

Report Highlight:

- **Two cases of Powassan were reported in Sussex county.**
- **New Jersey's first positive West Nile virus (WNV) mosquito pool in 2019 was identified in Passaic county.**
- **A mosquito pool collected from Passaic County tested positive for La Crosse virus (LAC). This is the first time LAC has been detected in mosquito pools in the state.**
- **A mosquito pool collected from Sussex County tested positive for Jamestown Canyon virus (JCV). This is the first time JCV has been detected in mosquito pools in the state.**

1. 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.

Table 1.1 Human Cases^a

Mosquito-borne diseases	2019 ^b		2018	Tickborne Diseases	
	2019 ^b	2018		2019 ^b	2018
Chikungunya	3	16	Anaplasmosis	22	118
Dengue	9	20	Babesiosis	17	247
Eastern equine encephalitis	-	-	<i>Borrelia miyamotoi</i>	5	7
Jamestown Canyon	-	-	Ehrlichiosis	17	94
Malaria	34	93	Lyme disease	726	3956
West Nile	-	61	Powassan	2	1
Zika	4	10	Spotted fever group rickettsioses	35	147

^a Data for 2019 reflect confirmed and probable cases that have been approved by NJDOH. This does not include cases under investigation.

All 2019 numbers are preliminary and are subject to change.

^b Cumulative through week 24: June 9-15, 2019.

2. 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):

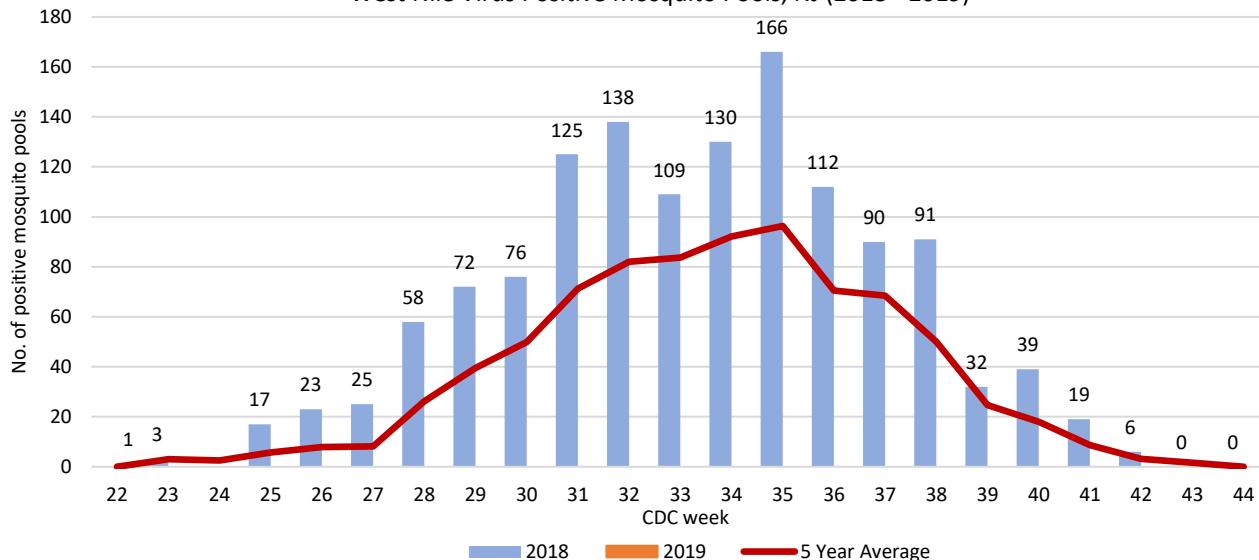
- A total of, 849 mosquito pools from 17 counties (Atlantic, Bergen, Burlington, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex and Warren) have been tested for WNV.
- In week 22, one mosquito pool tested positive for WNV in Passaic county. In 2018 the first WNV positive mosquito pool was identified in week 23.

WNV Positive Mosquito Pools

County	Week 24		Cumulative Total (week 24)	
	2019*	2018	2019*	2018
Atlantic				
Bergen				
Burlington				
Camden				
Cape May				
Cumberland				
Essex				
Gloucester				2
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic			1	
Salem				
Somerset				
Sussex				
Union				
Warren				1
Total	-	-	1	3

*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 June 19, 2019

West Nile Virus Positive Mosquito Pools, NJ (2018 - 2019)



Eastern equine encephalitis virus (EEE)

