

## Report Highlights:

- There have been no detections of West Nile virus (WNV), Eastern equine encephalitis (EEE), or Jamestown Canyon virus (JCV) in humans, mosquitoes, or animals this year.
- NJDOH began testing mosquitoes for arboviruses the week of May 15<sup>th</sup> and to date has tested mosquitoes submitted from 19 counties. No mosquito pools have tested positive.
- The number of N.J. chikungunya cases reported to date in 2023 is higher than the 2022 total due to an ongoing outbreak in South America.
- The number of tick-related emergency department visits is higher compared to this time last year, but close to the 5-year average.
- The number of Lyme disease cases reported in 2023 is similar to 2022.

## Vector-borne Disease Case Summary

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2023 data reflect cases that have been approved by NJDOH and do not include cases under investigation. Due to the time needed for public health investigation, the number of tickborne diseases (with the exception of Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2023 numbers are preliminary and subject to change.

	Mosquito-borne diseases		Tickborne Diseases/Conditions		
	2023	2022		2023	2022
Chikungunya	4	2	Alpha-gal syndrome	30	234
Dengue	8	35	Anaplasmosis	26	125
Eastern equine encephalitis	-	-	Babesiosis	10	292
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	6
Malaria	11	86	Ehrlichiosis ( <i>chaffeensis</i> , <i>ewingii</i> )	6	115
West Nile	-	20	Lyme disease*	2,123	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	4	35
			Tularemia	-	1

\* Lyme disease surveillance transitioned to laboratory-based surveillance in 2022.

## Mosquito-borne Disease Activity

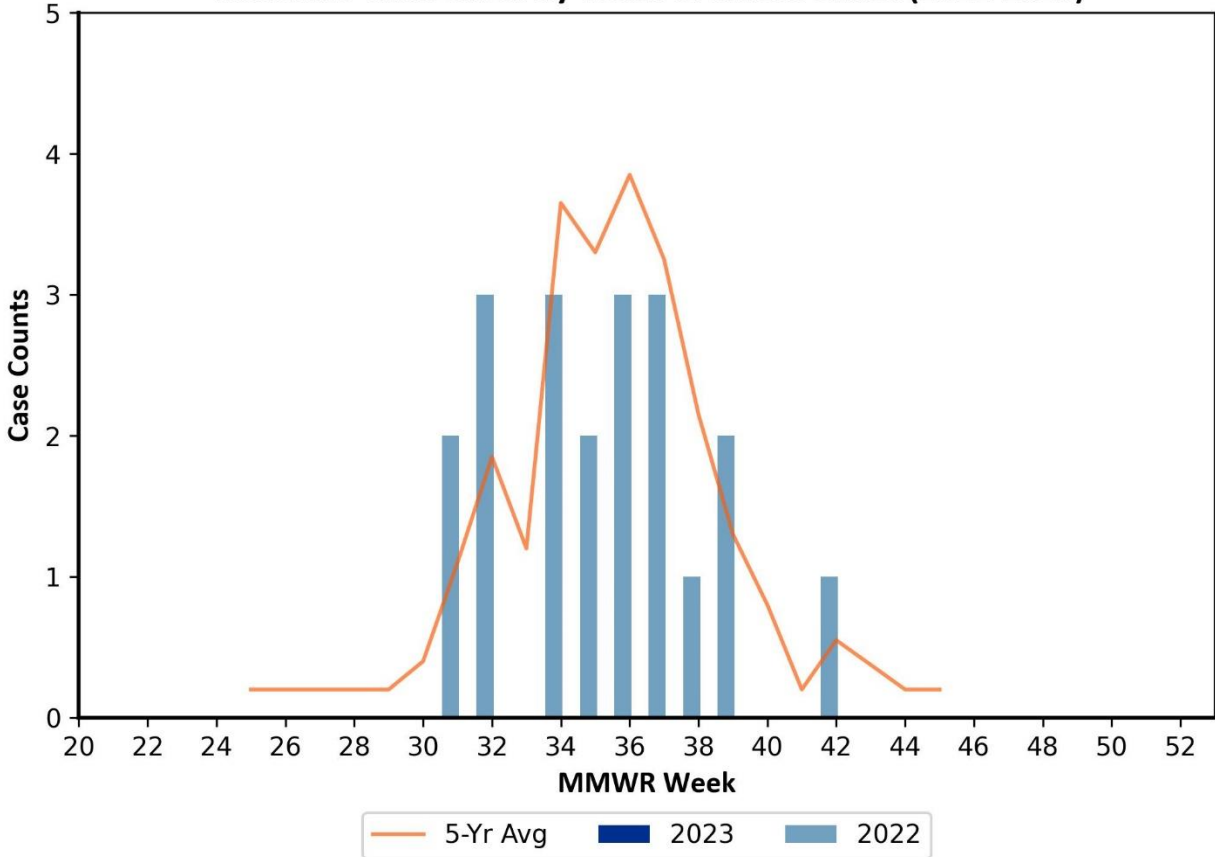
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) performs arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on May 30, 2023

