

Report Highlight:

- Five mosquito pools tested positive for West Nile Virus (WNV) in Bergen, Gloucester, Salem, and Somerset County in Week 24, for a total of six positive mosquito pools this year.
- Jamestown Canyon Virus was detected in two mosquito pools in Bergen County (Week 22 & 24).
- There have been no WNV or EEE positive cases detected in humans or animals this season.
- Tick-related ED visits in 2022 are below seasonal trends observed in the past 5 years but are equal to 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	29	-
Dengue	4	12	Anaplasmosis	28	202
Eastern equine encephalitis	-	-	Babesiosis	10	258
Jamestown Canyon	-	2	<i>Borrelia miyamotoi</i>	-	16
Malaria	15	71	Ehrlichiosis (<i>chaffeensis, ewingii</i>)	21	77
West Nile	-	36	Lyme disease*	91	3,518
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	4	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 1533 mosquito pools from all 21 counties have been tested for WNV.
- No pools tested positive for WNV on Week 25. Six mosquito pools have tested positive so far this year.
- The positive pools were detected in *Aedes cantator* (1), *Ae. triseriatus* (1), *Ae. vexans* (1), *Culex pipiens* (1), and *Cx. pipiens/restuans/salinarius species mix* (2).
- The first WNV positive mosquito pool (*Aedes cantator*) was detected in week 22 from Burlington County. In 2021, the first WNV positive mosquito pool was identified in Week 23 from Somerset County. This is the earliest detection since 2019, when Passaic County had a positive pool in week 22.

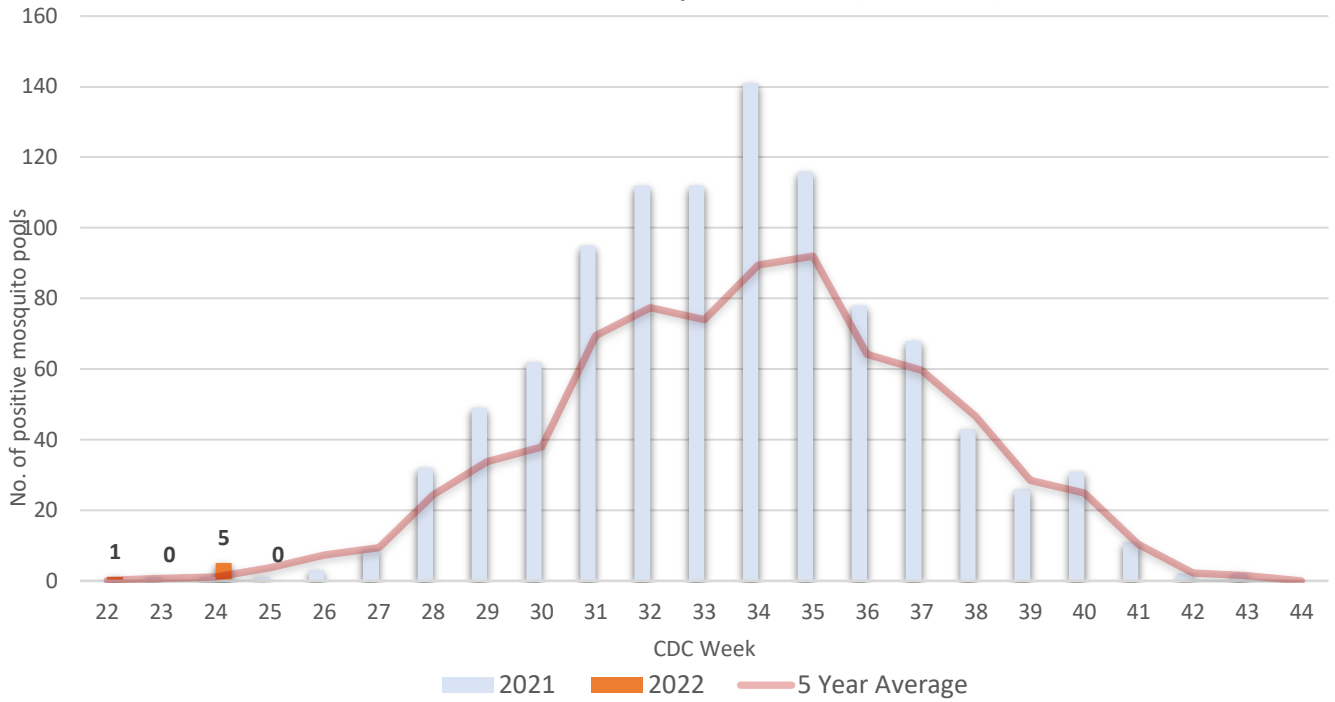
*Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL and CMBSL3 as of June 29, 2022

