

## Report Highlight:

- **West Nile virus (WNV) has been detected in mosquito pools in 3 counties (Bergen, Somerset, and Warren), no pools tested positive for WNV in week 26.**
- **One human case of Jamestown Canyon virus was confirmed from Sussex County in week 18.**
- **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, but are lower than historical averages.**

## 1. Human Testing

New Jersey Administrative Code (NJAC.) 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	30	238
Eastern equine encephalitis	-	-	<i>Borrelia miyamotoi</i>	1	9
Jamestown Canyon	1	-	Ehrlichiosis	3	78
Malaria	12	24	Lyme disease	738	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 26: June 27-July 3, 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 2115 mosquito pools have been tested for WNV.
- 3 pools were positive for WNV this year.
- 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.

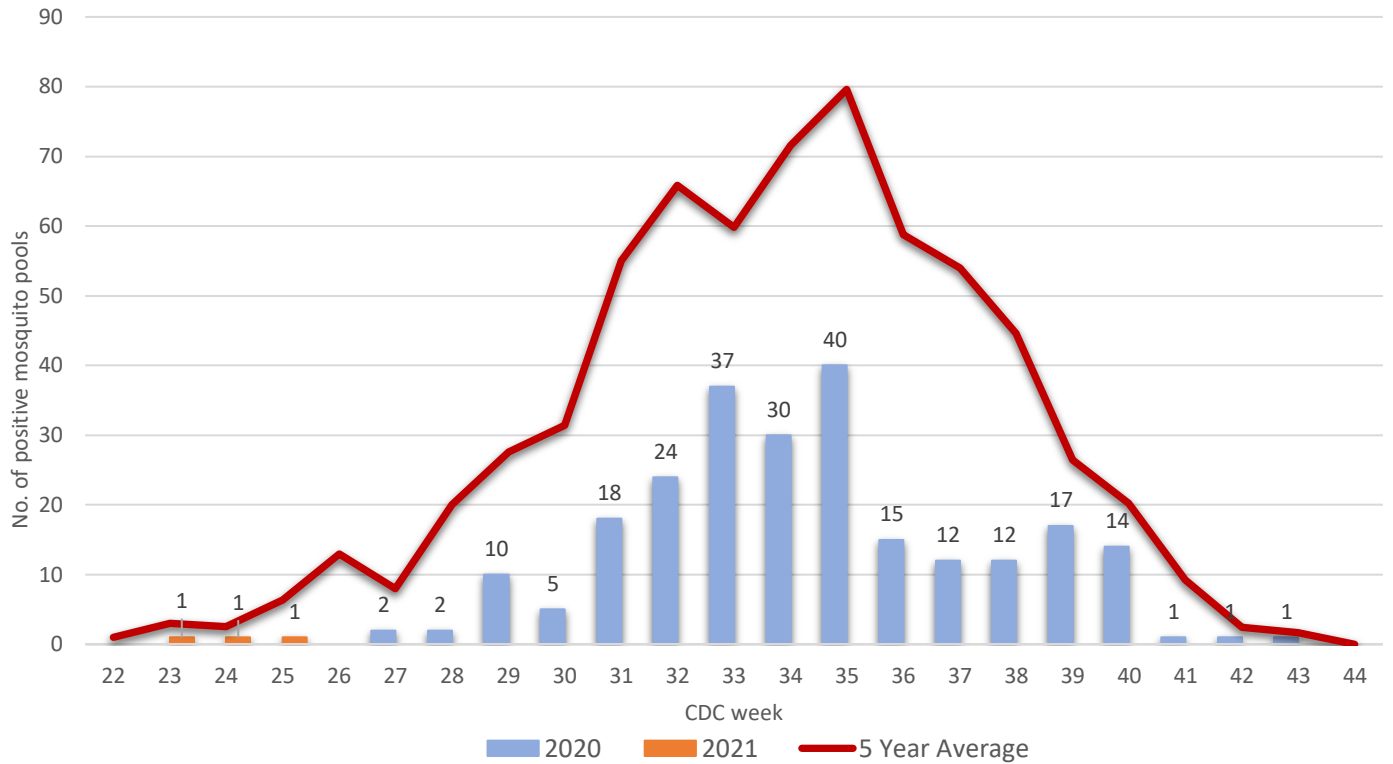
\*Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL and CMBSL3 as of July 7th, 2021

