

## Report Highlight:

- **West Nile virus (WNV) has been detected in mosquito pools in 2 counties (Somerset and Warren)**
- **One human case of Jamestown Canyon virus was confirmed from Sussex County. This is the first positive human case identified (and the 2<sup>nd</sup> case ever) in the state since 2015.**
- **There have been no WNV or EEE positive cases detected in humans or animals this season.**
- **The number of tick related ED visits in 2021 is higher compared with visits reported in 2020.**

## 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<sup>a</sup>**

Mosquito-borne diseases			Tickborne Diseases		
	2021 <sup>b</sup>	2020		2021 <sup>b</sup>	2020
Chikungunya	-	3	Anaplasmosis	18	115
Dengue	-	2	Babesiosis	24	238
Eastern equine encephalitis	-	-	<i>Borrelia miyamotoi</i>	1	9
Jamestown Canyon	1	-	Ehrlichiosis	3	78
Malaria	2	24	Lyme disease	629	2572
West Nile	-	3	Powassan	-	1
Zika	-	3	Spotted fever group rickettsioses	5	35

<sup>a</sup> Data for 2021 reflect confirmed and probable cases that have been approved by NJDOH. This does not include cases under investigation.

All 2021 numbers are preliminary and are subject to change.

<sup>b</sup> Cumulative through week 25: June 20-26, 2021

## 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):

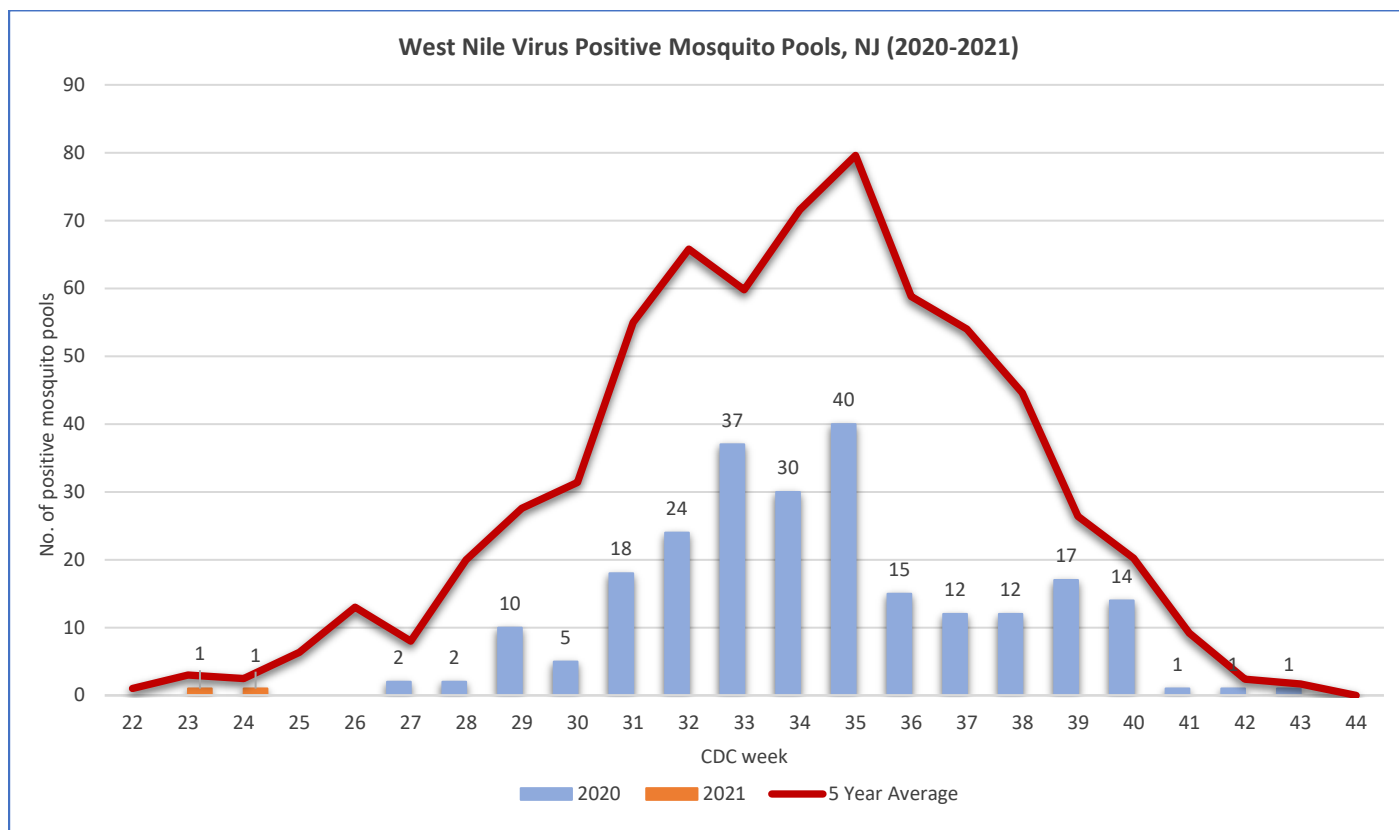
- A total of 1893 mosquito pools from 20 counties (Atlantic, Bergen, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex and Warren) have been tested for WNV.
- 2 positive pools were positive for WNV.
- The positive pools were detected in *Culex pipiens/restuans/salinarius* species mix
- The first WNV positive pool was detected in week 23 from Somerset County. In 2020 the first WNV positive mosquito pool was identified in week 27 from Mercer and Monmouth counties.