WNV Positive Mosquito Pools

County	Week 25		Cumulative Total (Week 25)	
	2022*	2021	2022*	2021
Atlantic				
Bergen		1	2	1
Burlington			1	
Camden				
Cape May				
Cumberland				
Essex				
Gloucester			1	
Hudson				
Hunterdon				
Mercer				
Middlesex				
Monmouth				
Morris				
Ocean				
Passaic				
Salem			1	
Somerset			1	1
Sussex				
Union				
Warren				1
Total	-	1	6	3

Week 25: June 20-26, 2021; June 19-25, 2022

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



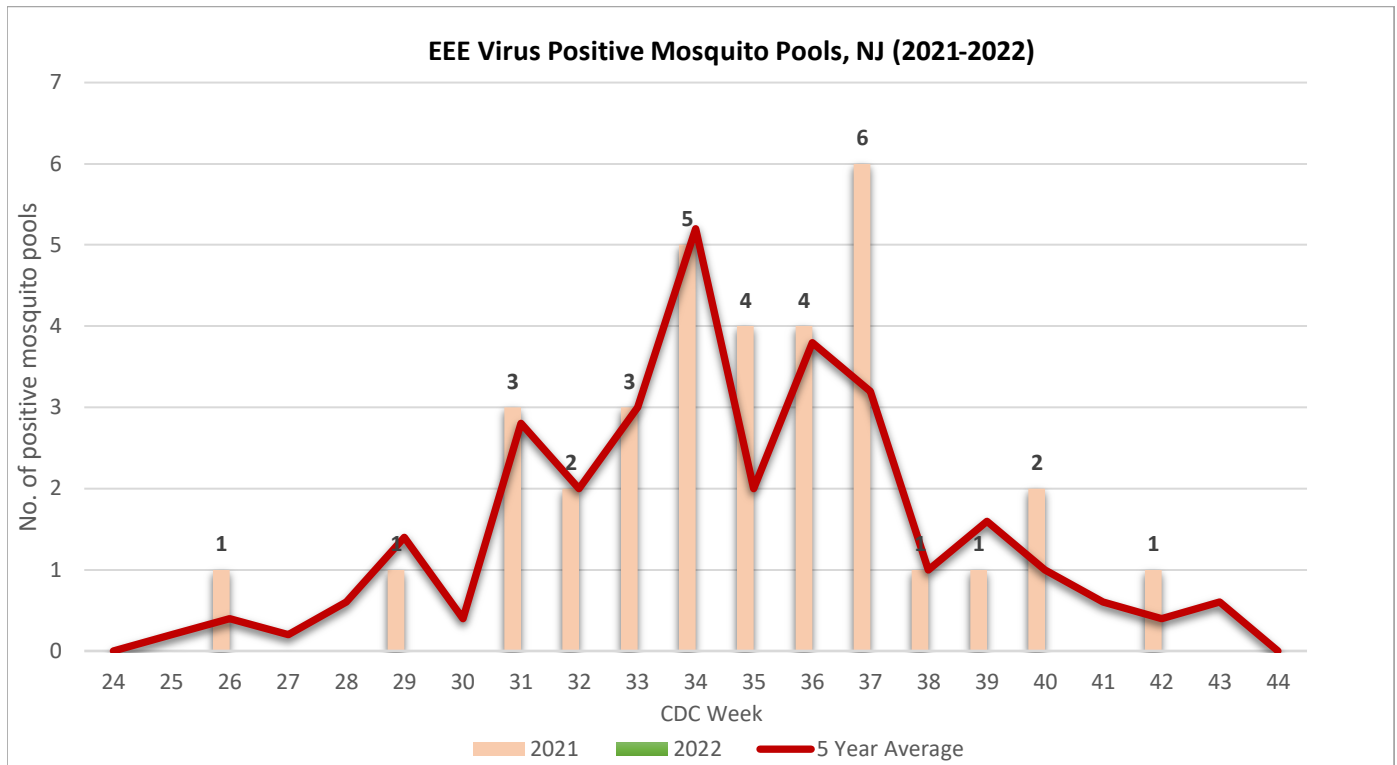
Eastern equine encephalitis virus (EEE)