### WNV Positive Mosquito Pools

County	Week 26		Cumulative Total (Week 26)	
	2021*	2020	2021*	2020
Atlantic				
Bergen			1	
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>	-	-	3	-

Week 26: June 21-27, 2020; June 27-July 3, 2021

West Nile Virus Positive Mosquito Pools, NJ (2020-2021)



#### Eastern equine encephalitis virus (EEE)

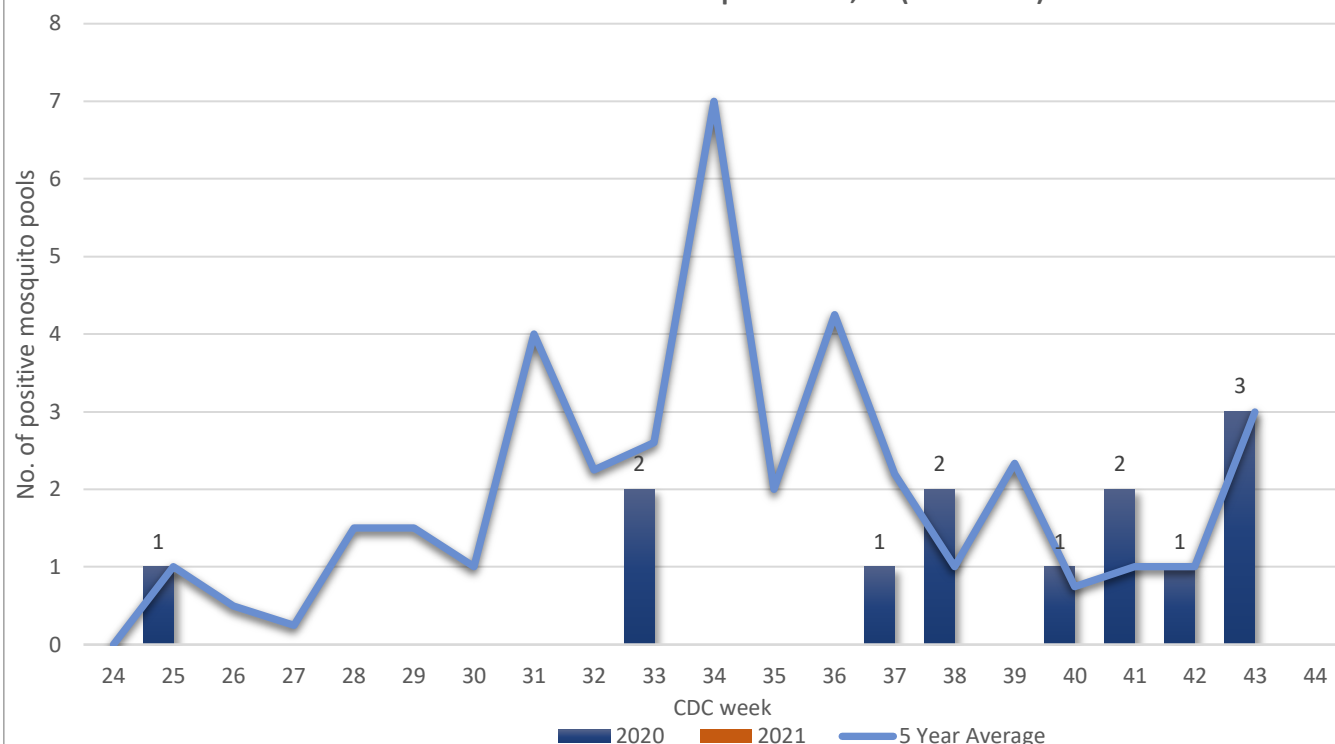
- A total of 2101 mosquito pools have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2021. In 2020, the first EEE mosquito pool was reported from Atlantic County in Week 26.

EEE Positive Mosquito Pools

County	Week 26		Cumulative Total (Week 26)	
	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 26: June 21-27, 2020; June 27-July 3, 2021

EEE Virus Positive Mosquito Pools, NJ (2020-2021)



#### Other viruses:

Mosquito pools from 21 counties have been tested for other arboviruses.