*\*Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL and CMBSL3 as of June 30, 2021*

### WNV Positive Mosquito Pools

County	Week 25		Cumulative Total (week 25)	
	2021*	2020	2021*	2020
Atlantic				
Bergen				
Burlington				
Camden				
Cape May				
Cumberland				
Essex				
Gloucester				
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem				
Somerset			1	
Sussex				
Union				
Warren			1	
<b>Total</b>	-	-	2	-

Week 25: June 14-20, 2020; June 20-26, 2021



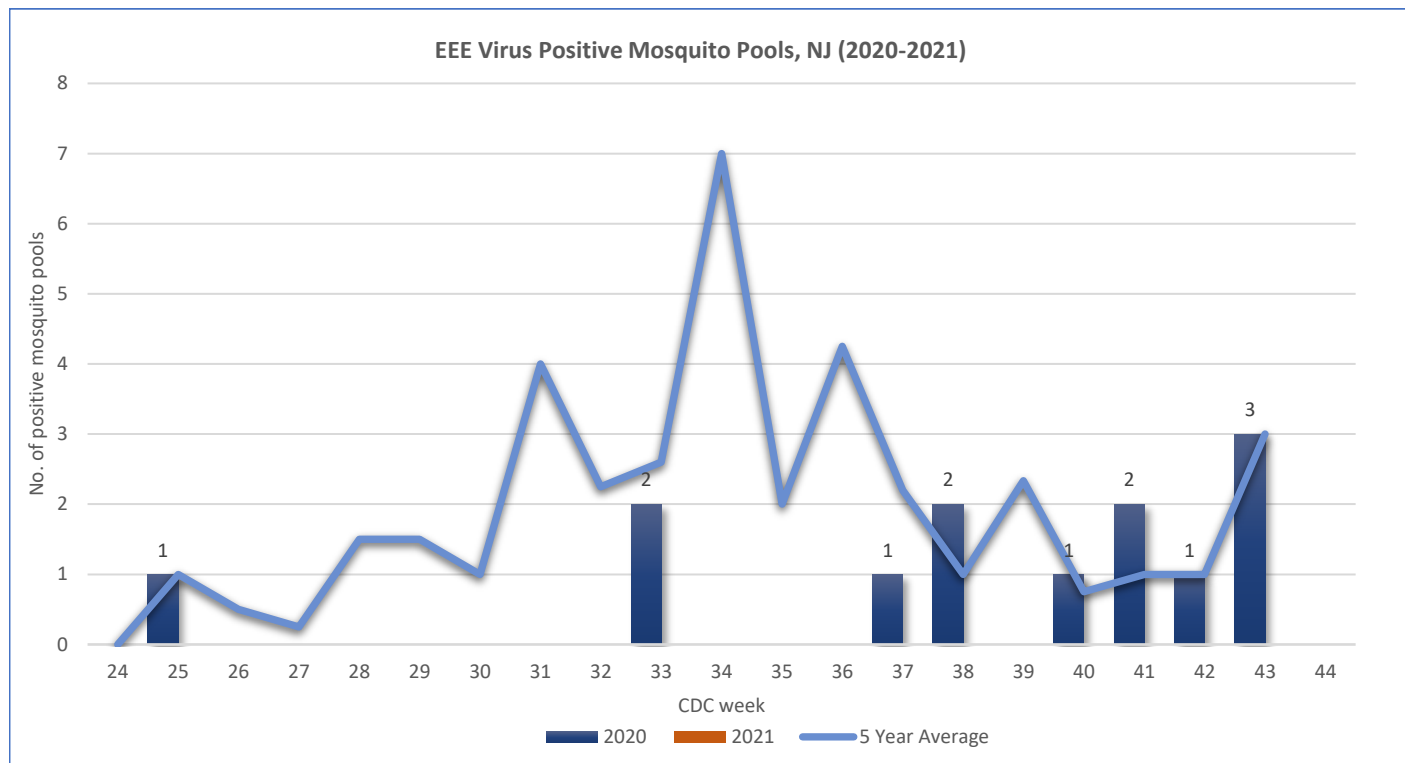
### Eastern equine encephalitis virus (EEE)

