

## Report Highlights:

- The first West Nile virus (WNV) positive pool for the season was detected in Bergen County.
- NJDOH began testing mosquitoes for arboviruses the week of May 15<sup>th</sup> and to date has tested mosquitoes submitted from 20 counties.
- 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 comparable to this time last year, but below the 5-year average.
- The number of Lyme disease cases reported in 2023 is lower compared 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	7	2	Alpha-gal syndrome	45	234
Dengue	8	35	Anaplasmosis	34	125
Eastern equine encephalitis	-	-	Babesiosis	11	292
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	6
Malaria	11	86	Ehrlichiosis ( <i>chaffeensis</i> , <i>ewingii</i> )	10	115
West Nile	-	20	Lyme disease*	2,461	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	6	35
			Tularemia	-	1

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

## Mosquito-borne Disease Activity

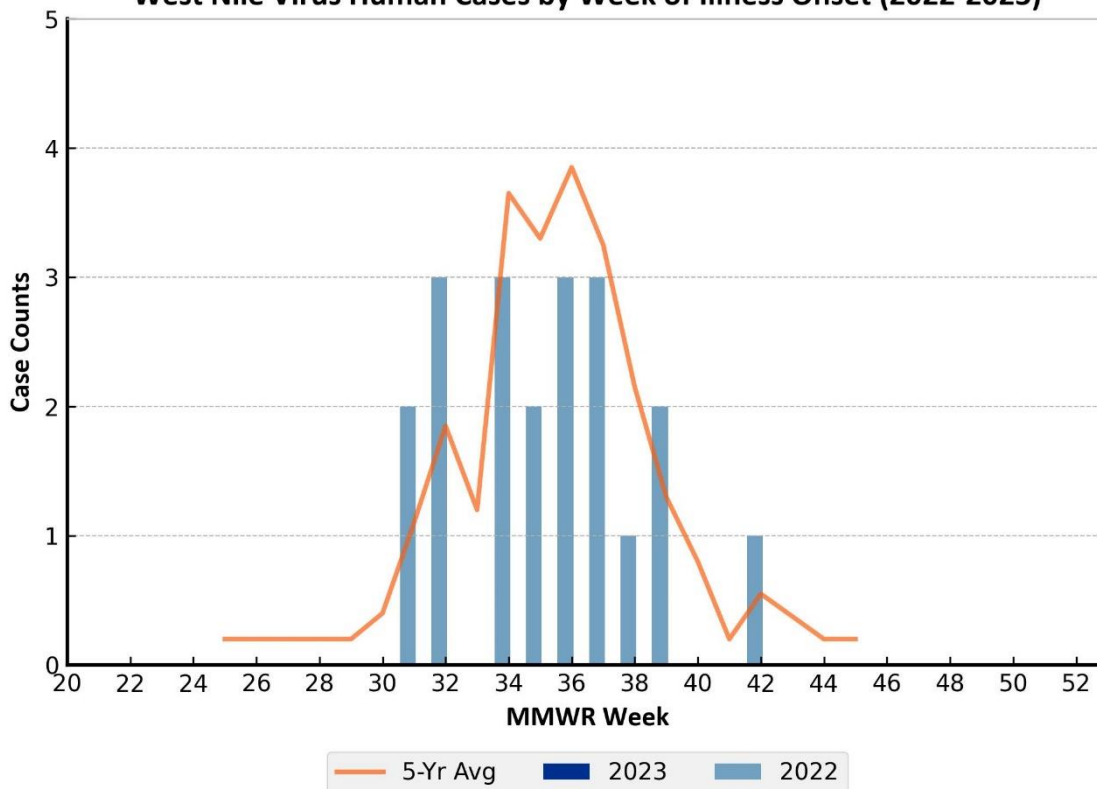
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) performs arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on June 13, 2023

## West Nile Virus

- There have been no human cases of WNV in New Jersey in 2023.
- A total of 1,685 pools from 20 counties (all except Union County) have been tested for WNV.
- One positive WNV pool has been identified in 2023 from Bergen County. The positive pool was found in: *Culex pipiens/restuans/salinarius*. In 2022, the first WNV positive pool was detected in Week 22 from Burlington County.
- No animals have tested positive for WNV in 2023.