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

County	CHIKV		DENV		JCV		LACV		SLEV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	8		8		98				98		8	
Bergen					100				102			
Burlington					105		8		137			
Camden					34				34			
Cape May	1		1		101				118		1	
Cumberland					90				145			
Essex					25				36			
Gloucester					100				150			
Hudson					51				57			
Hunterdon					60				100			
Mercer					78		2		133			
Middlesex					79				116			
Monmouth					106				159			
Morris					62				106			
Ocean					59				74			
Passaic					24				47			
Salem					97		3		133			
Somerset					55				55			
Sussex					184		2		184			
Union					6				6			
Warren					113				113			
<b>Total</b>	<b>9</b>		<b>9</b>		<b>1627</b>		<b>15</b>		<b>2103</b>		<b>9</b>	

<sup>a</sup> Chikungunya virus (CHIKV), Dengue virus (DENV), Jamestown Canyon Virus (JCV), La Crosse encephalitis virus (LAC), St. Louis encephalitis virus (SLE), 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 26), 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 has 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 26		Cum. Total (Year)	
	2021*	2020	2021*	2020
Equine (EEE)				
Equine (WNV)				
Avian (WNV)				
Other				

Week 26: June 21-27, 2020; June 27-July 3, 2021

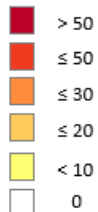
## 4. Surveillance Maps

### West Nile Virus (WNV)

### Week 26 WNV Activity (2021)\*

### Cumulative WNV Activity 2021

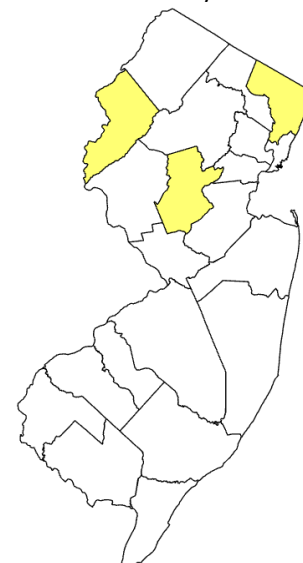
#### WNV Positive Pools



WNV human case



WNV equine case

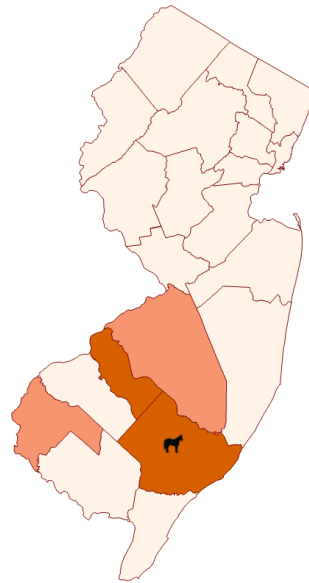
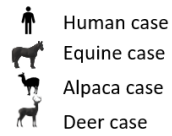
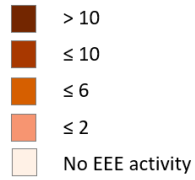


## Eastern equine encephalitis (EEE)

### 2020 EEE Activity

### Cumulative EEE Activity 2021

#### EEE Positive Pools

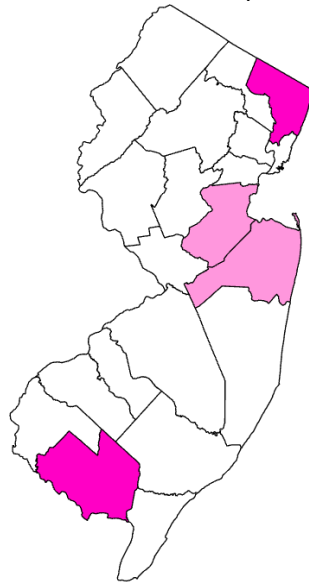
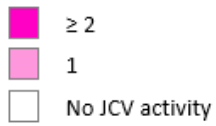


