

Report Highlight:

- 2022 Vector Season is underway and mosquito testing for arboviruses has commenced in 13 counties.
- No mosquito pools have tested positive for arboviruses in 2022.
- There have been no WNV or EEE positive cases detected in humans, mosquitoes, or animals this season.
- The number of tick-related ED visits in 2022 is below seasonal trends observed in the past 5 years but is consistent with 2021 levels.

1. Human Cases

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2022 data reflect cases that have been approved by NJDOH and do not include cases under investigation. All 2022 numbers are preliminary and subject to change.

Human Cases

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2022	2021		2022	2021
Chikungunya	1	4	Alpha-gal syndrome	20	-
Dengue	4	12	Anaplasmosis	14	202
Eastern equine encephalitis	-	-	Babesiosis	7	258
Jamestown Canyon	-	2	<i>Borrelia miyamotoi</i>	-	16
Malaria	13	71	Ehrlichiosis (<i>chaffeensis, ewingii</i>)	7	77
West Nile	-	36	Lyme disease*	17	3,518
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	1	39
			Tularemia	-	4

* Lyme disease surveillance has transitioned to a laboratory-only surveillance approach in 2022; as such, case reporting is delayed.

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):

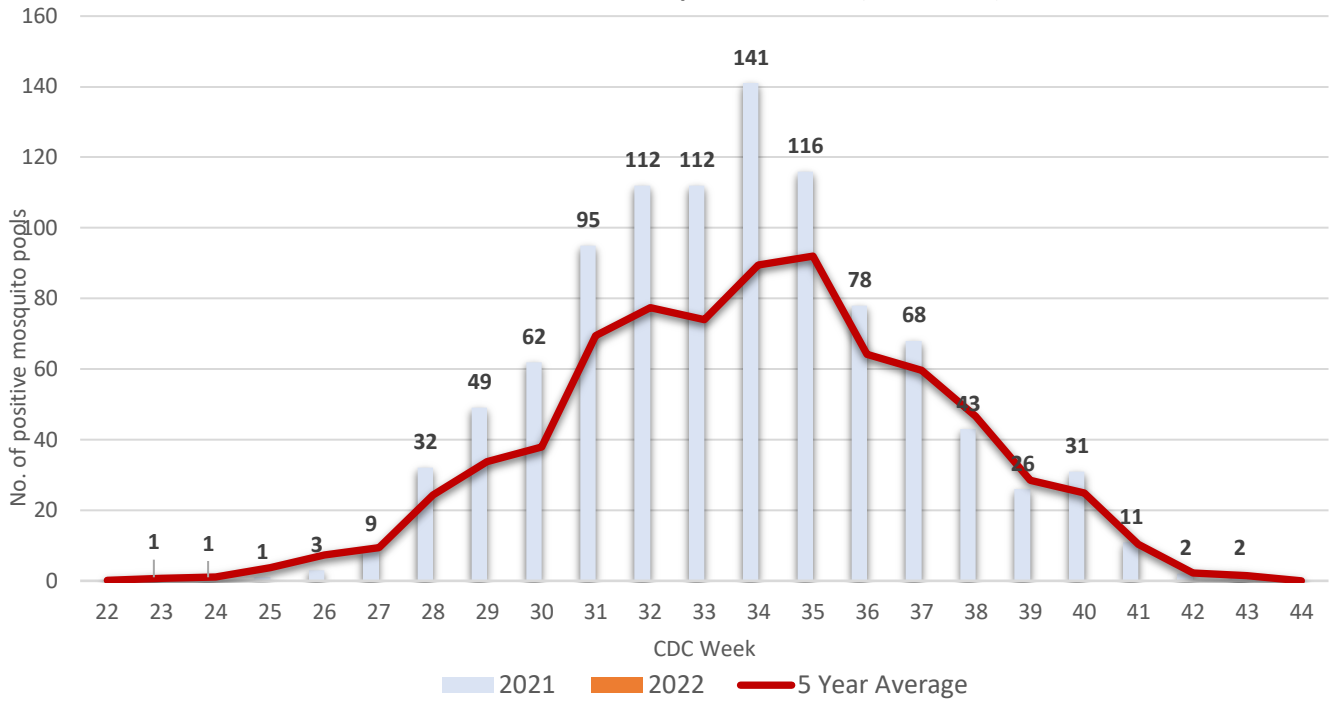
- A total of 266 mosquito pools from 13 counties (Atlantic, Burlington, Cumberland, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Sussex, Warren) have been tested for WNV.
- No positive WNV pools have been identified in 2022. In 2021, the first WNV positive pool was detected in Week 23 from Somerset County.

