

Report Highlight:

- **West Nile virus (WNV) has been detected in 23 mosquito pools so far this week, including 9 positive pools in Camden County. To date, 70 pools have tested positive for WNV. Activity increased sharply in week 28. One American crow tested positive for WNV in Week 27; no human or other animal cases have been reported.**
- **Eastern Equine Encephalitis virus (EEEV) has been detected in a mosquito pool in Camden County this week. To date, two pools have tested positive for EEE (Gloucester and Camden counties).**
- **The number of tick-related ED visits in 2021 continues to be higher than 2020 levels but 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^a

Mosquito-borne diseases			Tickborne Diseases		
	2021 ^b	2020		2021 ^b	2020
Chikungunya	-	3	Anaplasmosis	67	115
Dengue	-	2	Babesiosis	68	238
Eastern equine encephalitis	-	-	<i>Borrelia miyamotoi</i>	2	9
Jamestown Canyon	1	-	Ehrlichiosis	24	78
Malaria	18	24	Lyme disease	1115	2572
West Nile	-	3	Powassan	-	1
Zika	-	3	Spotted fever group rickettsioses	12	35

^a Data for 2021 reflect confirmed and probable cases that NJDOH has approved. This does not include cases under investigation. All 2021 numbers are preliminary and are subject to change. ^b Cumulative through Week 29: July 18-24, 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 3607 mosquito pools have been tested for WNV.
- 70 pools were positive for WNV this year.
- The positive pools were detected in *Culex pipiens/restuans/salinarius* species mix and *Aedes trivittatus*.
- 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.

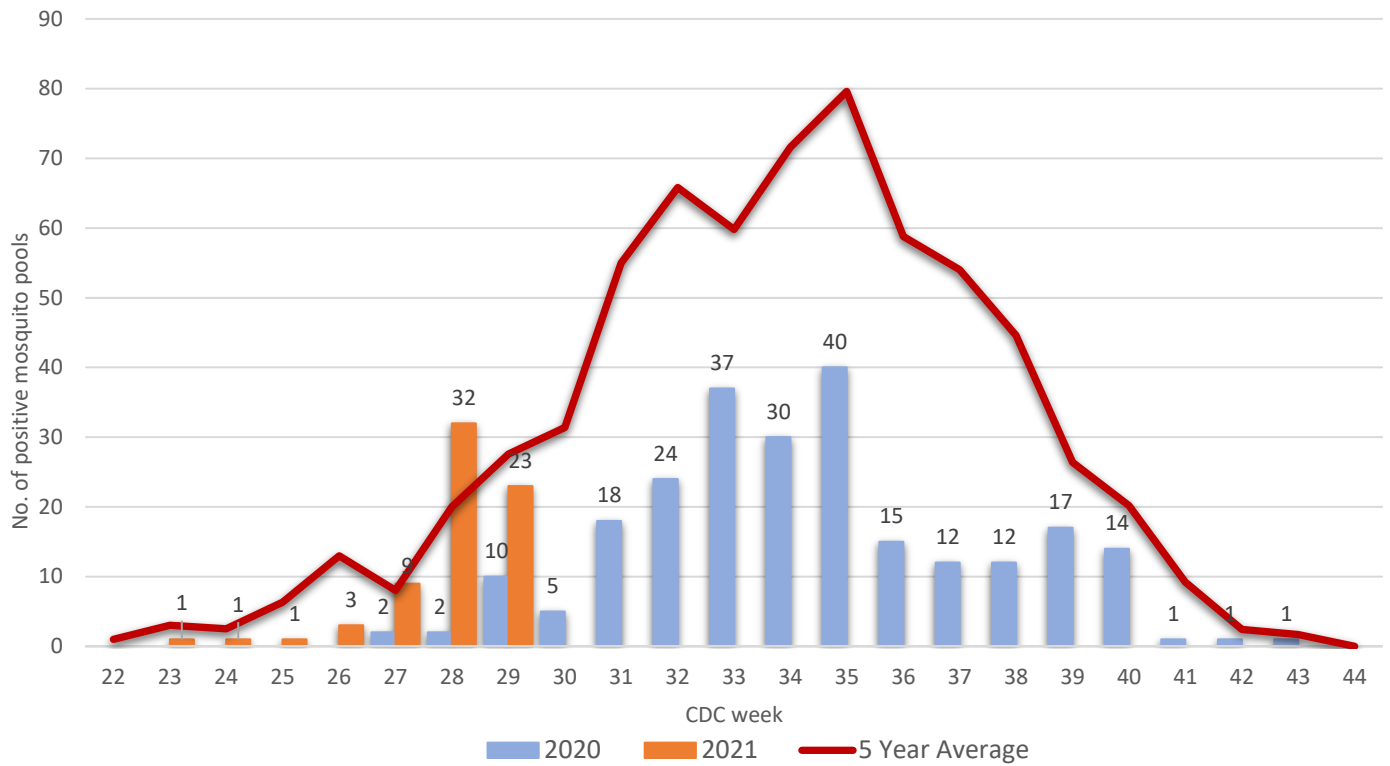
**Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL as of July 28th, 2021*