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



**WNV Mosquito Pool Testing**

County	WEEK 24 Positive Pools		Cumulative Pos. Total (WEEK 24)		# Pools Tested	WEEK 24 Vector Index
	2023	2022	2023	2022	2023	2023 <sup>t</sup>
Bergen	1	2	1	2	40	0.257
Atlantic					69	
Burlington				1	4	
Camden					70	
Cape May					102	
Cumberland					58	
Essex					39	
Gloucester		1		1	313	
Hudson					46	
Hunterdon					51	
Mercer					61	
Middlesex					72	
Monmouth					47	
Morris					78	
Ocean					65	
Passaic					52	
Salem		1		1	69	
Somerset		1		1	31	
Sussex					314	
Union						
Warren					104	
<b>Total</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>6</b>	<b>1685</b>	<b>-</b>

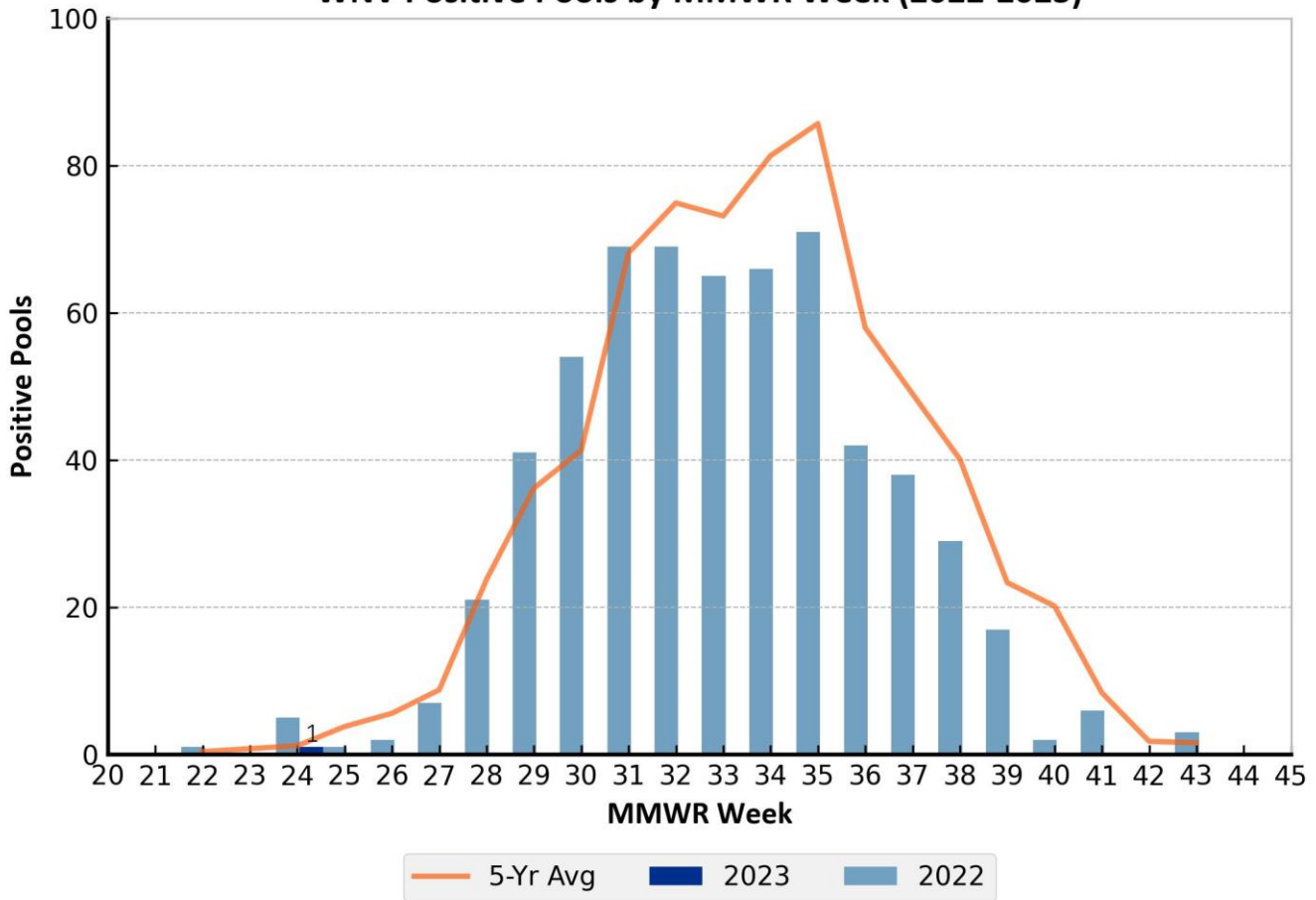
WEEK 24: June 12-18, 2022; June 11-17, 2023