WNV Positive Mosquito Pools

County	Week 21		Cumulative Total (Week 21)	
	2022*	2021	2022*	2021
Atlantic				
Bergen				
Burlington				
Camden				
Cape May				
Cumberland				
Essex				
Gloucester				
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem				
Somerset				
Sussex				
Union				
Warren				
Total	-	-	-	-

*Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL as of June 1, 2022

West Nile Virus Positive Mosquito Pools, NJ (2021-2022)



Eastern equine encephalitis virus (EEE)

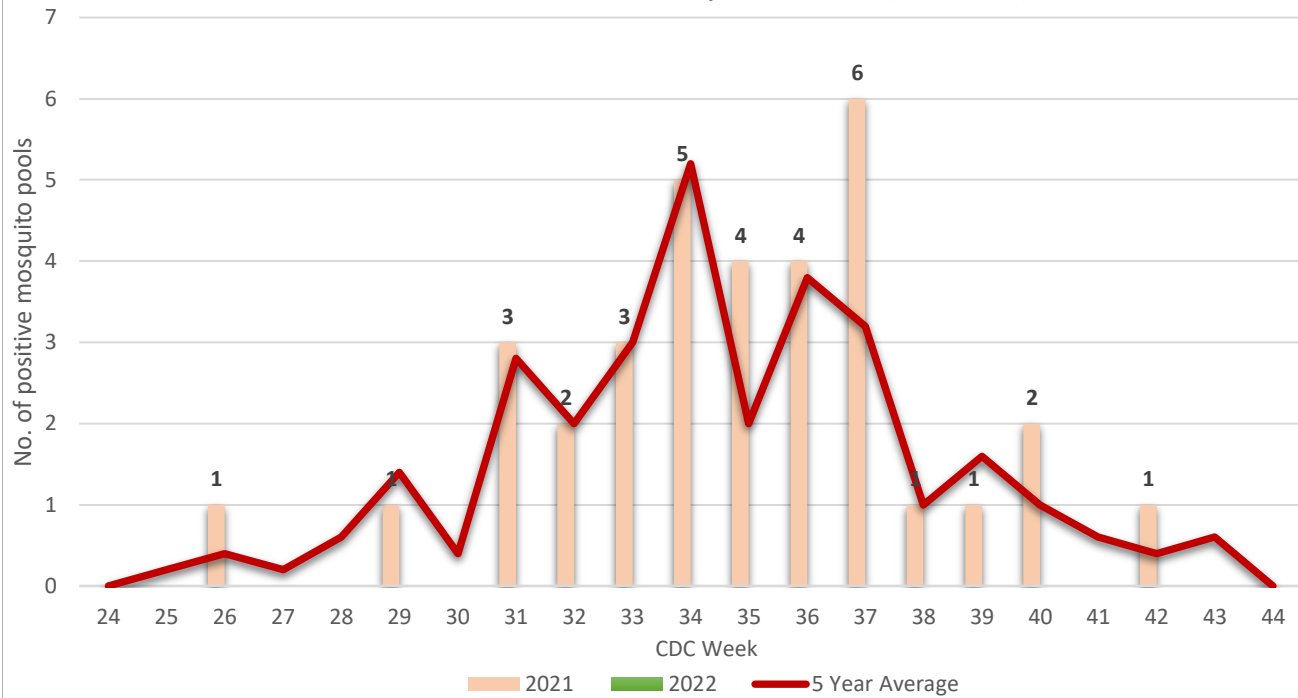
- A total of 265 mosquito pools from 13 counties (Atlantic, Burlington, Cumberland, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Sussex, Warren) have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2022. In 2021, the first positive mosquito pool was detected in Week 26 from Gloucester County.