WNV Positive Mosquito Pools

County	Week 29		Cumulative Total (Week 29)	
	2021*	2020	2021*	2020
Atlantic				
Bergen			10	
Burlington	3	1	6	2
Camden	9		18	
Cape May			1	
Cumberland				
Essex			1	
Gloucester				
Hudson			2	
Hunterdon				
Mercer	1		2	1
Middlesex	3		8	
Monmouth	1		2	2
Morris				
Ocean	1		5	
Passaic				
Salem				
Somerset			6	
Sussex				
Union	5		5	
Warren			4	
Total	23	1	70	5

Week 29: July 12-18, 2020; July 18-24, 2021

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



Eastern equine encephalitis virus (EEE)

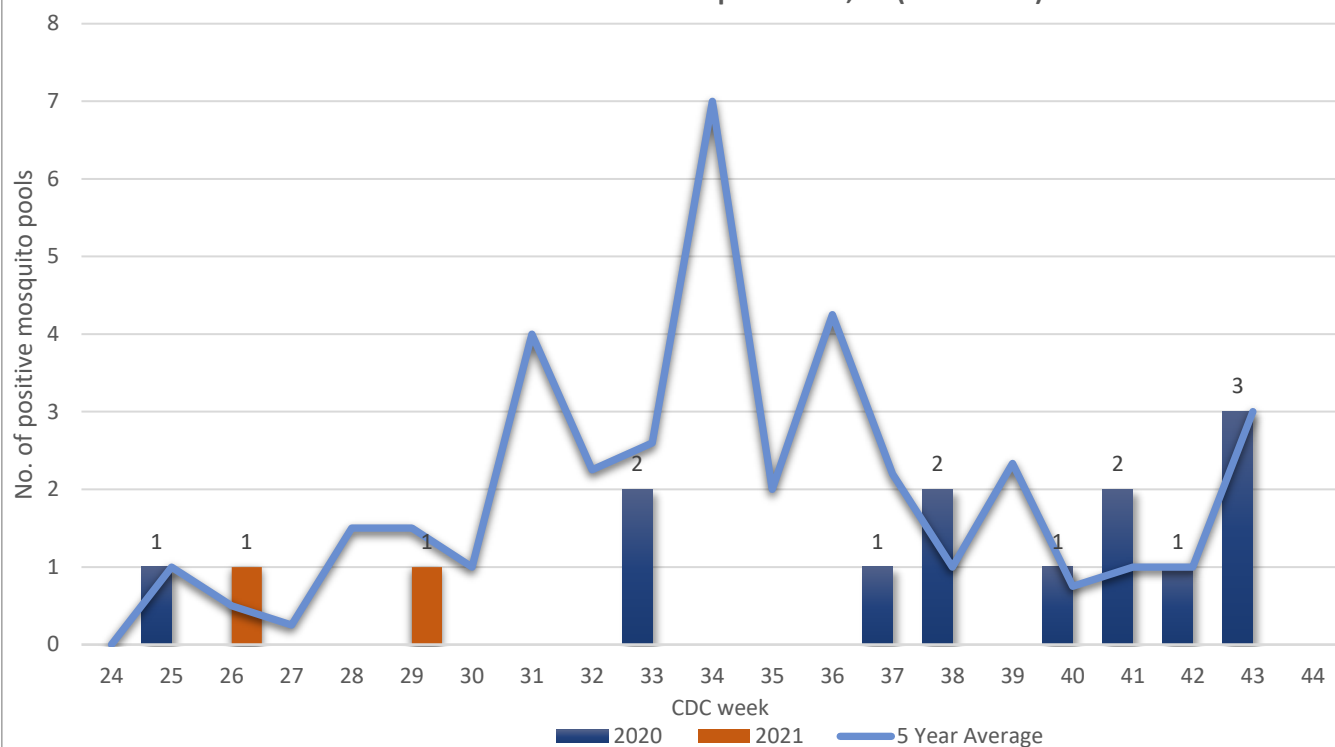
- A total of 2794 mosquito pools have been tested for EEE.
- One positive pool was detected in Camden County in Week 29.
- Two pools tested positive for EEE this year, both in *Culiseta melanura*.
- The first positive mosquito pool was detected in Week 26 from Gloucester County. In 2020, the first EEE mosquito pool was reported from Atlantic County in Week 25.

