

### Report Highlight:

- As of week 41, WNV positive mosquito pools have been reported in all 21 Counties.
- To date in 2017, seven human cases of WNV have been reported: 2 Mercer, 1 Atlantic, 1 Cape May, 1 Gloucester, 1 Middlesex and 1 Monmouth. There have been two equine cases of WNV (Gloucester and Salem).
- To date in 2017, eighteen mosquito pools and three horses (2 Cumberland and 1 Atlantic) 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	140	174
Dengue	7	92	Ehrlichiosis/Anaplasmosis	193	193
Eastern equine encephalitis	-	1	Lyme disease	3891	4350
West Nile	7	13	Powassan	3	-
Zika	31	238	Spotted fever rickettsioses	98	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 41: October 8-14, 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):

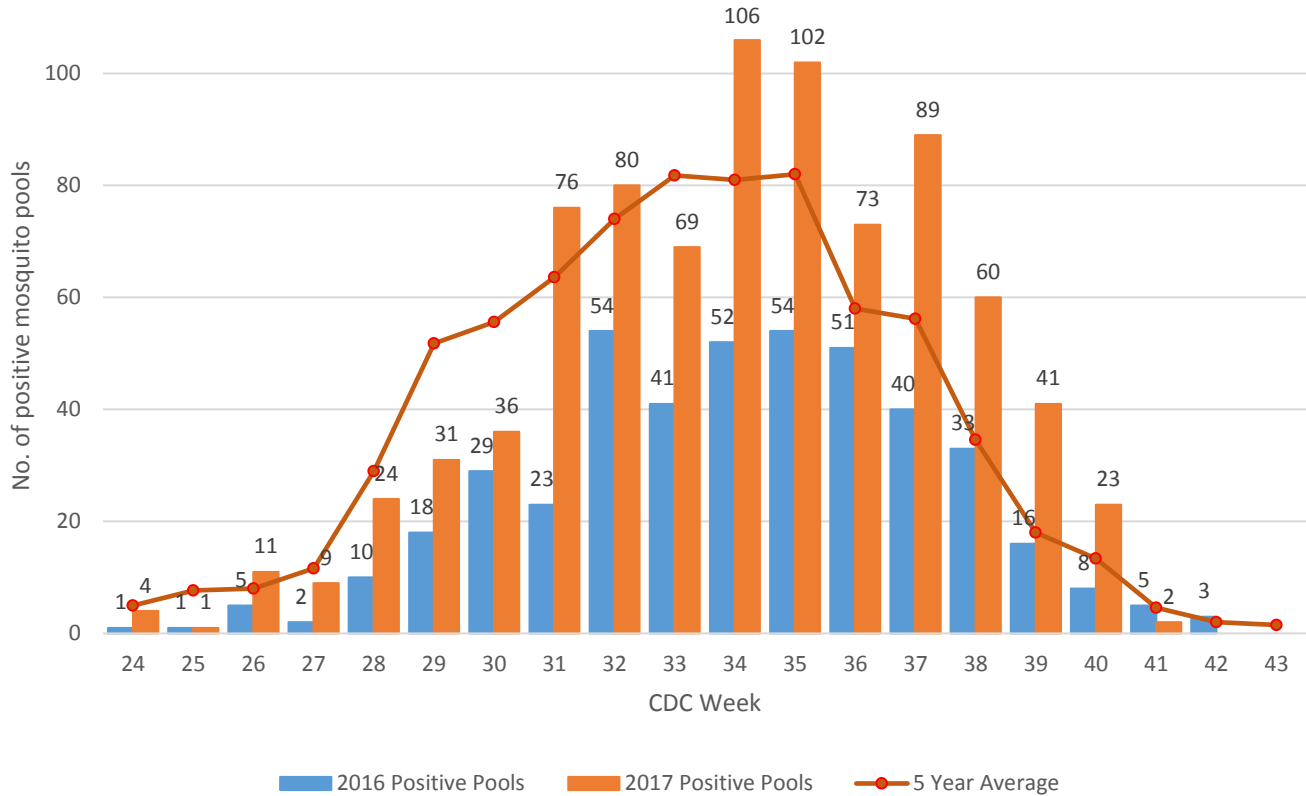
- To date this year, 837 mosquito pools have tested positive for WNV. This is 87 percent higher than the total number of positive pools reported in 2016 ( $n=447$ ).
- 90% ( $n=756$ ) of the pools positive were *Culex spp.*
- As of week 41, Gloucester County has reported 100 WNV positive pools. This is 49 percent higher than the 5-year average of WNV positive pools in reported in Gloucester County during the same period.
- The number of WNV positive pools reported from week 34 through week 40 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 17, 2017