EEE Positive Mosquito Pools

County	WEEK 21		Cumulative Total (WEEK 21)	
	2022*	2021	2022*	2021
Atlantic				
Bergen				
Burlington				
Camden				
Cape May				
Cumberland				
Essex				
Gloucester				
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem				
Somerset				
Sussex				
Union				
Warren				
Total	-	-	-	-

Week 21: May 23-29, 2021; May 22-28, 2022

EEE Virus Positive Mosquito Pools, NJ (2021-2022)



Other viruses:

Mosquito pools from 13 counties have been tested for other arboviruses. None have tested positive.

Cumulative 2022 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	8		8									
Bergen												
Burlington	3		3									
Camden												
Cape May												
Cumberland	33		33									
Essex												
Gloucester												
Hudson												
Hunterdon	31		31									
Mercer	19		19		1							
Middlesex	1		1									
Monmouth	43		43									
Morris	46		46									
Ocean	14		14									
Passaic	8		8									
Salem	11		11									
Somerset												
Sussex	15		15									
Union												
Warren	33		33									
Total	265	-	265	-	1	-	-	-	-	-	-	-

^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 2022

Numbers in green shaded columns represent positive pools in 2022

Jamestown Canyon virus (JCV):

- NJ reported 2 human JCV cases last year in Sussex County (week 18) and in Essex County (week 36). The first NJ case was reported in 2015 in Sussex County.
- In 2021, eight positive JCV pools were reported in Atlantic County (week 38), Sussex County (week 27), Camden County (week 33, week 35, and Week 41), Essex County (week 34) and Gloucester County (week 35 and week 39).

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 2022.
- Routine avian testing has been discontinued but is available upon request at PHEL.

WNV/EEE Positive Test Results

	WEEK 21		Cum. Total (Year)	
	2022*	2021	2022*	2021
Equine (EEE)				
Equine (WNV)				
Avian (WNV)				
Other				

Week 21: May 23-29, 2021; May 22-28, 2022

4. Surveillance Maps

West Nile Virus (WNV)

WEEK 21 WNV Activity (2022)*

Cumulative WNV Activity 2022

WNV Positive Pools

- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- WNV human case
- WNV equine case







Eastern equine encephalitis (EEE)