**WNV Vector Index, WEEK 24<sup>t</sup>**

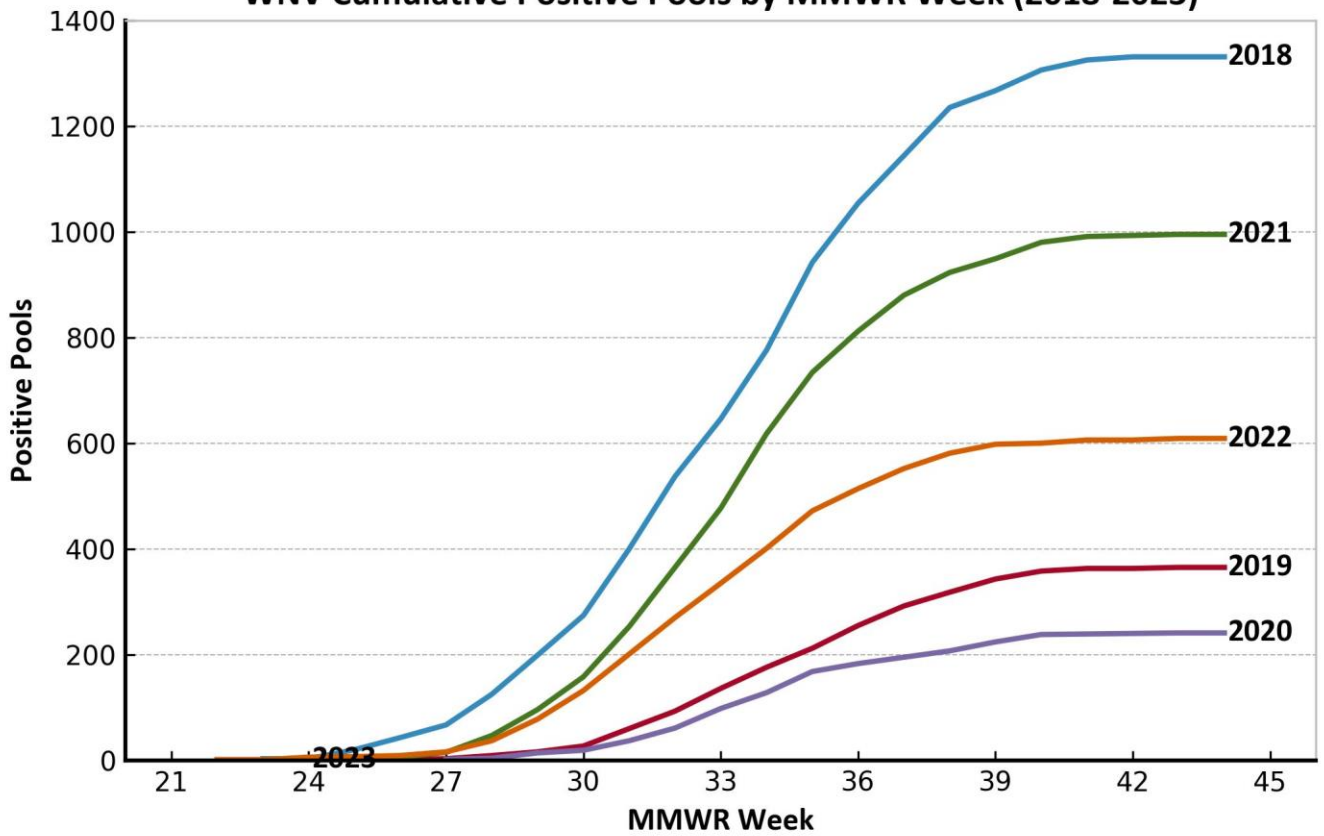


<sup>t</sup> Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps

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



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

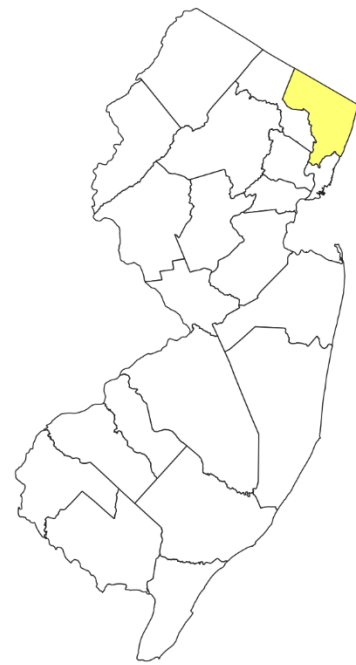
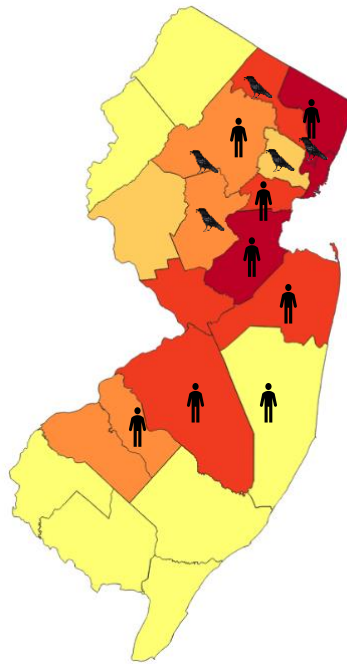


### 2022 WNV Activity

### Cumulative WNV Activity, 2023

#### WNV Positive Pools

- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- ≥ 1 WNV human case
- ≥ 1 WNV equine case
- ≥ 1 WNV avian case



### 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 1,680 pools from 20 counties (all except Union County) 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.
- No animals have tested positive for EEE in 2023.