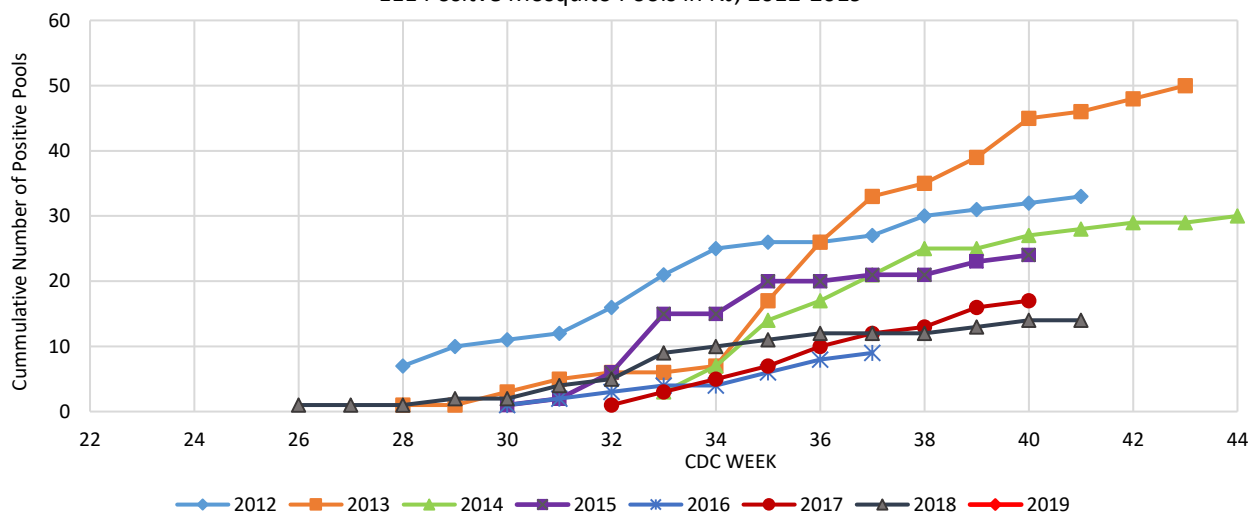
- A total of 780 mosquito pools from 17 (Atlantic, Bergen, Burlington, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex and Warren) counties have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2019. In 2018, the first EEE mosquito pool was reported in week 26.

EEE Positive Mosquito Pools

County	Week 24		Cumulative Total (week 24)	
	2019*	2018	2019*	2018
Atlantic				
Cape May				
Cumberland				
Hunterdon				
Mercer				
Middlesex				
Morris				
Ocean				
Passaic				
Salem				
Somerset				
Warren				
Total	-	-	-	-

Week 24: June 10-16, 2018; June 9-15, 2019

EEE Positive Mosquito Pools in NJ, 2012-2019



Other viruses:

Mosquito pools from 17 counties have been tested for other arboviruses. In 2019, PHEL and Cape May County BLS3 labs brought on new capacity to test for Jamestown Canyon virus (JCV) in mosquitoes.

Cumulative 2019 Mosquito Pool Testing (Other Viruses ^a)

County	SLE		JCV		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	52		52				8		8		8	
Bergen	21		21									
Burlington	20		20									
Cape May	230		21		31		39				39	
Cumberland	15		15									
Gloucester	39		39									
Hunterdon	14		14									
Mercer	59		59									
Middlesex	13		13				1		1		1	
Monmouth	55		55									
Morris	35		35									
Ocean	57		57									
Passaic	17		17		1	1						
Salem	49		49									
Somerset	25		25									
Sussex	19		19	1								
Warren	60		60									
Total	780	-	571	1	32	1	48		1	-	48	-

^a St. Louis encephalitis virus (SLE), Jamestown Canyon Virus (JCV), 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 2019
 Numbers in blue shaded columns represent positive pools in 2019

La Crosse encephalitis virus (LAC):

- A mosquito pool collected on May 31st (week 22) in Passaic County tested positive for La Crosse virus at PHEL. This is the first time La Crosse virus has been detected in mosquito pools in NJ.
- There have not been any human La Crosse virus cases reported in at least the past 20 years.

Jamestown Canyon virus (JCV):

- A mosquito pool collected on June 5th (week 23) in Sussex County tested positive for Jamestown Canyon virus at PHEL. This is the first time Jamestown Canyon virus has been detected in mosquito pools in NJ.
- NJ reported its first and only human case of Jamestown Canyon virus in 2015 in a Sussex County resident.

3. 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.

- No animals have tested positive for WNV or EEE in 2019.
- Routine avian testing has been discontinued but is available upon request at PHEL.

WNV/EEE Positive Test Results

	Week 24		Cum. Total (Year)	
	2019	2018	2019	2018
Equine (EEE)				
Equine (WNV)				
Avian (WNV)				
Other				

Week 24: June 10-16, 2018; June 9-15, 2019

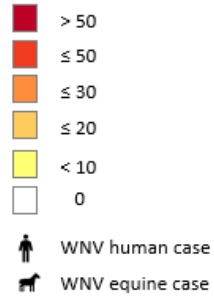
4. Surveillance Maps

West Nile Virus (WNV)

