

Report Highlight:

- As of week 42, 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 five horses (2 Cumberland, 2 Cape May 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^a

Mosquito-borne diseases			Tick-borne Diseases		
	2017 ^b	2016 Cases		2017 ^b	2016 Cases
Chikungunya	8	11	Babesiosis	143	174
Dengue	8	92	Ehrlichiosis/Anaplasmosis	193	193
Eastern equine encephalitis	-	1	Lyme disease	3955	4350
West Nile	7	13	Powassan	3	-
Zika	31	238	Spotted fever rickettsioses	98	64

^a 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.

^b Cumulative through week 42: October 15-21, 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, 854 mosquito pools have tested positive for WNV. This is 91 percent higher than the total number of positive pools reported in 2016 ($n=447$).
- 90% ($n=771$) of the pools positive were *Culex spp.*
- As of week 42, Bergen, Gloucester and Union Counties have the highest number of positive pools this season, reporting 100 or more WNV positive pools.
- The number of WNV positive pools reported from week 34 through week 41 is higher than number of positive pools reported at the same time last year and 46 percent higher than the 5-year average of WNV positive pools during the same period.

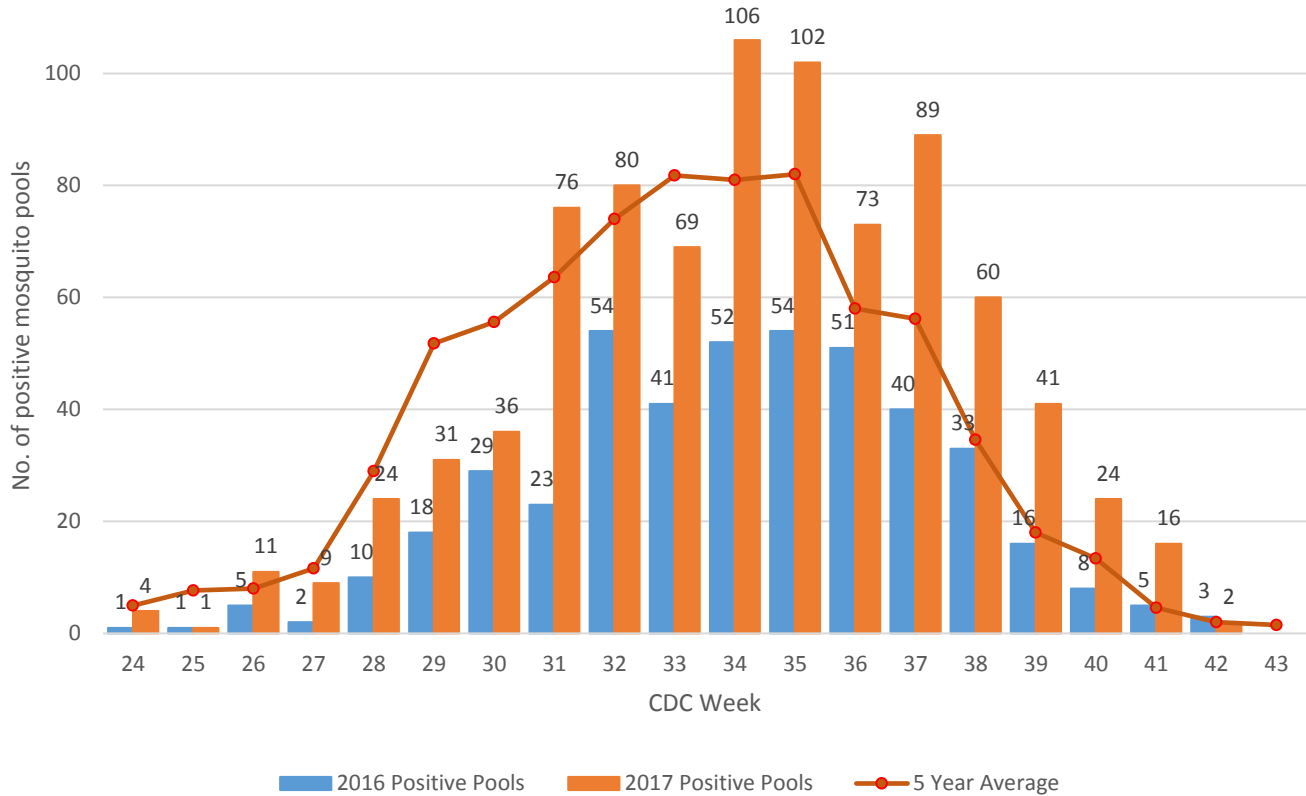
* Test results may be incomplete; Counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL, CMBSL3 and US Army Public Health as of Oct 24, 2017

WNV Positive Mosquito Pools

County	Week 42		Cumulative Total (week 42)	
	2017*	2016	2017*	2016
Bergen			125	88
Gloucester			103	42
Union			100	79
Hunterdon	1		90	39
Hudson			71	32
Middlesex	1		57	29
Sussex			40	7
Camden			38	8
Somerset			37	13
Warren			31	2
Morris			29	12
Burlington		1	26	9
Cape May			23	6
Mercer			22	23
Monmouth			16	16
Ocean			15	1
Salem			10	1
Passaic			7	23
Essex			6	2
Atlantic		2	5	14
Cumberland			3	1
Total	2	3	854	447

Week 42: October 16-22, 2016; October 15-21, 2017

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 42, 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 42		Cumulative Total (week 42)	
	2017	2016	2017	2016
Salem			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				
Total	-	-	18	11

Week 42: October 16-22, 2016; October 15-21, 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^a)

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	810	0	62	0	434	0			682	0
Cumberland										
Essex										
Gloucester										
Hudson										
Hunterdon										
Mercer					13	0	13	0	13	0
Middlesex					2	0	2	0	2	0
Monmouth										
Morris										
Ocean										
Passaic										
Salem										
Somerset										
Sussex			31	0						
Union										
Warren										
Total	831	0	109	0	449	0	15	0	697	0

^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 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.

- Two equine cases of EEE were reported from Cape May County in week 42. The first in an 11-year-old gelding with unknown vaccination history (onset October 17th, euthanized October 17th); and the second in a 10-year-old unvaccinated gelding (onset October 21st, euthanized October 22nd).

Previous EEE cases reported: two from Cumberland County (onset August 23rd and September 30th) and one from Atlantic County (onset September 17th). 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 24th) and one from Salem County (onset September 29th). Both horses have recovered.

WNV/EEE Positive Test Results

	Week 42		Cum. Total (Year)	
	2017	2016	2017	2016
Equine (EEE)	2		5	4
Equine (WNV)			2	
Avian				
Other				
Total	2	-	7	4

Surveillance Maps*

Week 42 WNV Activity (2017)

WNV Positive Pools

> 50

31 - 50

21 - 30

11 - 20

< 10

0

★ WNV human case

● WNV equine case



Cumulative WNV Activity 2017



2016 EEE Activity

Positive mosquito pool

● Equine case

★ Human case



Cumulative EEE Activity 2017



* Data reflects mosquito test results received from PHEL, CMBSL3 and US Army Public Health as of Oct 24, 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/>