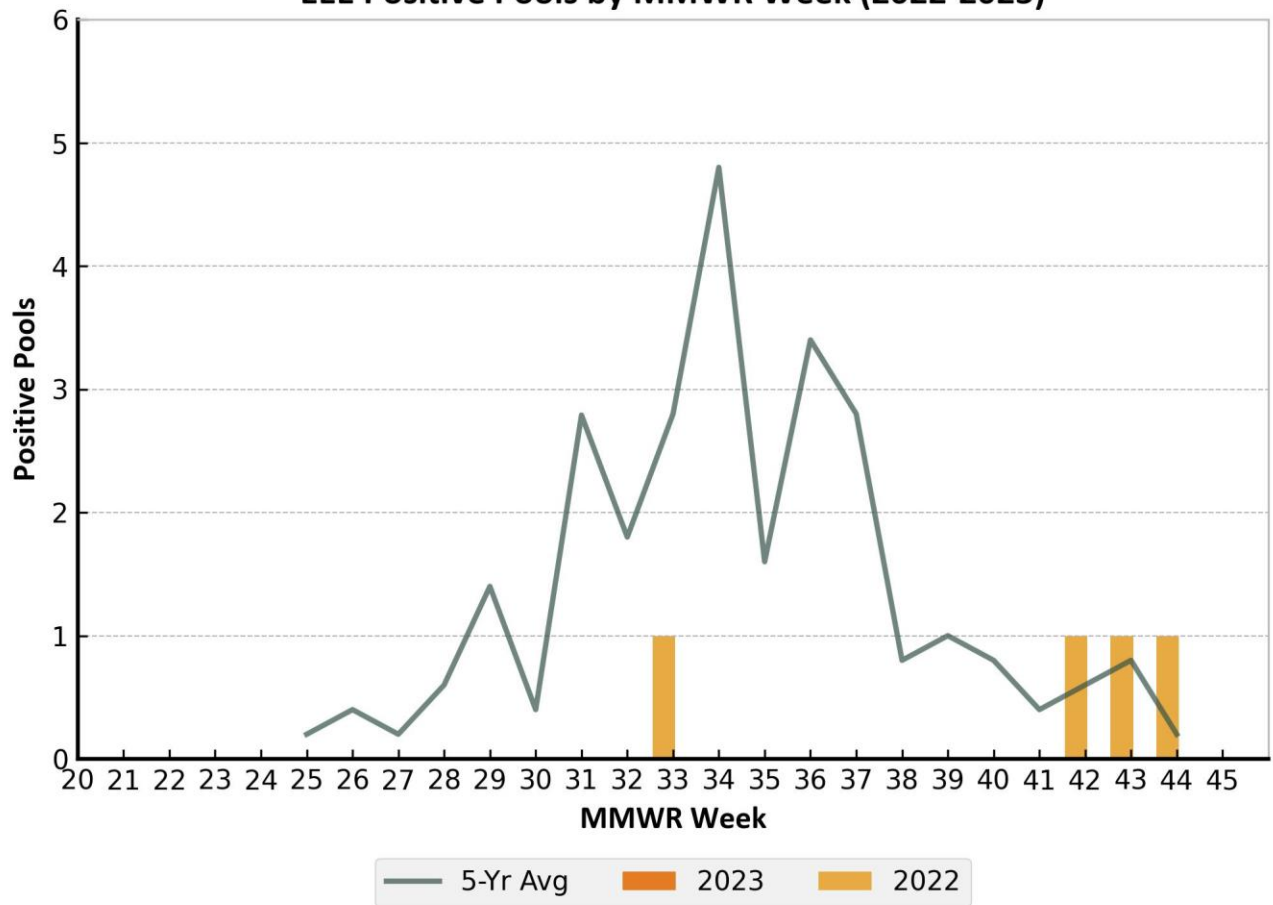
#### EEE Mosquito Pool Testing

County	WEEK 24 Positive Pools		Cumulative Pos. Total (WEEK 24)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					69	
Bergen					40	
Burlington					4	
Camden					70	
Cape May					102	
Cumberland					58	
Essex					39	
Gloucester					313	
Hudson					46	
Hunterdon					51	
Mercer					57	
Middlesex					72	
Monmouth					47	
Morris					78	
Ocean					65	
Passaic					52	
Salem					68	
Somerset					31	
Sussex					314	
Union						
Warren					104	
<b>Total</b>	-	-	-	-	1680	-

#### Cumulative EEE MFIR, 2023



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



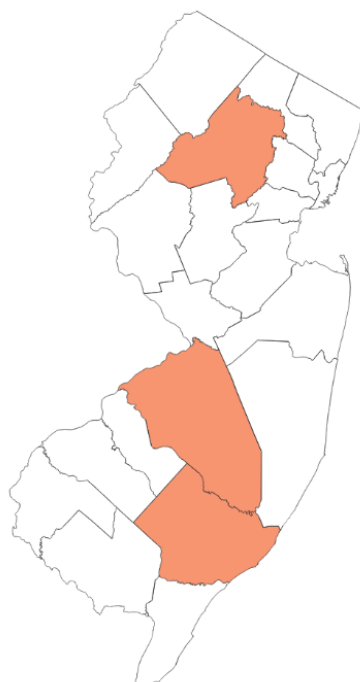
### 2022 EEE Activity

### 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 1,680 pools from 20 counties (all except Union County) 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 County).