- A total of 1519 mosquito pools from all 21 counties 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 25		Cumulative Total (WEEK 25)	
	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 25: June 20-26, 2021; June 19-25, 2022



Other viruses:

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

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	61		61				4		4		4	
Bergen	61		61	2								
Burlington	9		9									
Camden	5		4									
Cape May	53											
Cumberland	113		113									
Essex	13		13									
Gloucester	77		76									
Hudson	55		55									
Hunterdon	81		81									
Mercer	120		120		10							
Middlesex	52		52									
Monmouth	129		129									
Morris	122		122									
Ocean	74		74									
Passaic	30		30		1							
Salem	104		104									
Somerset	63		63									
Sussex	140		140									
Union	13		13									
Warren	144		144		3							
Total	1519	-	1464	2	14	-	4	-	4	-	4	-

^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):

- Two mosquito pools (*Ae. cantator*) from Bergen County tested positive for JCV on Week 22 and Week 24. In 2021, the first positive pool was detected on Week 27 from Sussex County.
- Jamestown Canyon virus has not been detected in humans in 2022.
- NJ reported 2 human JCV cases last year in Sussex County (week 18) and in Essex County (week 36). The first NJ JCV case was reported in 2015 in Sussex County.
- In 2021, eight positive JCV pools were reported in Atlantic, Camden, Essex, Gloucester, and Sussex counties.

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

Week 25: June 20-26, 2021; June 19-25, 2022

4. Surveillance Maps

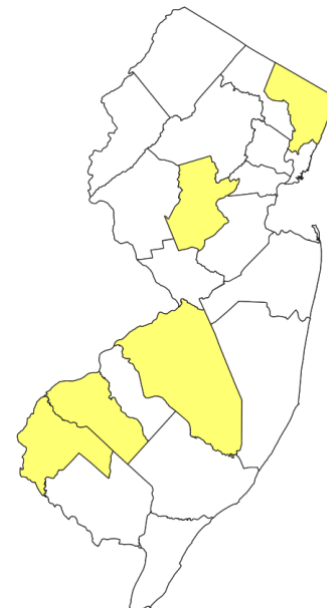
West Nile Virus (WNV)

WEEK 25 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)