- A total of 1882 mosquito pools from 20 counties (Atlantic, Bergen, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex and Warren) have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2021. In 2020, the first EEE mosquito pool was reported from Atlantic County in week 25.

### EEE Positive Mosquito Pools

County	Week 25		Cumulative Total (week 25)	
	2021*	2020	2021*	2020
Atlantic				1
Bergen				
Burlington				
Camden				
Cape May				
Cumberland				
Essex				
Gloucester				
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem				
Somerset				
Sussex				
Union				
Warren				
<b>Total</b>	-	-	-	1

Week 25: June 14-20, 2020; June 20-26, 2021



#### Other viruses:

Mosquito pools from 20 counties have been tested for other arboviruses.

#### Cumulative 2021 Mosquito Pool Testing (Other Viruses<sup>a</sup>)

County	SLE		JCV		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	93		93				3		3		3	
Bergen	81		80									
Burlington	117		83		8							
Camden	19		19									
Cape May	118		101				1		1		1	
Cumberland	139		90									
Essex	22		11									
Gloucester	136		100									
Hudson	44		38									
Hunterdon	100		60									
Mercer	125		78		1							
Middlesex	98		61									
Monmouth	129		80									
Morris	106		62									
Ocean	69		56									
Passaic	47		24									
Salem	132		96		2							
Somerset	55		55									
Sussex	154		154									
Union	-		-									
Warren	98		98									
<b>Total</b>	<b>1882</b>		<b>1439</b>		<b>11</b>		<b>4</b>		<b>4</b>		<b>4</b>	

<sup>a</sup> 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 2021

Numbers in blue shaded columns represent positive pools in 2021

### Jamestown Canyon virus (JCV):

- No positive Jamestown Canyon virus pools have been identified in 2021.
- In 2020, Six mosquito pools from 4 counties tested positive for Jamestown Canyon virus. The positive pools were identified in Bergen (week 23 and week 25), Cumberland (week 28 and week 32), Middlesex (week 31) and Monmouth (week 29).
- NJ reported its 2<sup>nd</sup> ever human case of Jamestown Canyon virus in 2021 in a Sussex County resident. The first case was reported in 2015 in a Sussex County resident.