JCV Mosquito Pool Testing

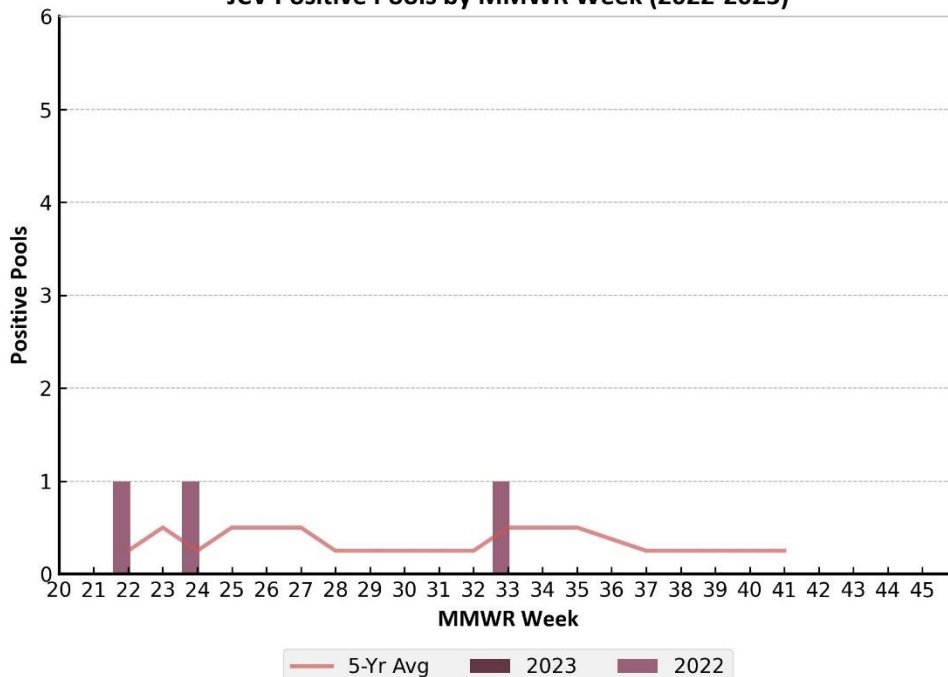
County	WEEK 24 Positive Pools		Cumulative Pos. Total (WEEK 24)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					69	
Bergen		1		2	40	
Burlington					4	
Camden					70	
Cape May					102	
Cumberland					58	
Essex					39	
Gloucester					313	
Hudson					46	
Hunterdon					51	
Mercer					57	
Middlesex					72	
Monmouth					47	
Morris					78	
Ocean					65	
Passaic					52	
Salem					68	
Somerset					31	
Sussex					314	
Union						
Warren					104	
<b>Total</b>	-	1	-	2	1680	-

Cumulative JCV MFIR, 2023



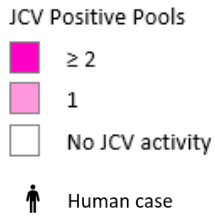
WEEK 24: June 12-18, 2022; June 11-17, 2023

JCV Positive Pools by MMWR Week (2022-2023)



**2022 JCV Activity**

**Cumulative JCV Activity, 2023**



**Other Mosquito-borne Viruses**

- Mosquito pools from 20 counties have been tested for other arboviruses with no positives.