EEE Positive Mosquito Pools

County	Week 29		Cumulative Total (Week 29)	
	2021*	2020	2021*	2020
Atlantic				1
Bergen				
Burlington				
Camden	1		1	
Cape May				
Cumberland				
Essex				
Gloucester			1	
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem				
Somerset				
Sussex				
Union				
Warren				
Total	1	-	2	1

Week 29: July 12-18, 2020; July 18-24, 2021

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



Other viruses:

Mosquito pools from 21 counties have been tested for other arboviruses. One pool has tested positive for JCV.

Cumulative 2021 Mosquito Pool Testing (Other Viruses^a)

County	CHIKV		DENV		JCV		LACV		SLEV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	12		12		194				194		12	
Bergen	1		1		150				152		1	
Burlington					179		11		213			
Camden					107				107			
Cape May	1		1		199				216		1	
Cumberland					184				239			
Essex					40				51			
Gloucester					200				250			
Hudson					102				108			
Hunterdon					124				164			
Mercer					157		2		213			
Middlesex					135				172			
Monmouth					209				262			
Morris	2		2		134				178		2	
Ocean					122				135			
Passaic					94		2		117			
Salem					183		8		219			
Somerset					115				115			
Sussex					253	1	6		253			
Union					35				35			
Warren					190				190			
Total	16	0	16	0	3106	1	29	0	3583	0	16	0

^a 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 the number of pools tested to date in 2021

Numbers in blue shaded columns represent positive pools in 2021

Jamestown Canyon virus (JCV):

- NJ reported its 2nd ever human case of Jamestown Canyon virus this year in Week 18 in a Sussex County resident. The first case was reported in 2015 in a Sussex County resident.
- One positive Jamestown Canyon virus pool was reported in Sussex County on Week 27.
- 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 29 and week 32), Middlesex (Week 31) and Monmouth (Week 29).

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.

- One American crow from Burlington County tested positive for WNV on Week 27.
- Routine avian testing has been discontinued but is available upon request at PHEL.

WNV/EEE Positive Test Results

	Week 29		Cum. Total (Year)	
	2021*	2020	2021*	2020
Equine (EEE)				
Equine (WNV)				
Avian (WNV)			1	
Other				