### La Crosse encephalitis virus (LAC):

- No positive La Crosse virus pools have been identified in 2021.
- Prior to the current year, a mosquito pool collected in Passaic County tested positive for La Crosse virus at PHEL in 2019.
- There have not been any human La Crosse virus cases reported in at least the past 20 years.

## 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 2021.
- Routine avian testing has been discontinued but is available upon request at PHEL.

**WNV/EEE Positive Test Results**

	Week 25		Cum. Total (Year)	
	2021*	2020	2021*	2020
Equine (EEE)				
Equine (WNV)				
Avian (WNV)				
Other				

Week 25: June 14-20, 2020; June 20-26, 2021

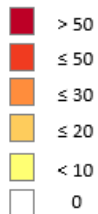
## 4. Surveillance Maps

### West Nile Virus (WNV)

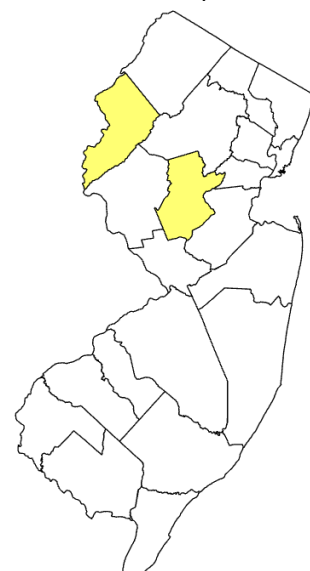
### Week 25 WNV Activity (2021)\*

### Cumulative WNV Activity 2021

#### WNV Positive Pools



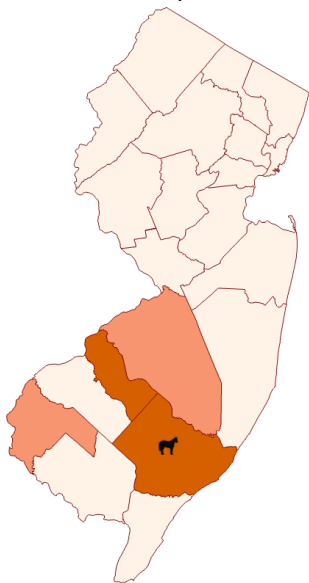
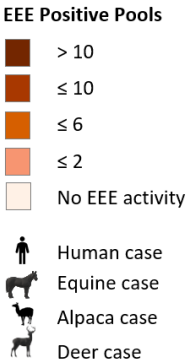
WNV human case  
WNV equine case



Eastern equine encephalitis (EEE)

2020 EEE Activity

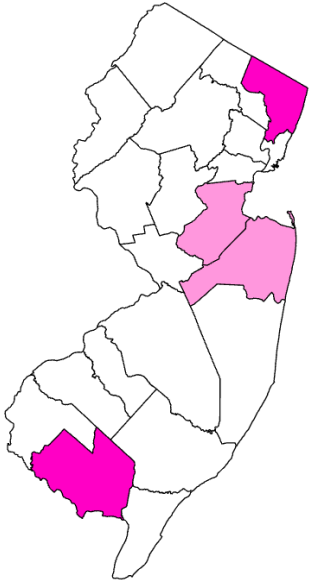
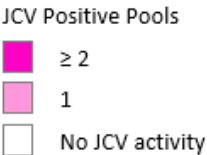
Cumulative EEE Activity 2021



Jamestown Canyon Virus (JCV)

2020 JCV Activity

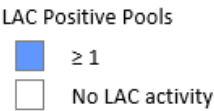
Cummulative JCV Activity 2021



La Crosse Virus (LAC)