## West Nile Virus

- There have been no human cases of WNV in New Jersey in 2023.
- A total of 1118 pools from 19 counties (Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Warren) have been tested for WNV.
- No positive WNV pools have been identified in 2023. In 2022, the first WNV positive pool was detected in Week 22 from Burlington County.

### West Nile Virus Cases by Week of Illness Onset (2022-2023)



### WNV Mosquito Pool Testing

County	WEEK 22 Positive Pools		Cumulative Pos. Total (WEEK 22)		# Pools Tested	WEEK 22 Vector Index
	2023	2022	2023	2022	2023	2023 <sup>t</sup>
Atlantic					29	
Bergen						
Burlington		1		1	4	
Camden					33	
Cape May					60	
Cumberland					40	
Essex					34	
Gloucester					239	
Hudson					19	
Hunterdon					31	
Mercer					40	
Middlesex					43	
Monmouth					47	
Morris					58	
Ocean					33	
Passaic					25	
Salem					47	
Somerset					10	
Sussex					262	
Union						
Warren					64	
<b>Total</b>	-	1	-	1	1118	-

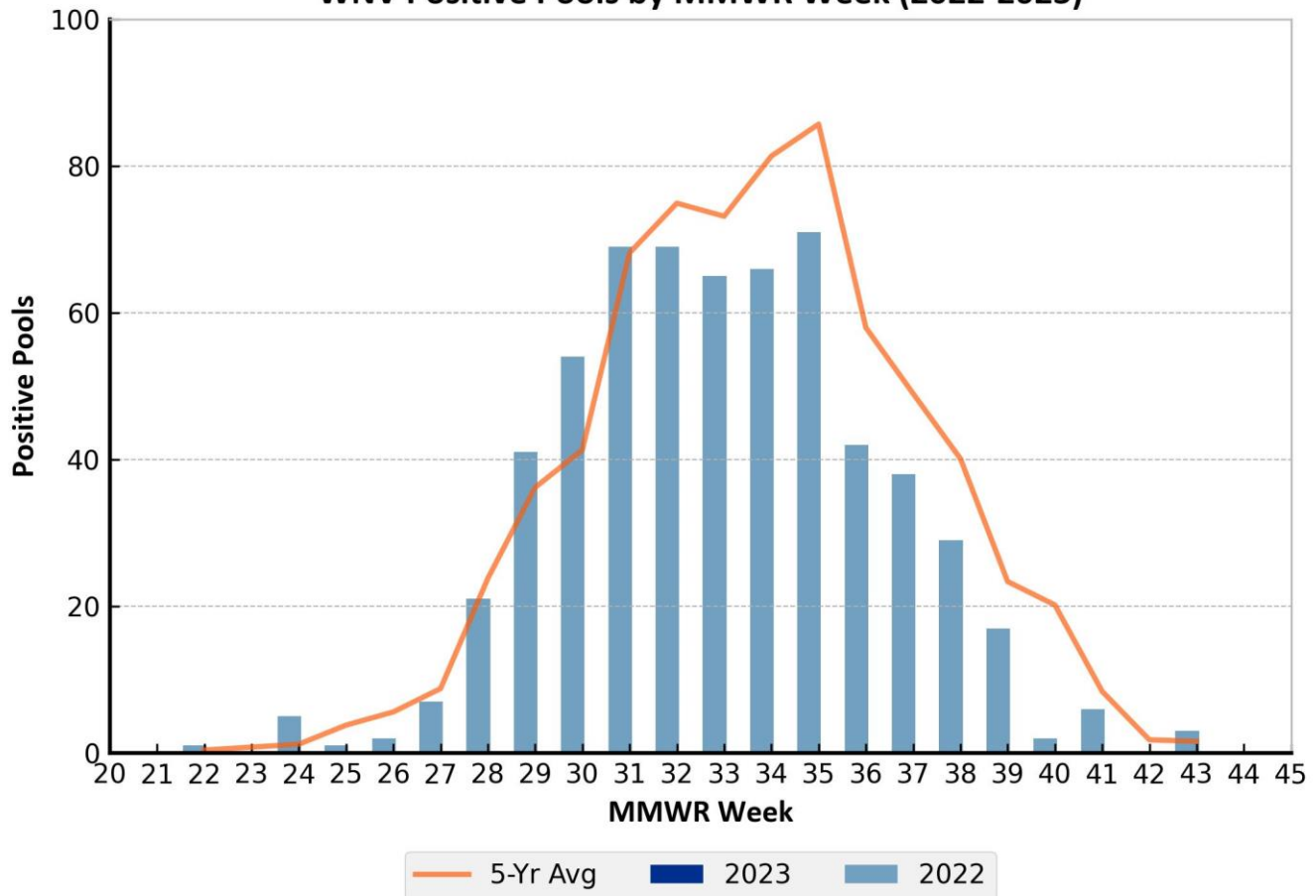
WEEK 22: May 29-June 4, 2022; May 28-June 3, 2023