Week 24 WNV Activity (2019)*

Cumulative WNV Activity 2019

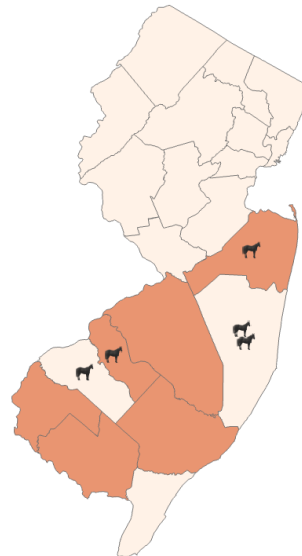
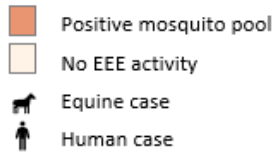
WNV Positive Pools



Eastern equine encephalitis (EEE)

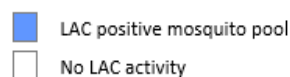
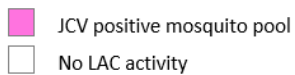
2018 EEE Activity

Cumulative EEE Activity 2019



Jamestown Canyon Virus Activity 2019

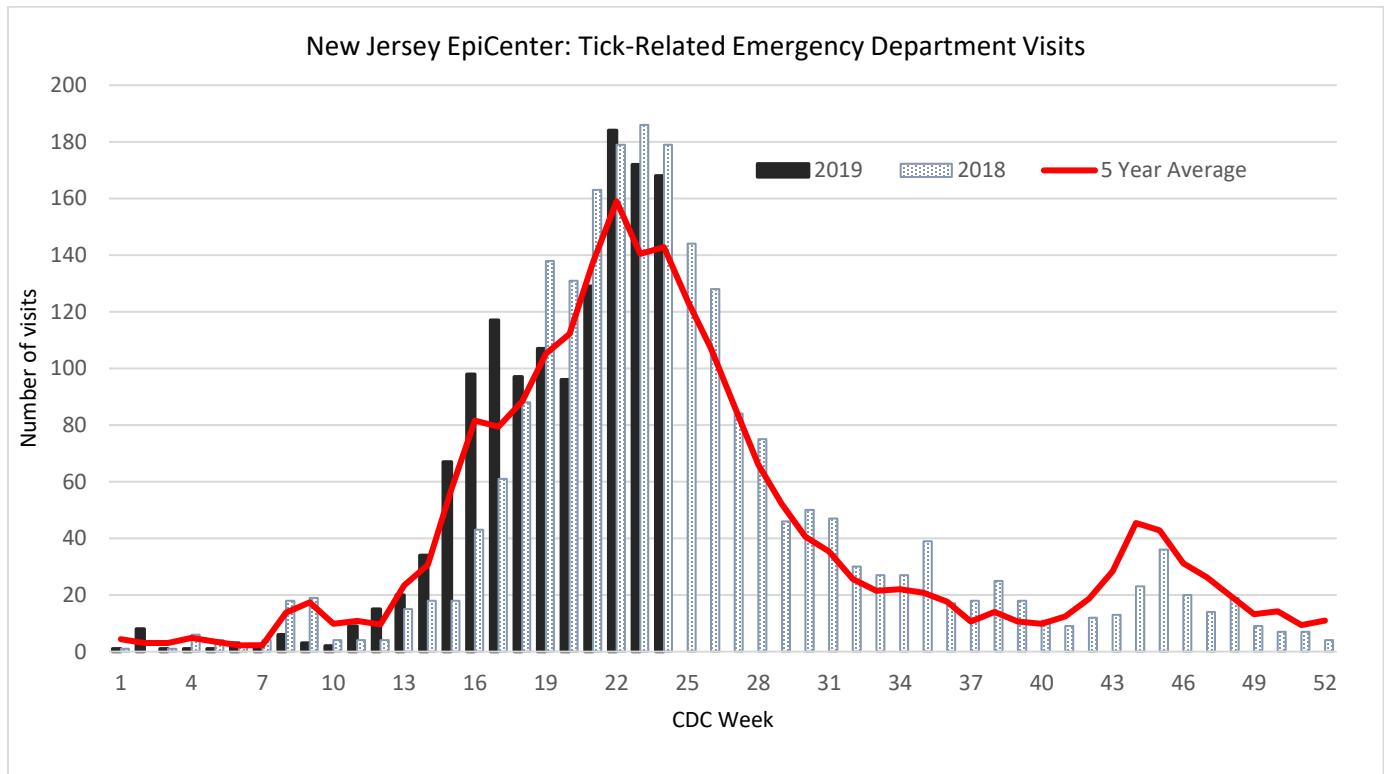
La Crosse Virus Activity 2019



5. Syndromic Surveillance for Tick-related Emergency Department Visits

EpiCenter is a syndromic surveillance system developed and maintained by Health Monitoring Systems, Inc, for monitoring by health departments in the United States. New Jersey's EpiCenter receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing ED computer systems.

The chart below represents NJ residents seen at emergency departments state wide with a tick-bite complaint or signs/symptoms associated with a reported tick-bite. Tick-related ED visits occur throughout the year with peak number of visits in the summer months and a smaller peak in the fall weeks when adult *Ixodes scapularis* (blacklegged ticks) are active. In week 24 the number of ED visits is higher than the 5-year average.



Data reflects ED visits downloaded from EpiCenter as of June 18, 2019

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/>