2020 LAC Activity

Cummulative LAC Activity 2021

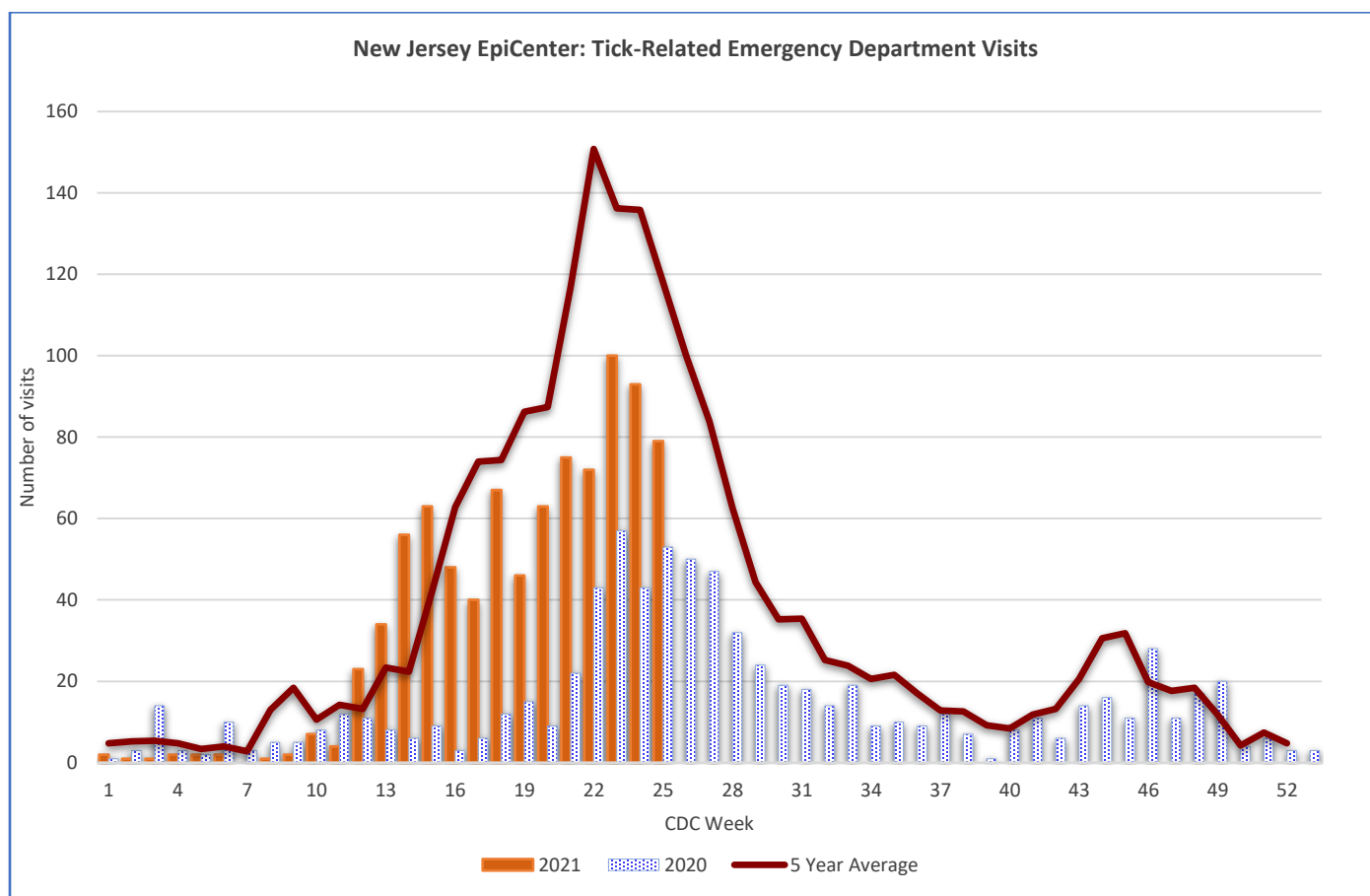


## 5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 statewide 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 25, the overall number of ED visits is lower than the 5-year average. There is a significant increase in activity compared with last year starting from week 12.



*Data reflects ED visits downloaded from EpiCenter as of June 30, 2021*

### For More Information

- NJDOH Communicable Disease Service: <http://nj.gov/health/cd/topics/vectorborne.shtml>
- New Jersey Arboviral Activity Maps: <http://bit.ly/JerseySurv>
- 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/>