### WNV Vector Index, WEEK 22<sup>t</sup>

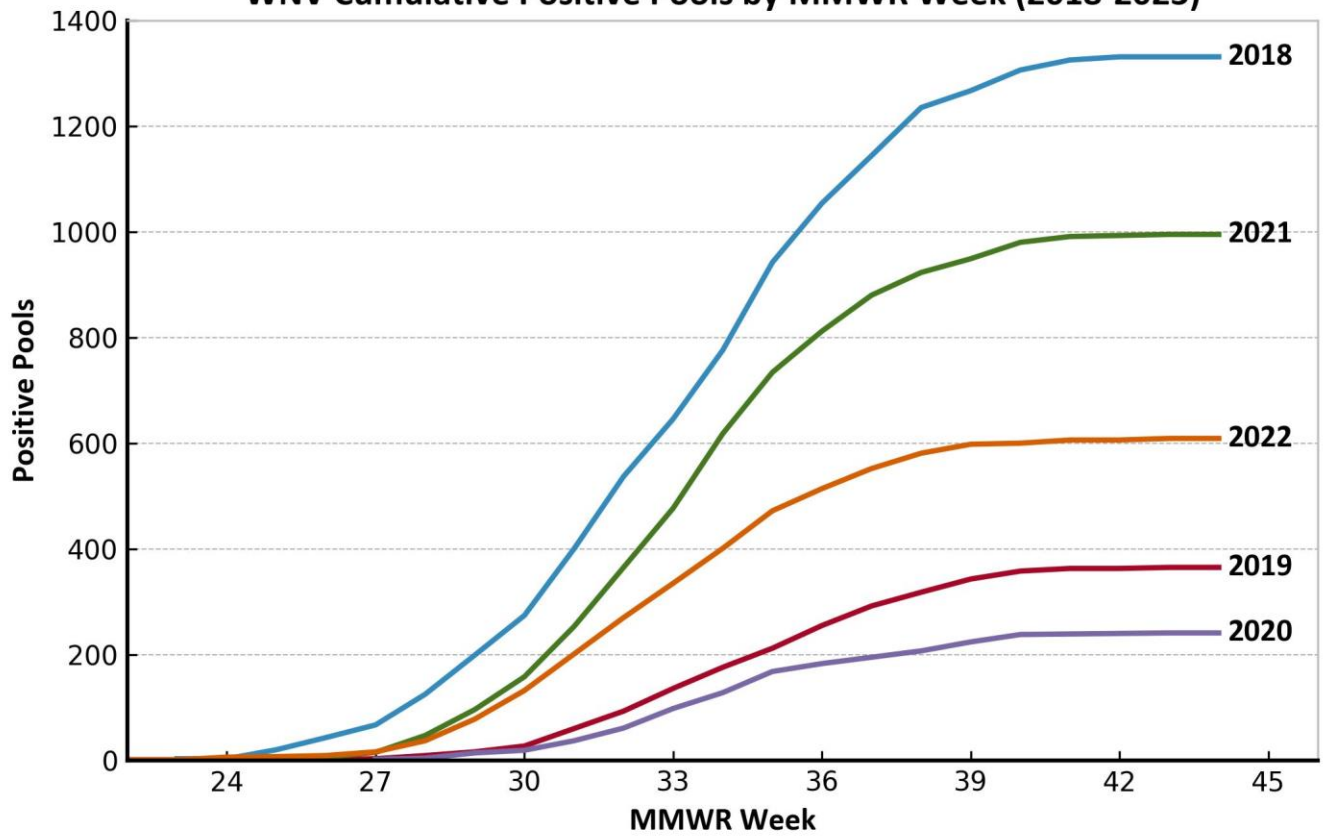


<sup>t</sup> Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps

**WNV Positive Pools by MMWR Week (2022-2023)**



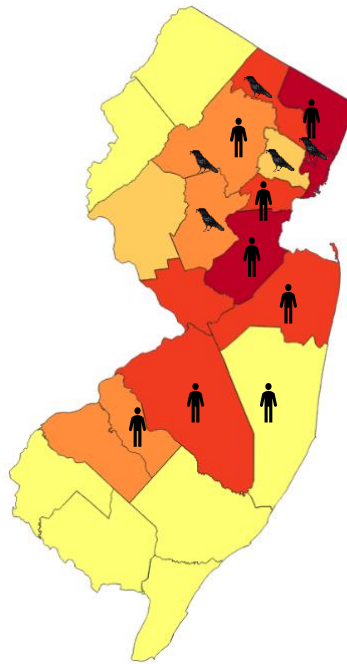
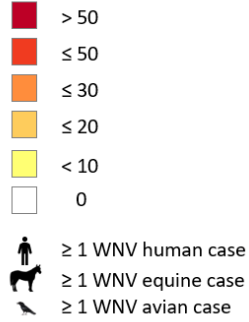
**WNV Cumulative Positive Pools by MMWR Week (2018-2023)**



### 2022 WNV Activity

### Cumulative WNV Activity, 2023

#### WNV Positive Pools



### Eastern Equine Encephalitis

- There have been no human cases of EEE in New Jersey in 2023. EEE cases were last reported in 2019 (4 cases).
- A total of 1116 pools from 19 counties (Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Warren) have been tested for EEE.
- No positive EEE pools have been identified in 2023. In 2022, the first EEE positive pool was detected in Week 33 from Morris County.