#### WNV Positive Mosquito Pools

County	Week 41		Cumulative Total (week 41)	
	2017*	2016	2017*	2016
Bergen			122	88
Gloucester		3	100	42
Union			98	79
Hunterdon	1		89	39
Hudson			68	32
Middlesex			56	29
Camden			38	8
Sussex		1	37	7
Somerset			37	13
Warren			31	2
Morris			29	12
Burlington			26	8
Cape May		1	23	6
Mercer			22	23
Monmouth			15	16
Ocean	1		15	1
Salem			10	1
Passaic			7	23
Essex			6	2
Atlantic			5	12
Cumberland			3	1
<b>Total</b>	<b>2</b>	<b>5</b>	<b>837</b>	<b>444</b>

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 41, a total of 18 mosquito pools in 8 Counties (Atlantic, Burlington, Camden, 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 41		Cumulative Total (week 41)	
	2017	2016	2017	2016
Salem	1		5	
Burlington			3	1
Cape May			3	2
Atlantic			3	1
Camden			1	2
Cumberland			1	
Gloucester			1	1
Monmouth			1	1
Bergen				
Essex				
Hudson				
Hunterdon				
Mercer				
Middlesex				3
Morris				
Ocean				
Passaic				
Somerset				
Sussex				
Union				
Warren				
<b>Total</b>	<b>1</b>	<b>-</b>	<b>18</b>	<b>11</b>

Week 41: October 9-15, 2016; October 8-14, 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	792	0	51	0	434	0			666	0
Cumberland										
Essex										
Gloucester										
Hudson										
Hunterdon										
Mercer					13	0	13	0	13	0
Middlesex					1	0	1	0	1	0
Monmouth										
Morris										
Ocean										
Passaic										
Salem										
Somerset										
Sussex			29	0						
Union										
Warren										
<b>Total</b>	813	0	96	0	448	0	14	0	680	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.

- To date this year, there have been three equine cases of EEE reported; two from Cumberland County (onset August 23<sup>rd</sup> and September 30<sup>th</sup>) and one from Atlantic County (onset September 17<sup>th</sup>). The two horses from Cumberland were euthanized.
- To date this year, there have been two equine cases of WNV reported; one from Gloucester County (onset August 24<sup>th</sup>) and one from Salem County (onset September 29<sup>th</sup>). Both horses have recovered.
- 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**

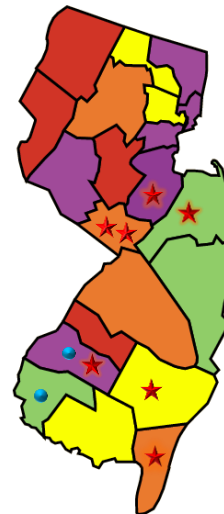
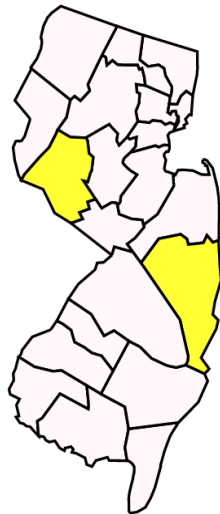
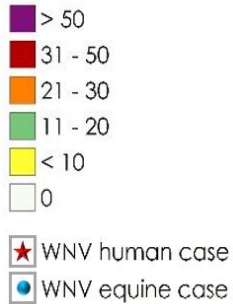
	Week 41		Cum. Total (Year)	
	2017	2016	2017	2016
Equine (EEE)			3	4
Equine (WNV)			2	
Avian				
Other				
<b>Total</b>	-	-	5	4

Surveillance Maps\*

Week 41 WNV Activity (2017)

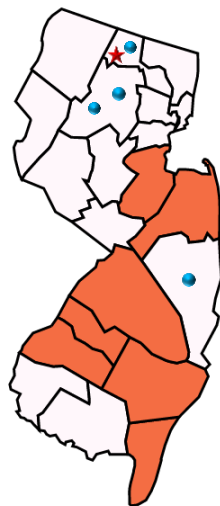
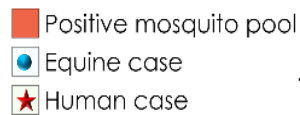
Cumulative WNV Activity 2017

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 Oct 17, 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/>