

### Report Highlight:

- As of week 39, WNV positive mosquito pools have been reported in all 21 Counties.
- To date in 2017, four human cases (2 Mercer, 1 Atlantic, and 1 Monmouth) and one equine case (Gloucester) of WNV have been reported.
- To date in 2017, sixteen mosquito pools and two horses have tested positive for EEE.
- There have been no human 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	8	11	Babesiosis	136	174
Dengue	6	92	Ehrlichiosis/Anaplasmosis	190	193
Eastern equine encephalitis	-	1	Lyme disease	3693	4350
West Nile	4	13	Powassan	3	-
Zika	25	238	Spotted fever rickettsioses	87	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 39: September 24-30, 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):

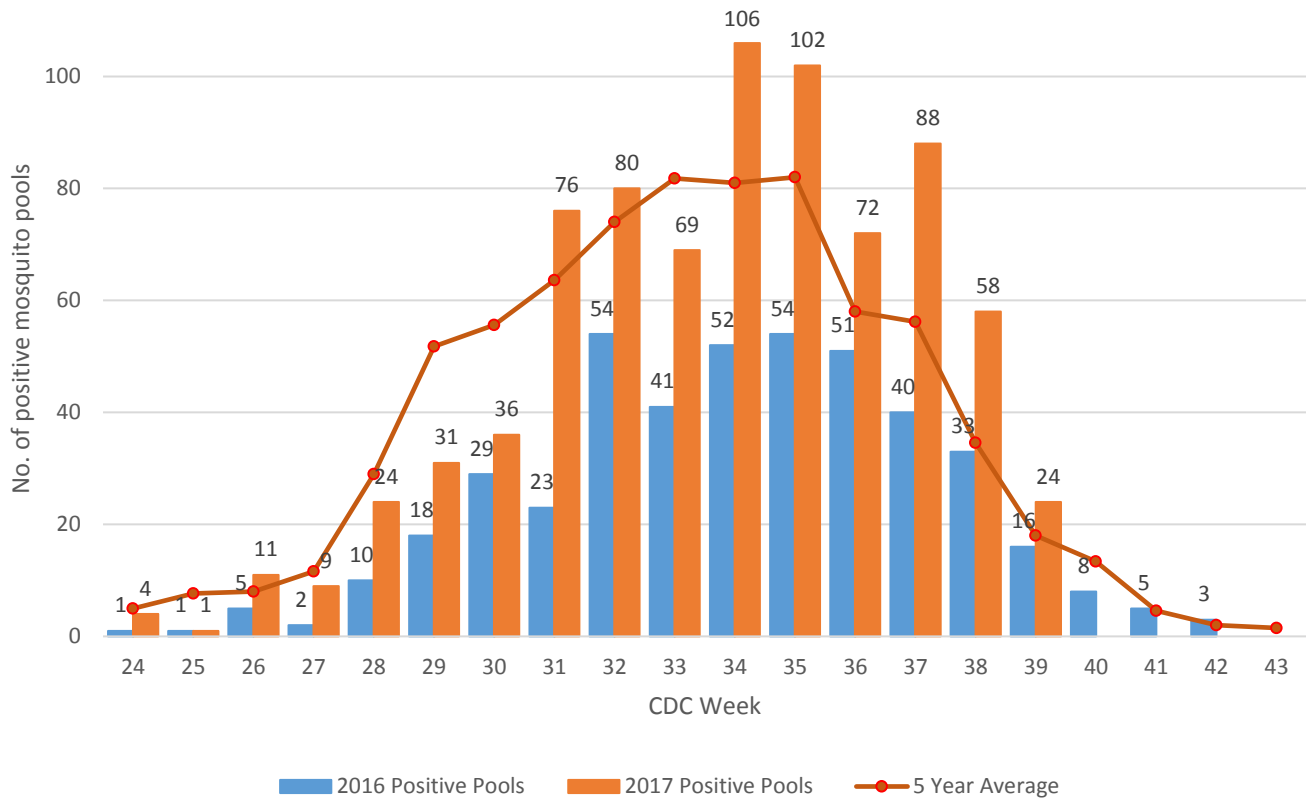
- To date this year, 791 mosquito pools have tested positive for WNV. This is 77 percent higher than the total number of positive pools reported in 2016 ( $n=447$ ).
- 91% ( $n=718$ ) of the pools positive were *Culex spp.*
- As of week 39, Bergen County has reported over 100 WNV positive pools. This is the first time since 2012 the County is reporting over 100 WNV positive pools.
- The number of WNV positive pools reported from week 34 through week 39 is higher than number of positive pools reported at the same time last year and 36 percent higher than the 5-year average of WNV positive pools during the same period.