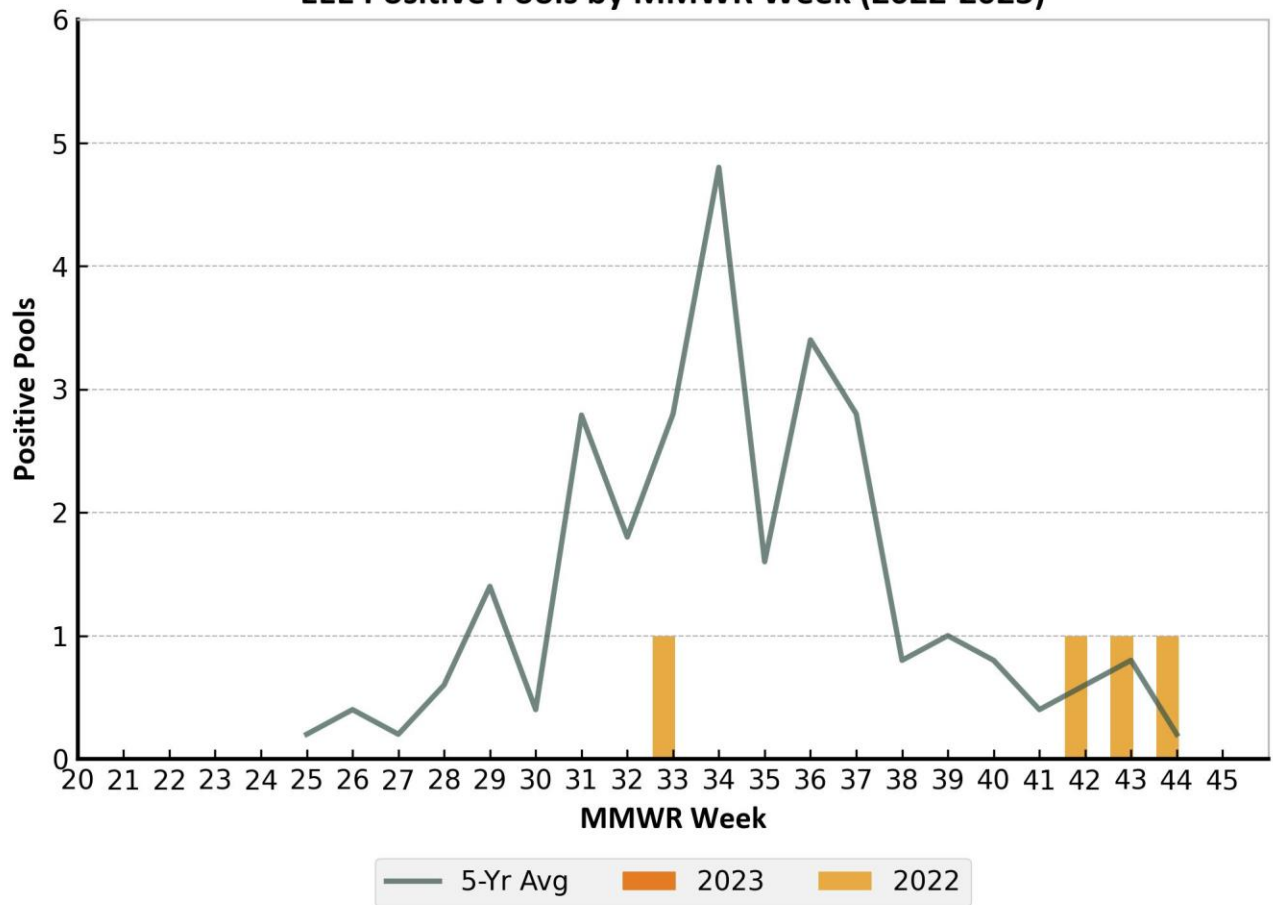
#### EEE Mosquito Pool Testing

County	WEEK 22 Positive Pools		Cumulative Pos. Total (WEEK 22)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					29	
Bergen						
Burlington					4	
Camden					33	
Cape May					60	
Cumberland					40	
Essex					34	
Gloucester					239	
Hudson					19	
Hunterdon					31	
Mercer					39	
Middlesex					43	
Monmouth					47	
Morris					58	
Ocean					33	
Passaic					25	
Salem					46	
Somerset					10	
Sussex					262	
Union						
Warren					64	
<b>Total</b>	-	-	-	-	<b>1116</b>	-

### Cumulative EEE MFIR, 2023



### EEE Positive Pools by MMWR Week (2022-2023)



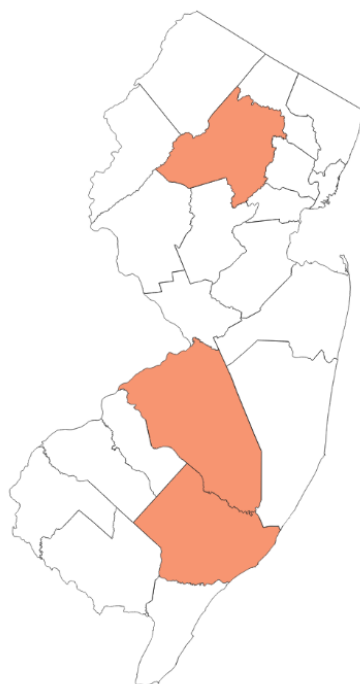
#### 2022 EEE Activity

#### Cumulative EEE Activity, 2023

##### EEE Positive Pools

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

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



## Jamestown Canyon Virus

- There have been no human cases of JCV in New Jersey in 2023.
- JCV can be detected in early-season mosquitoes. Nine counties submitted early season mosquito pools for JCV testing, with collection dates starting the 1<sup>st</sup> week of April. A total of 1116 pools from 19 counties (Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Somerset, Sussex, Warren) have been tested for JCV.
- No positive JCV pools have been identified in 2023. In 2022, the first JCV positive pool was detected in Week 22 (Bergen Cty).

