Middlesex		4	38	36
Warren		6	33	21
Camden	3	1	29	30
Burlington	2	1	25	17
Ocean		4	17	11
Atlantic			15	1
Essex		2	12	6
Cape May		2	11	16
Cumberland	4	2	9	2
Passaic		1	7	3
Sussex		10	7	20
Salem		1	5	7
Total	10	102	767	549

Week 35: Aug 27-Sep 2, 2017; Aug 26-Sep 1, 2018

West Nile Virus Positive Mosquito Pools, NJ



Eastern equine encephalitis virus (EEE)

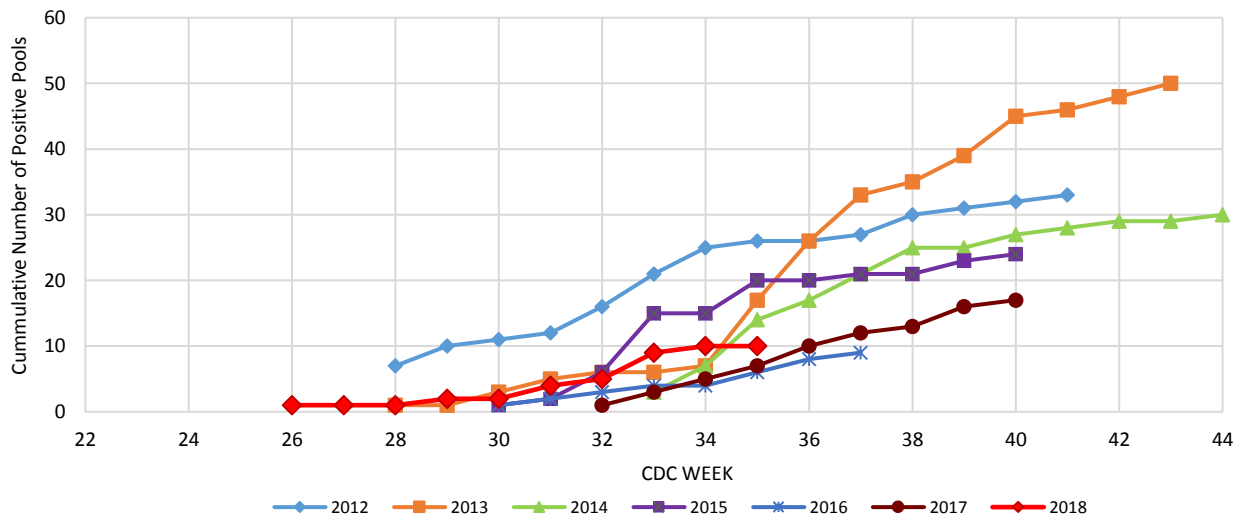
- To date, 1503 mosquito pools from 15 counties have been tested for EEE.
- A total of 10 mosquito pools have tested positive for EEE this season.
- The first EEE positive pool was reported in week 26. This is the earliest EEE positive pool identified in the state in the past 7 years (see chart below).
- All EEE positive pools were *Culiseta melanura* species.

EEE Positive Mosquito Pools

County	Week 35		Cumulative Total (week 35)	
	2018	2017	2018	2017
Camden			4	
Burlington			3	2
Salem			2	1
Monmouth			1	
Atlantic				
Cape May		2		3
Cumberland				1
Gloucester				
Total	-	2	10	7

Week 35: Aug 27-Sep 2, 2017; Aug 26-Sep 1, 2018

EEE Positive Mosquito Pools in NJ, 2012-2018



Other viruses:

Mosquito pools from 9 counties (Atlantic, Bergen, Burlington, Cape May, Gloucester, 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					33		33		33	
Bergen					1		1		1	
Burlington	34		12							
Cape May	663								366	
Gloucester					7		7		7	
Middlesex					2		2		2	
Ocean			4		39		39		39	
Salem			3							
Sussex			3		1		1		1	
Total	697	-	22	-	83	-	83	-	449	-

^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 Camden County in week 35 (onset August 26th, euthanized August 27th). The vaccination status of the 12-year-old gelding was unknown. The first 2018 equine case of EEE was reported from Monmouth County in week 33 (onset August 17th, euthanized August 18th).

WNV/EEE Positive Test Results

	Week 35		Cum. Total (Year)	
	2018	2017	2018	2017
Equine (EEE)	1	1	2	1
Equine (WNV)				
Avian (WNV)			12	
Other				

Week 35: Aug 27-Sep 2, 2017; Aug 26-Sep 1, 2018

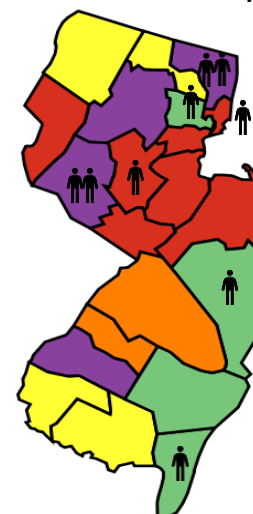
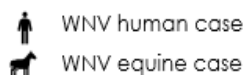
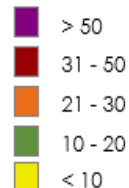
- WNV has been detected in 12 dead bird carcasses from 7 counties submitted to NJDEP/NJDA for testing. The species of birds tested were the American crow, Broad-winged hawk, Cooper's Hawk and Fish crow.