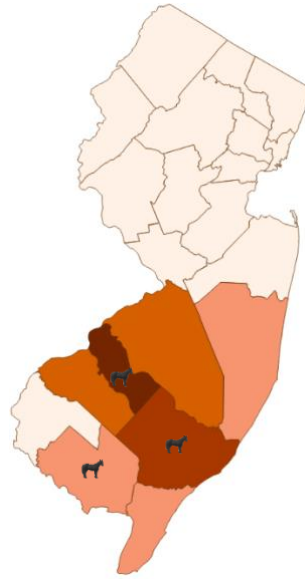
2021 EEE Activity

Cumulative EEE Activity 2022

EEE Positive Pools

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

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



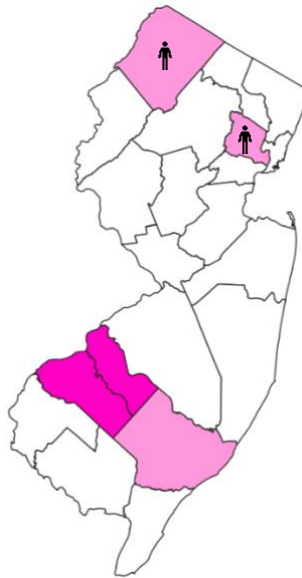
Jamestown Canyon Virus

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

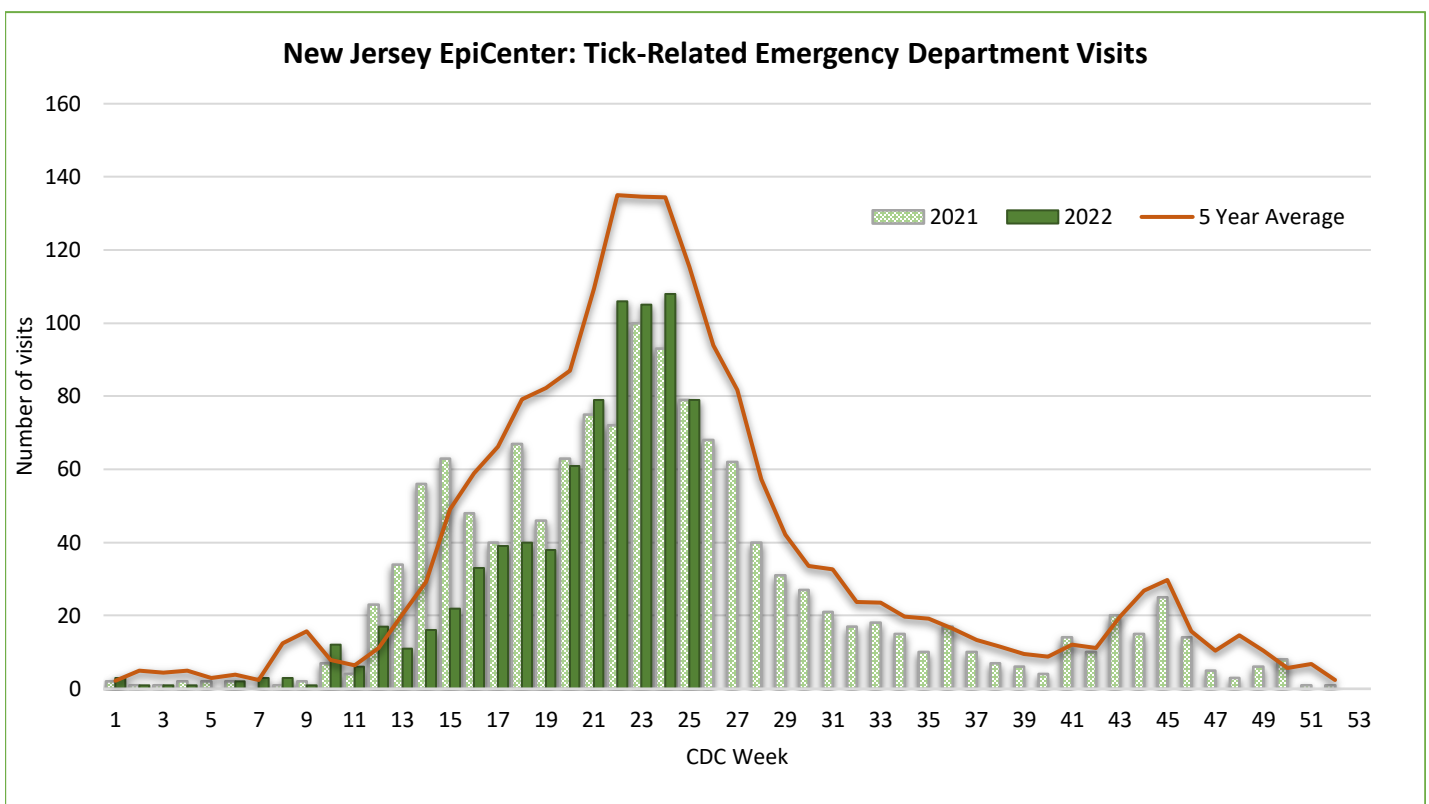


5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 25, the number of ED visits is lower than the 5-year average. ED visits started to increase starting on Week 12, with current levels equal to last year.



Data reflects ED visits downloaded from EpiCenter as of June 29, 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/>