JCV Mosquito Pool Testing

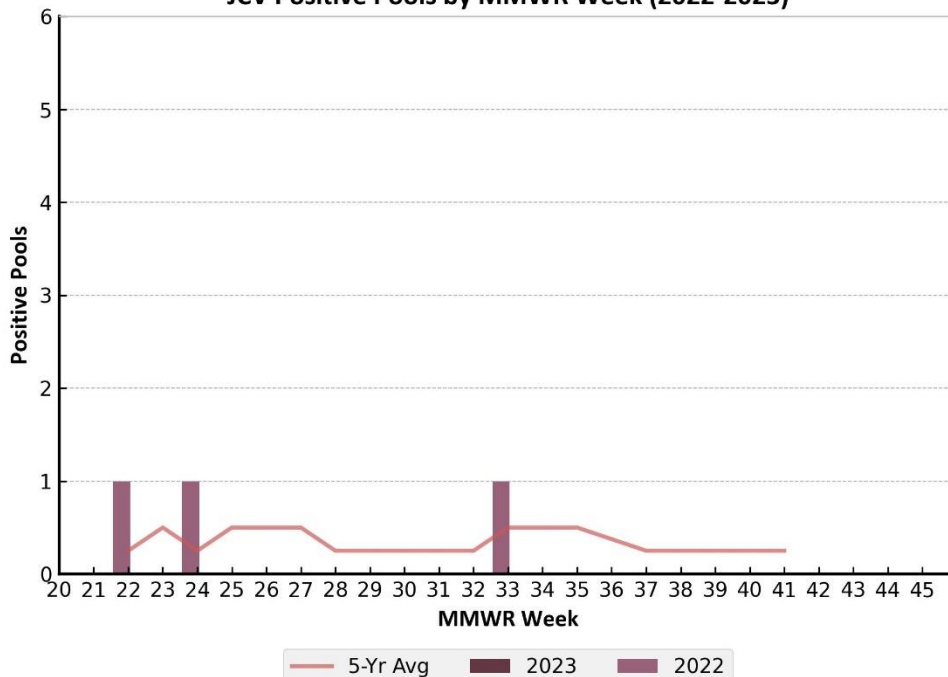
County	WEEK 22 Positive Pools		Cumulative Pos. Total (WEEK 22)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					29	
Bergen		1		1		
Burlington					4	
Camden					33	
Cape May					60	
Cumberland					40	
Essex					34	
Gloucester					239	
Hudson					19	
Hunterdon					31	
Mercer					39	
Middlesex					43	
Monmouth					47	
Morris					58	
Ocean					33	
Passaic					25	
Salem					46	
Somerset					10	
Sussex					262	
Union						
Warren					64	
<b>Total</b>	-	<b>1</b>	-	<b>1</b>	<b>1116</b>	-

Cumulative JCV MFIR, 2023



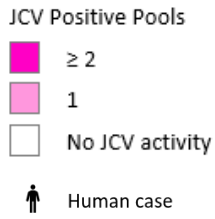
WEEK 22: May 29-June 4, 2022; May 28-June 3, 2023

JCV Positive Pools by MMWR Week (2022-2023)



**2022 JCV Activity**

**Cumulative JCV Activity, 2023**



**Other Mosquito-borne Viruses**

- Mosquito pools from 19 counties have been tested for other arboviruses with no positives.

**Cumulative 2023 Mosquito Pool Testing (Other Viruses<sup>a</sup>)**

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	29									
Bergen										
Burlington	4									
Camden	33									
Cape May	60									
Cumberland	40									
Essex	34									
Gloucester	239									
Hudson	19									
Hunterdon	31									
Mercer	39		1							
Middlesex	43									
Monmouth	47									
Morris	58									
Ocean	33									
Passaic	25									
Salem	46		1							
Somerset	10									
Sussex	262									
Union										
Warren	64									
<b>Total</b>	<b>1116</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