## Jamestown Canyon Virus (JCV)

### 2020 JCV Activity

### Cummulative JCV Activity 2021

#### JCV Positive Pools

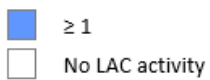


## La Crosse Virus (LAC)

### 2020 LAC Activity

### Cummulative LAC Activity 2021

#### LAC Positive Pools

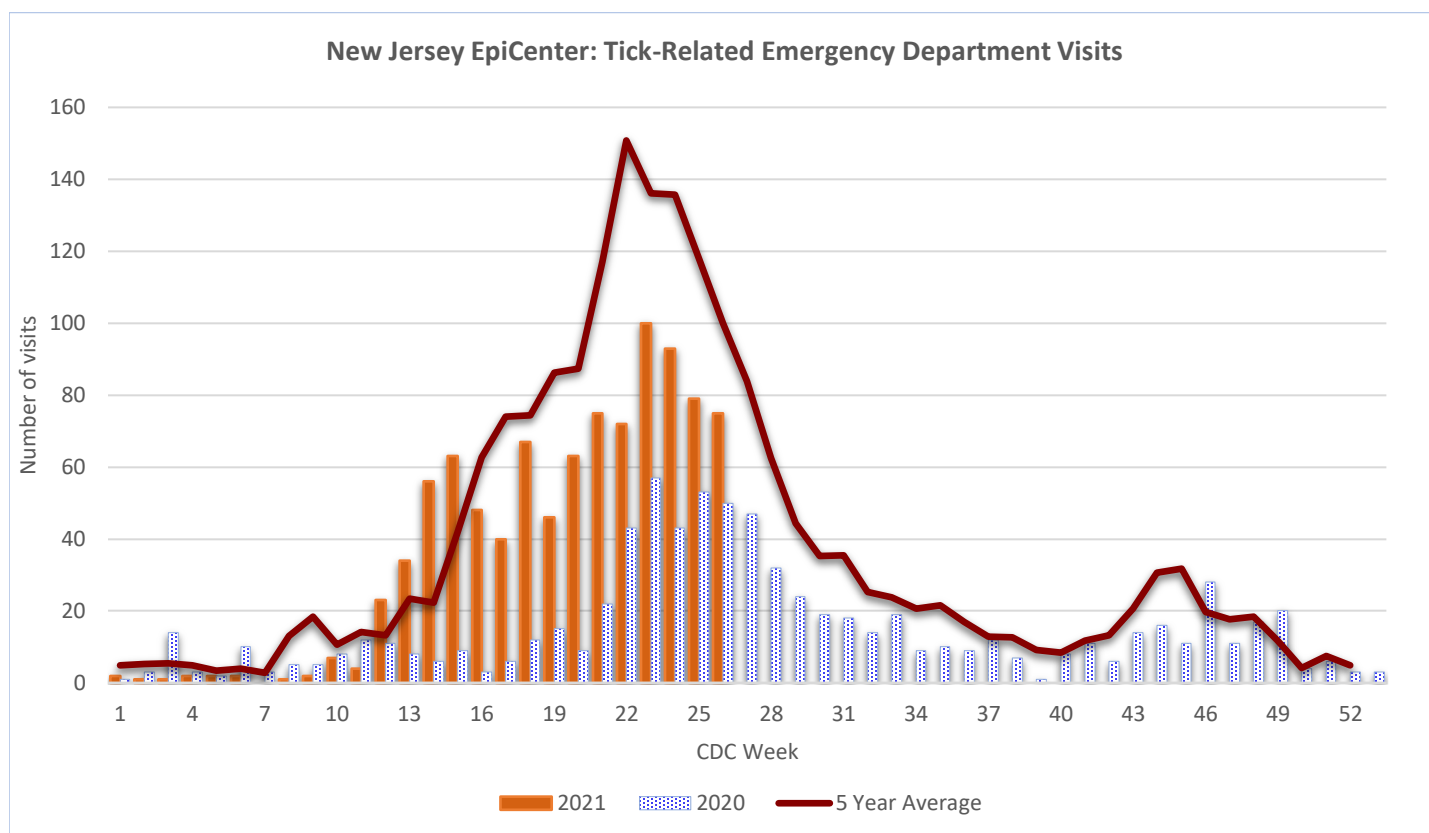


## 5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 26, 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 July 3, 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/>