

Report Highlight:

- As of week 40, WNV positive mosquito pools have been reported in all 21 Counties.
- To date in 2017, five human cases (2 Mercer, 1 Atlantic, 1 Gloucester and 1 Monmouth) and two equine cases (Gloucester and Salem) of WNV have been reported.
- To date in 2017, seventeen 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^a

Mosquito-borne diseases			Tick-borne Diseases		
	2017 ^b	2016 Cases		2017 ^b	2016 Cases
Chikungunya	6	11	Babesiosis	140	174
Dengue	6	92	Ehrlichiosis/Anaplasmosis	192	193
Eastern equine encephalitis	-	1	Lyme disease	3783	4350
West Nile	5	13	Powassan	3	-
Zika	25	238	Spotted fever rickettsioses	92	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 40: October 1-7, 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, 812 mosquito pools have tested positive for WNV. This is 82 percent higher than the total number of positive pools reported in 2016 ($n=447$).
- 90% ($n=734$) of the pools positive were *Culex spp.*
- As of week 40, Bergen County has reported over 110 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.

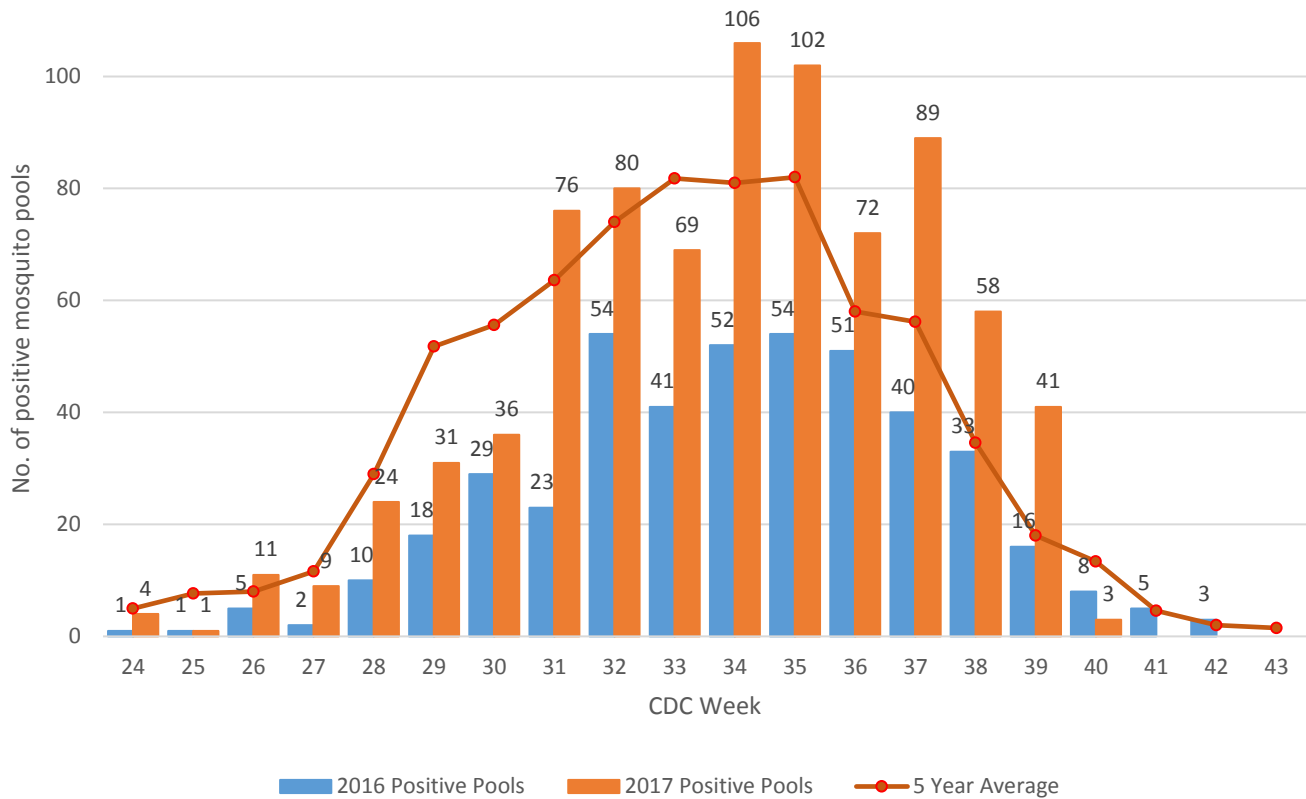
* Test results may be incomplete; Counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL, CMBSL3 and US Army Public Health as of Oct 10, 2017

WNV Positive Mosquito Pools

County	Week 40		Cumulative Total (week 40)	
	2017*	2016	2017*	2016
Bergen			113	88
Union	1		98	79
Gloucester		1	95	39
Hunterdon			86	39
Hudson		1	68	32
Middlesex		1	55	29
Camden	1	1	38	8
Somerset			36	13
Sussex			35	6
Warren			31	2
Morris			29	12
Burlington	1		26	8
Mercer		3	22	23
Cape May		1	21	5
Monmouth			14	16
Ocean			14	1
Salem			10	1
Passaic			7	23
Essex			6	2
Atlantic			5	12
Cumberland			3	1
Total	3	8	812	439

Week 40: October 2-8, 2016; October 1-7, 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 40, a total of 17 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 40		Cumulative Total (week 40)	
	2017	2016	2017	2016
Salem			4	
Burlington			3	1
Cape May			3	2
Atlantic			3	1
Camden	1		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	1	-	17	11

Week 40: October 2-8, 2016; October 1-7, 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	765	0	41	0	434	0		0	643	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										
Total	786	0	84	0	443	0	9	0	652	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.

- A second equine case of WNV was reported from Salem County (onset September 29th). The 10-year old stallion was unvaccinated. The first WNV equine case was reported from Gloucester County (onset August 24th).
- A third equine case of EEE was reported from Cumberland County (onset September 30th) in a 15-year old unvaccinated mare. The mare was euthanized September 30th. The first EEE case was reported from Cumberland County (onset August 23rd) and the second case from Atlantic County (onset September 17th).
- 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

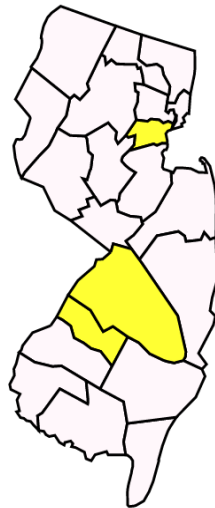
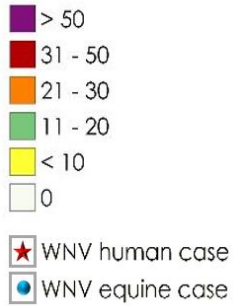
	Week 40		Cum. Total (Year)	
	2017	2016	2017	2016
Equine (EEE)			3	4
Equine (WNV)			2	
Avian				
Other				
Total	-	-	5	4

Surveillance Maps*

Week 40 WNV Activity (2017)

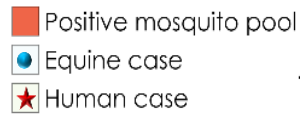
Cumulative WNV Activity 2017

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 10, 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/>