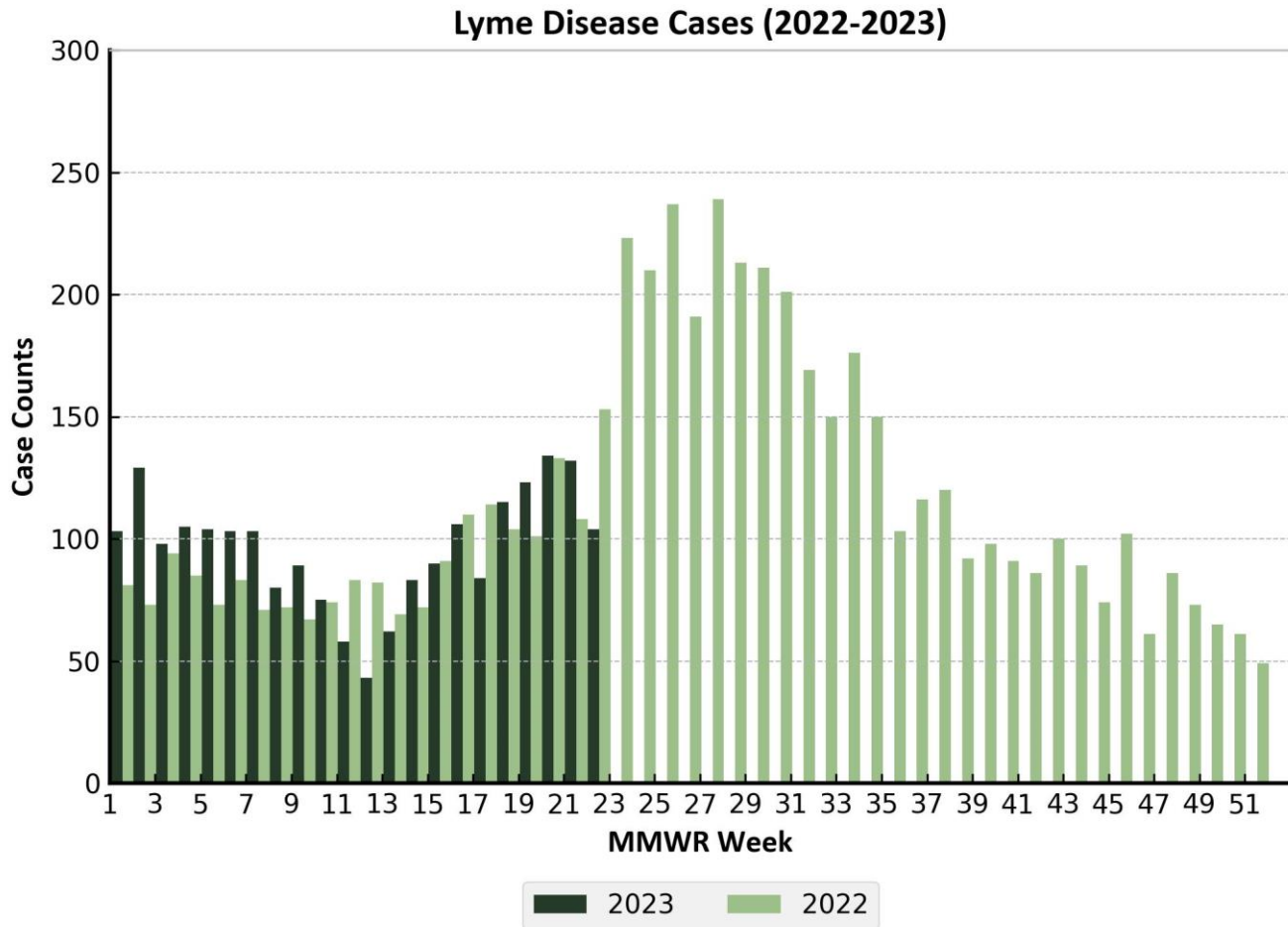
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2023  
 Number in blue shaded columns represent positive pools in 2023



## Tick-borne Disease Activity

### Lyme Disease

- There have been 2,123 cases of Lyme disease reported in New Jersey in 2023, including cases in all 21 counties.