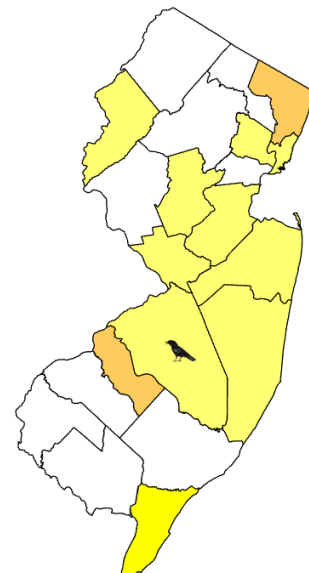
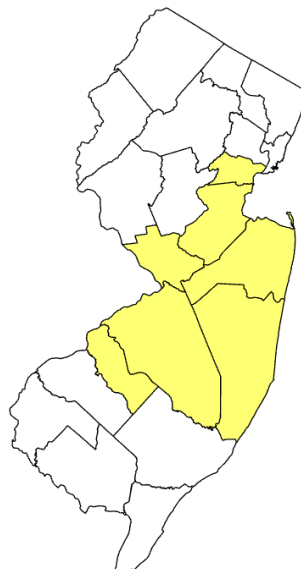
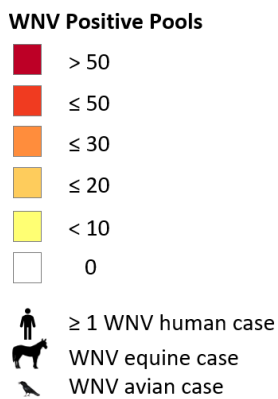
Week 29: July 12-18, 2020; July 18-24, 2021

4. Surveillance Maps

West Nile Virus (WNV)

Week 29 WNV Activity (2021)*

Cumulative WNV Activity 2021



Eastern equine encephalitis (EEE)

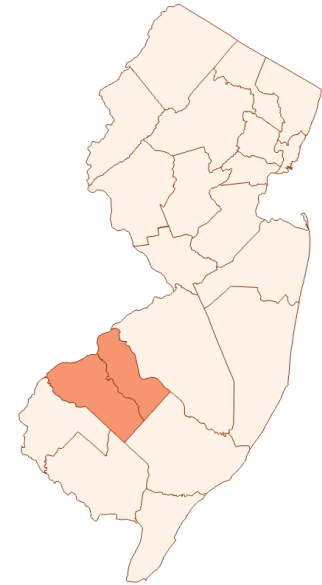
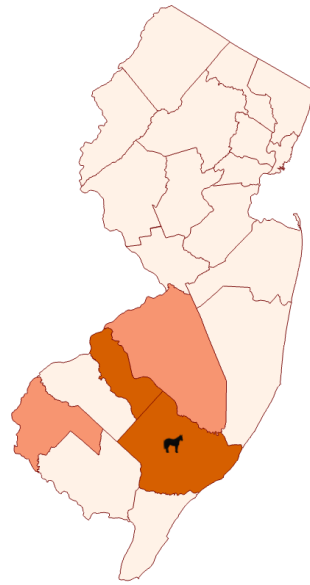
2020 EEE Activity

Cumulative EEE Activity 2021

EEE Positive Pools

- > 10
- ≤ 10
- ≤ 6
- ≤ 2
- No EEE activity

- Human case
- Equine case
- Alpaca case
- Deer case



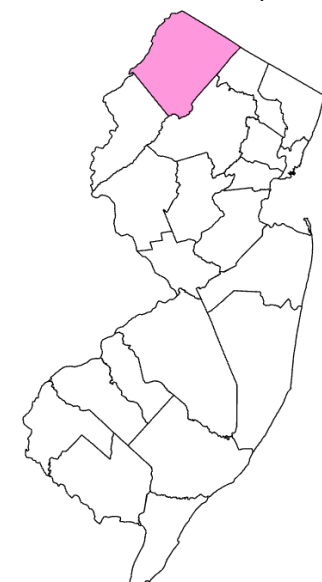
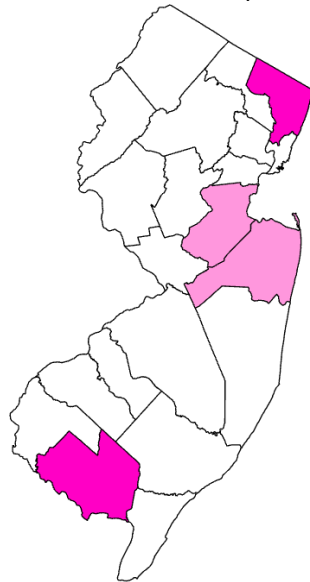
Jamestown Canyon Virus (JCV)