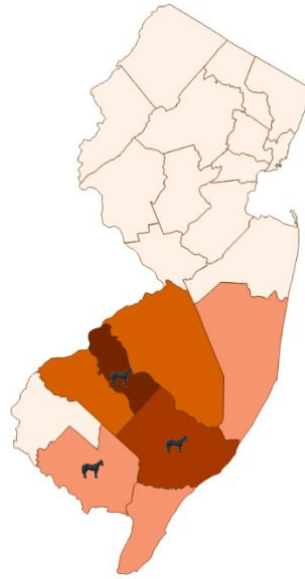
2021 EEE Activity

Cumulative EEE Activity 2022

EEE Positive Pools

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

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



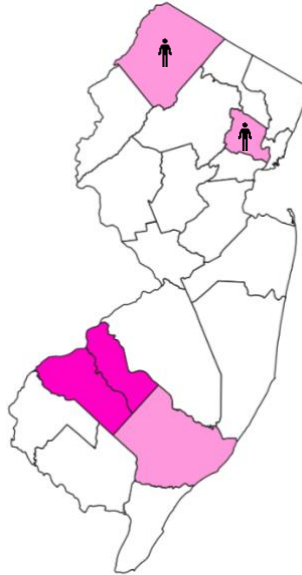
Jamestown Canyon Virus

2021 JCV Activity

Cummulative JCV Activity 2022

JCV Positive Pools

- ≥ 2
- 1
- No JCV activity



La Crosse Virus Activity 2022

2021 LAC Activity

Cummulative LAC Activity 2022

LAC Positive Pools

- ≥ 1
- No LAC activity

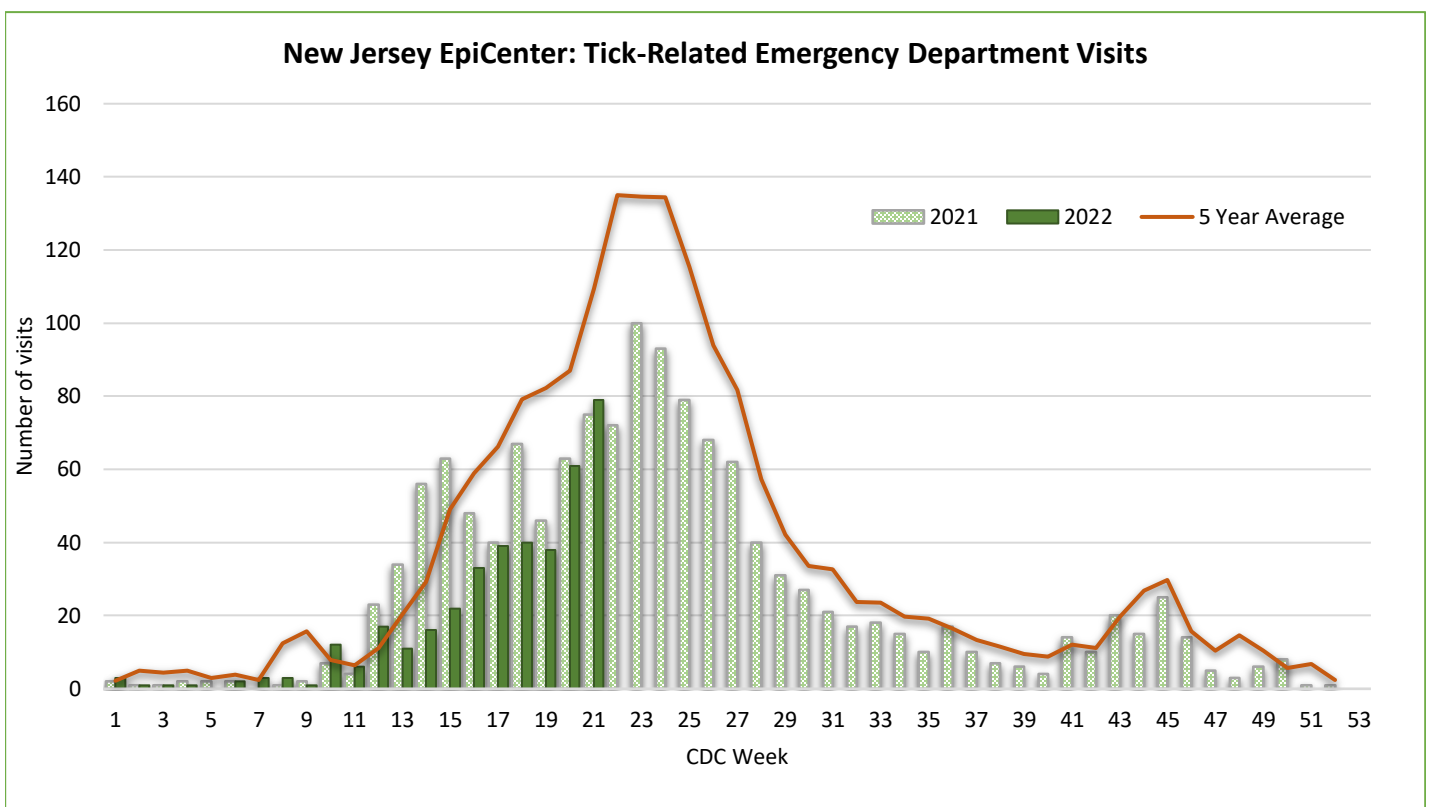


5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 21, the number of ED visits is significantly lower than the 5-year average. ED visits started to increase starting on week 12, with current levels comparable to last year.



Data reflects ED visits downloaded from EpiCenter as of June 1, 2022

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/>