- The number of cases in 2023 is similar to the number of cases reported at this time in 2022.



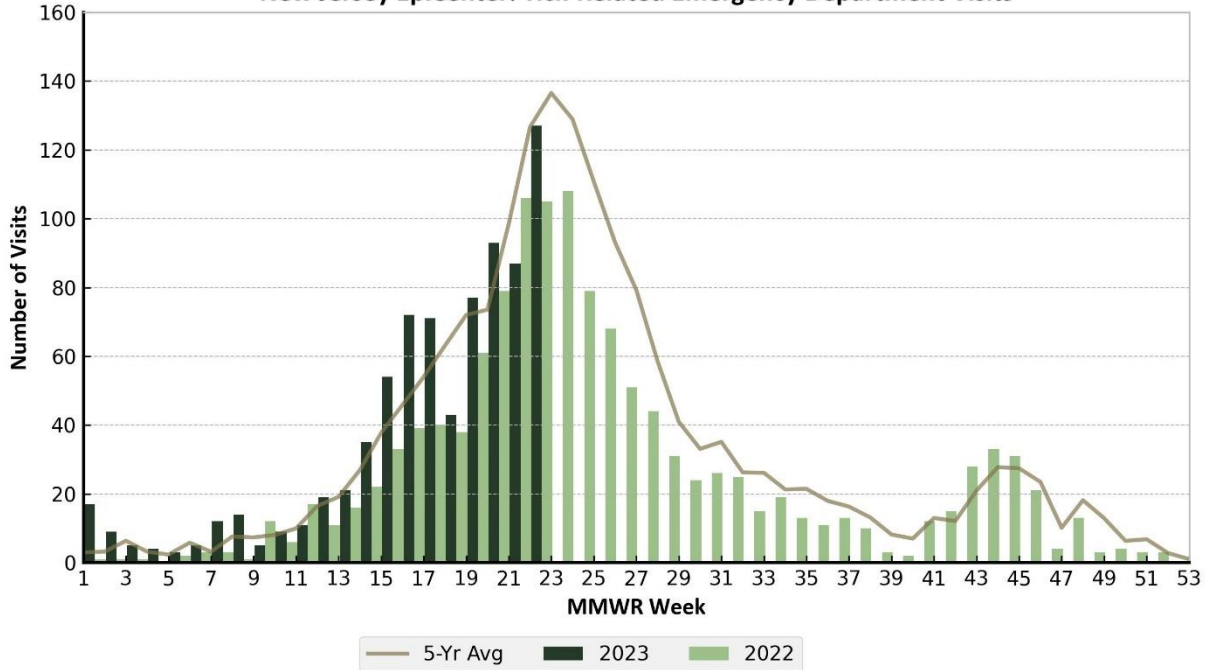
### Tick-related Emergency Department Visits

New Jersey’s syndromic surveillance system, known as 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 N.J. 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.