2020 JCV Activity

Cumulative JCV Activity 2021

JCV Positive Pools

- ≥ 2
- 1
- No JCV activity



La Crosse Virus (LAC)

2020 LAC Activity

Cumulative LAC Activity 2021

LAC Positive Pools

- ≥ 1
- No LAC activity

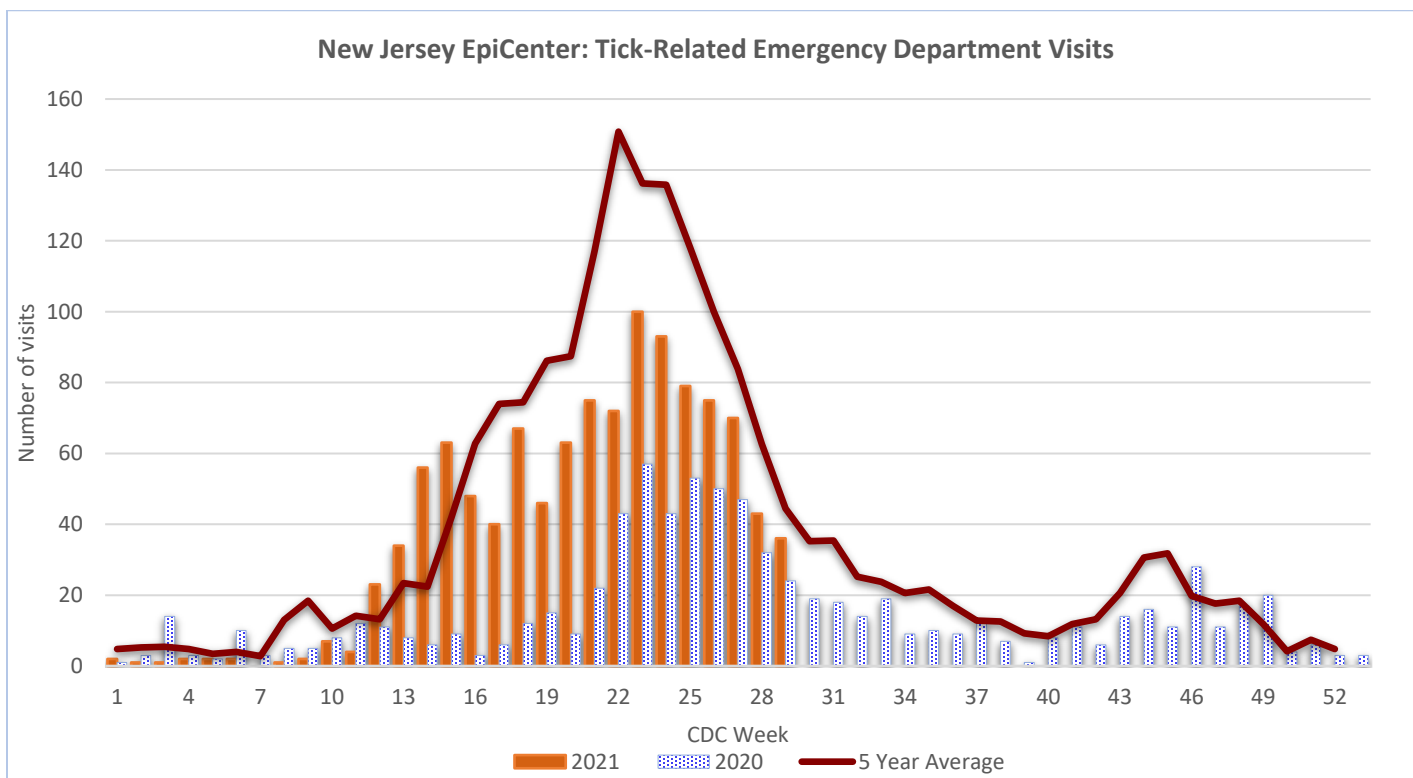


5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 29, 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 28, 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/>