\* 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 Oct 3, 2017

#### WNV Positive Mosquito Pools

County	Week 39		Cumulative Total (week 39)	
	2017*	2016	2017*	2016
Bergen		1	106	87
Union	2	2	97	77
Gloucester	1	2	92	36
Hunterdon	6	4	86	35
Hudson		2	67	29
Middlesex	6		55	28
Camden	3		37	7
Sussex		1	35	5
Somerset			34	13
Warren	4		31	2
Morris		2	27	10
Burlington			25	8
Mercer	1	1	22	19
Cape May			21	4
Monmouth			14	16
Ocean	1		14	1
Salem			10	1
Essex			6	2
Passaic		1	5	22
Atlantic			4	12
Cumberland			3	1
<b>Total</b>	<b>24</b>	16	<b>791</b>	415

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



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

- To date, mosquito pools from 15 counties (Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Sussex, and Warren) have been tested for EEE.
- As of week 39, a total of 16 mosquito pools in 7 Counties (Atlantic, Burlington, Cape May, Cumberland, Gloucester, Monmouth and Salem) have tested positive for EEE.
- All EEE positive pools were *Culiseta melanura* species.

EEE Positive Mosquito Pools

County	Week 39		Cumulative Total (week 39)	
	2017	2016	2017	2016
Salem	1		4	
Burlington			3	1
Cape May			3	2
Atlantic	1		3	1
Cumberland			1	
Gloucester	1		1	1
Monmouth			1	1
Bergen				
Camden				2
Essex				
Hudson				
Hunterdon				
Mercer				
Middlesex				3
Morris				
Ocean				
Passaic				
Somerset				
Sussex				
Union				
Warren				
<b>Total</b>	<b>3</b>	<b>-</b>	<b>16</b>	<b>11</b>

Week 39: September 25-October 1, 2016; September 24-30, 2017

**Other viruses:**

To date in 2017, mosquito pools from 5 counties (Burlington, Cape May, Mercer, Middlesex 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	21	0	16	0						
Camden										
Cape May	730	0	21	0	434	0		0	601	0
Cumberland										
Essex										
Gloucester										
Hudson										
Hunterdon										
Mercer					8	0	8	0	8	0
Middlesex					1	0	1	0	1	0
Monmouth										
Morris										
Ocean										
Passaic										
Salem										
Somerset										
Sussex			27	0						
Union										
Warren										
<b>Total</b>	751	0	64	0	443	0	9	0	610	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.

- One horse from Gloucester County tested positive for WNV. The 1-year old colt was vaccinated this spring but no second dose or booster shot was given. The illness onset date is currently unknown; specimen was collected on September 24<sup>th</sup>.
- To date in 2017, there have been 2 equine cases of EEE. The first case was reported from Cumberland County (onset August 23<sup>rd</sup>) and the second case from Atlantic County (onset September 17<sup>th</sup>).
- 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 39		Cum. Total (Year)	
	2017	2016	2017	2016
Equine (EEE)			2	4
Equine (WNV)	1		1	
Avian				
Other				
<b>Total</b>	1	-	3	4

## Surveillance Maps\*

Week 39 WNV Activity (2017)

Cumulative WNV Activity 2017

### WNV Positive Pools

> 50

31 - 50

21 - 30

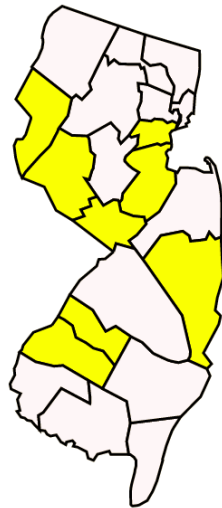
11 - 20

< 10

0

★ WNV human case

● WNV equine case



2016 EEE Activity

Cumulative EEE Activity 2017

Positive mosquito pool

● Equine case

★ Human case



\* Data reflects mosquito test results received from PHEL, CMBSL3 and US Army Public Health as of Oct 3, 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/>