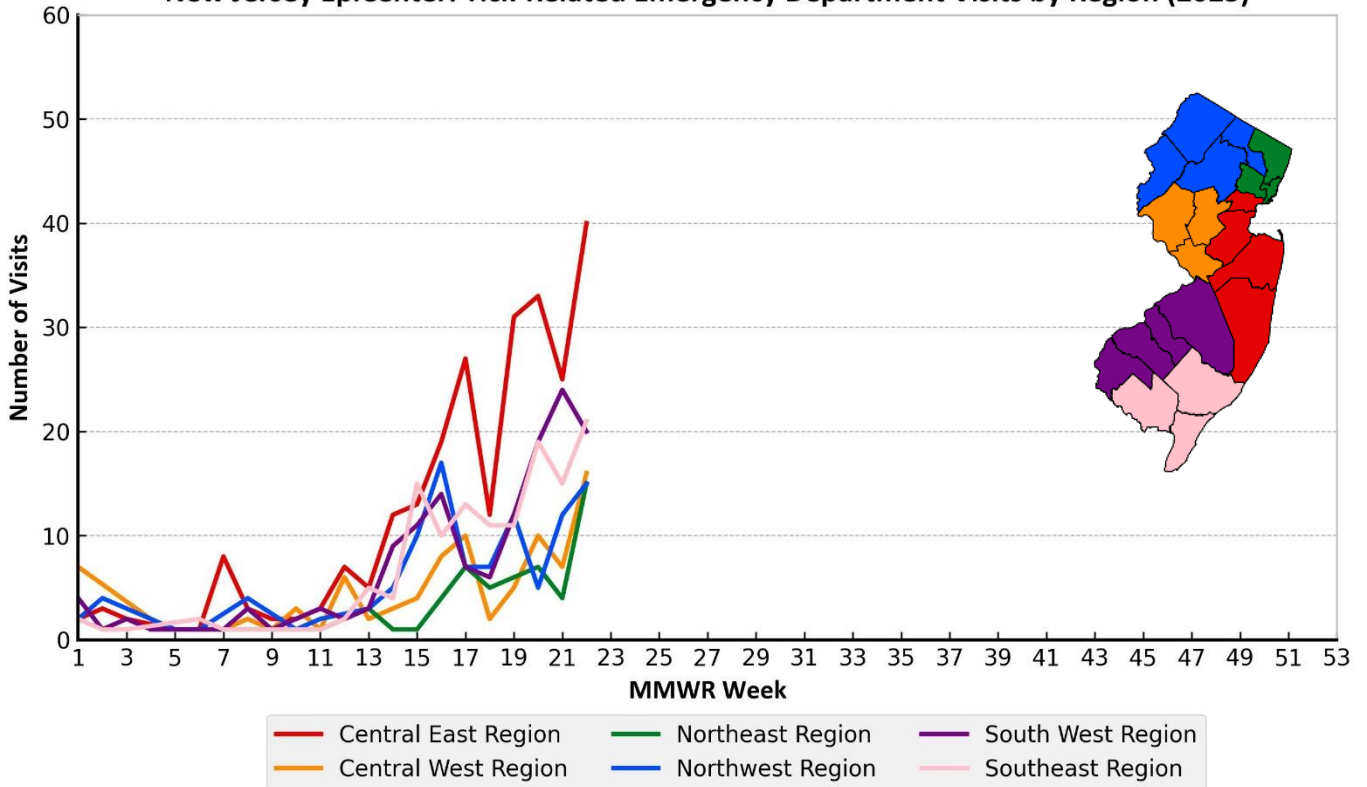
In week 22, the number of tick-related ED visits is higher than in 2022 but similar to the 5-year average.



**New Jersey EpiCenter: Tick-Related Emergency Department Visits**



**New Jersey EpiCenter: Tick-Related Emergency Department Visits by Region (2023)**



Data reflects ED visits downloaded from EpiCenter as of May 30, 2023

**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/>