

Report Highlight:

- As of week 43, 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	145	174
Dengue	9	92	Ehrlichiosis/Anaplasmosis	210	193
Eastern equine encephalitis	-	1	Lyme disease	4036	4350
West Nile	7	13	Powassan	3	-
Zika	33	238	Spotted fever rickettsioses	100	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 43: October 22-28, 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):

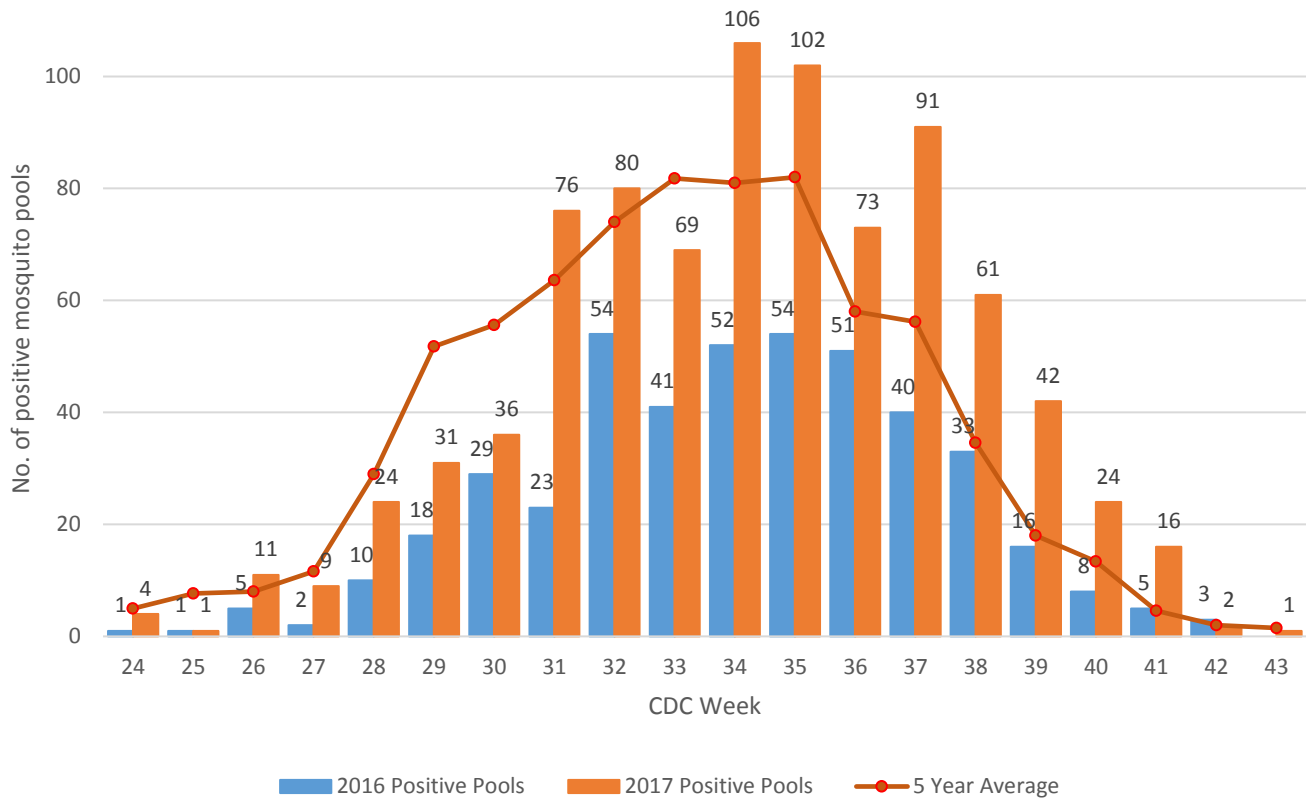
- To date this year, 859 mosquito pools have tested positive for WNV. This is 92 percent higher than the total number of positive pools reported in 2016 ($n=447$).
- 90% ($n=774$) of the pools positive were *Culex spp.*
- As of week 43, Bergen, Gloucester and Union Counties have the highest number of 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 31, 2017

WNV Positive Mosquito Pools

County	Week 43		Cumulative Total (week 43)	
	2017*	2016	2017*	2016
Bergen			125	88
Gloucester			103	42
Union			100	79
Hunterdon			90	39
Hudson			71	32
Middlesex			57	29
Sussex			40	7
Camden			38	8
Somerset			37	13
Warren			31	2
Morris			29	12
Burlington	1		27	9
Cape May			25	6
Mercer			24	23
Monmouth			16	16
Ocean			15	1
Salem			10	1
Passaic			7	23
Essex			6	2
Atlantic			5	14
Cumberland			3	1
Total	1	-	859	447

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 43, 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 43		Cumulative Total (week 43)	
	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 43: October 23-29, 2016; October 22-28, 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	23	0	16	0						
Camden										
Cape May	841	0	62	0	434	0			704	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	864	0	109	0	449	0	15	0	719	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.

- To date this year there have been five equine cases of EEE.
 - Atlantic County (1): 9-year-old mare vaccinated 2 years ago (onset September 17th).
 - Cape May County (2): 10 and 11-year-old unvaccinated geldings (onset October 17th, October 21st). Both horses were euthanized.
 - Cumberland County (2): 5 and 15-year-old unvaccinated mares (onset August 23rd, September 30th). One horse died and the other was euthanized.

- To date this year, there have been two equine cases of WNV.
 - Gloucester County: 1-year old Colt (onset August 24th).
 - Salem County: 10-year-old stallion (onset September 29th). Both horses have recovered.

WNV/EEE Positive Test Results

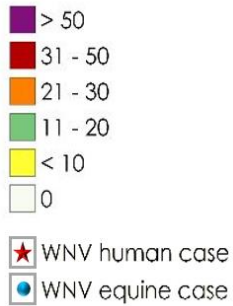
	Week 43		Cum. Total (Year)	
	2017	2016	2017	2016
Equine (EEE)			5	4
Equine (WNV)			2	
Avian				
Other				
Total	-	-	7	4

Surveillance Maps*

Week 43 WNV Activity (2017)

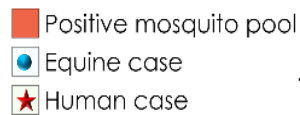
Cumulative WNV Activity 2017

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 31, 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/>