Surveillance Maps*

Week 35 WNV Activity (2018)*

Cumulative WNV Activity 2018

WNV Positive Pools

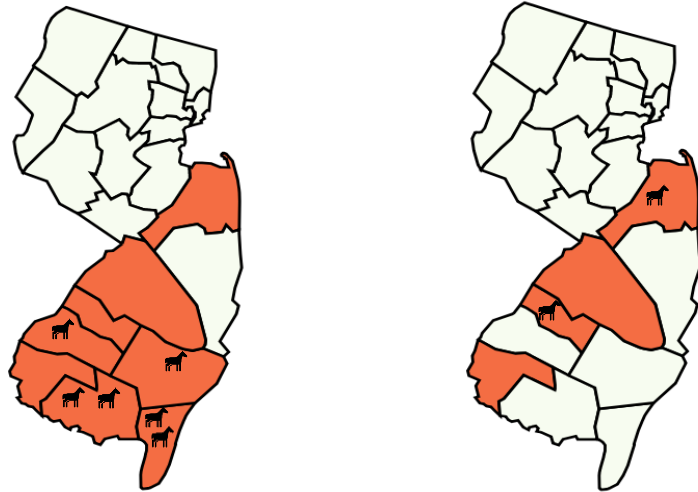


*Test results may be incomplete. Data reflects mosquito test results received from PHEL, CMBSL3 and US Army Public Health as of Sept 6, 2018

2017 EEE Activity

Cumulative EEE Activity 2018

- Positive mosquito pool
- Equine case
- Human case

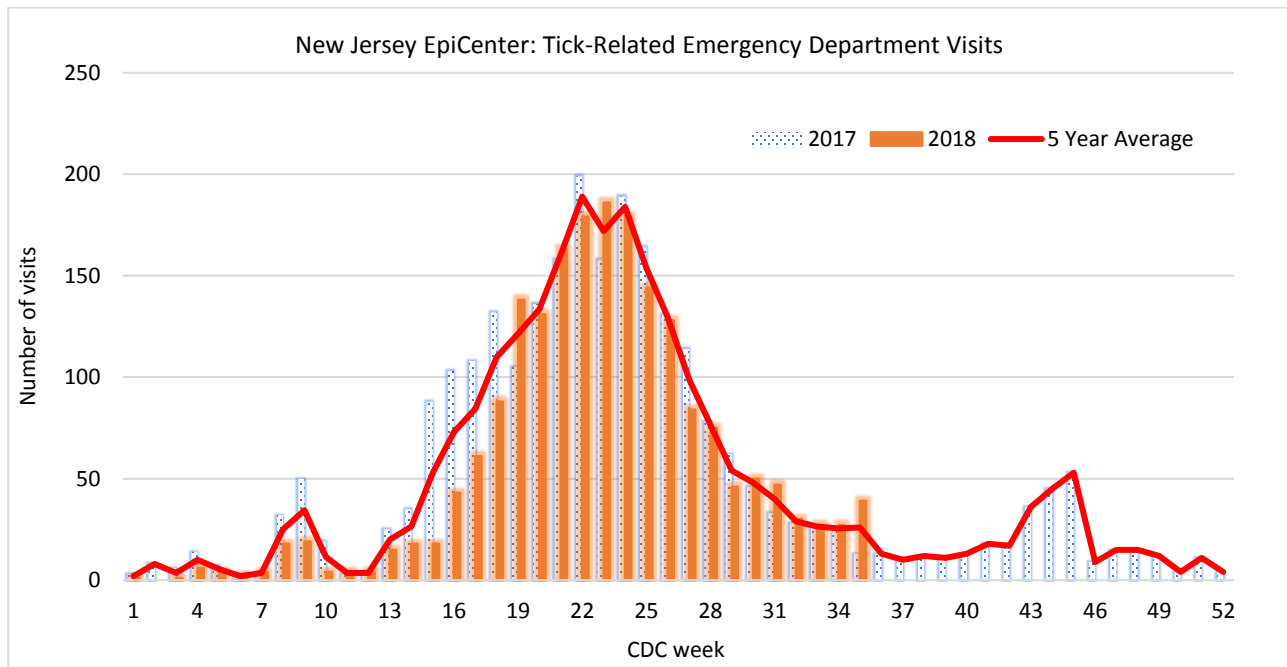


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Syndromic Surveillance for Tick-related Emergency Department Visits

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 Sept 5, 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/>