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

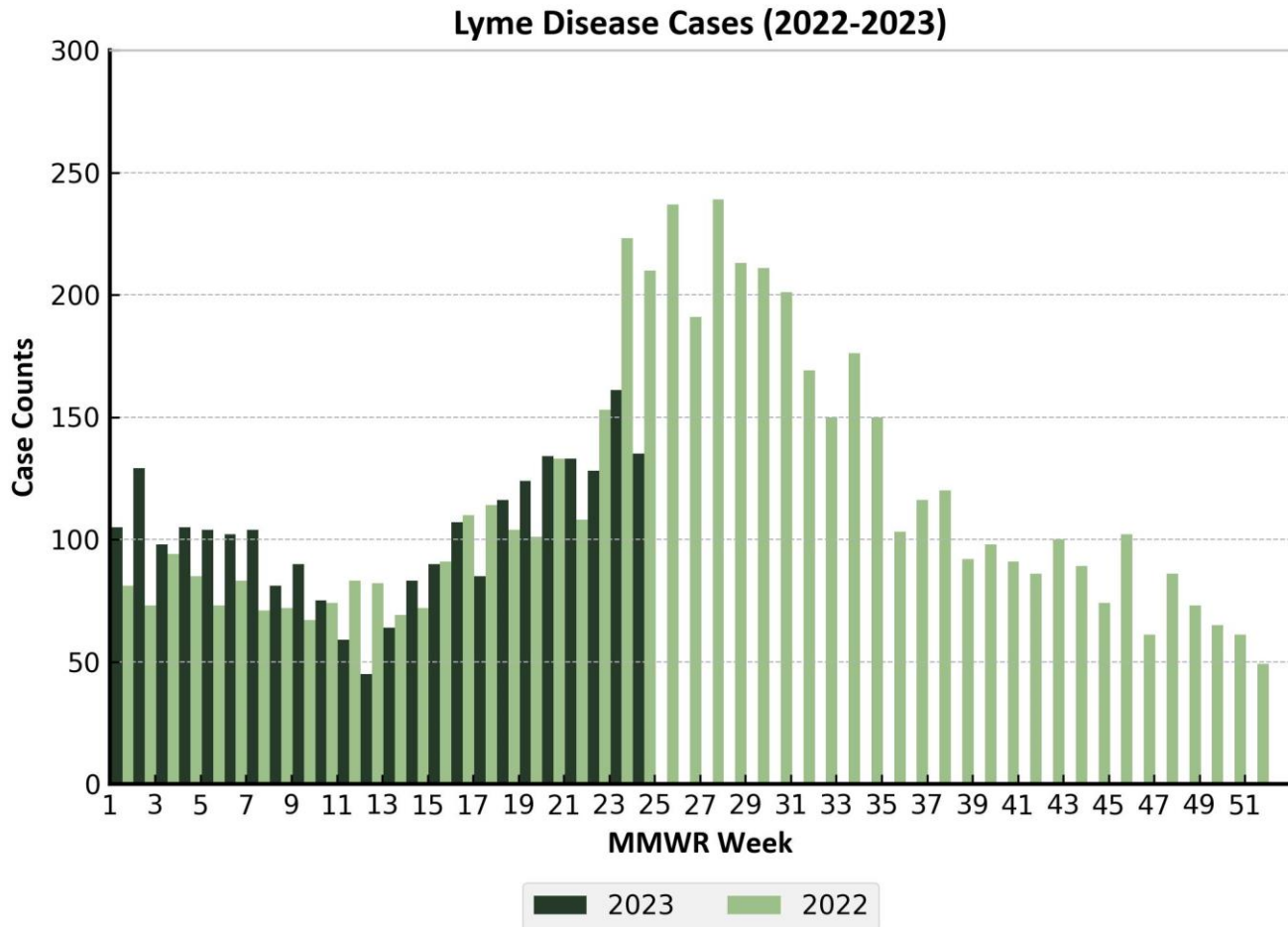
County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	69									
Bergen	40									
Burlington	4									
Camden	70									
Cape May	102									
Cumberland	58									
Essex	39									
Gloucester	313									
Hudson	46									
Hunterdon	51									
Mercer	57		4							
Middlesex	72									
Monmouth	47									
Morris	78									
Ocean	65									
Passaic	52									
Salem	68		1							
Somerset	31									
Sussex	314									
Union										
Warren	104									
<b>Total</b>	<b>1680</b>	<b>-</b>	<b>5</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 2,457 cases of Lyme disease reported in New Jersey in 2023, including cases in all 21 counties.
- The number of cases in week 24 this year is lower than the number of cases reported in 2022.



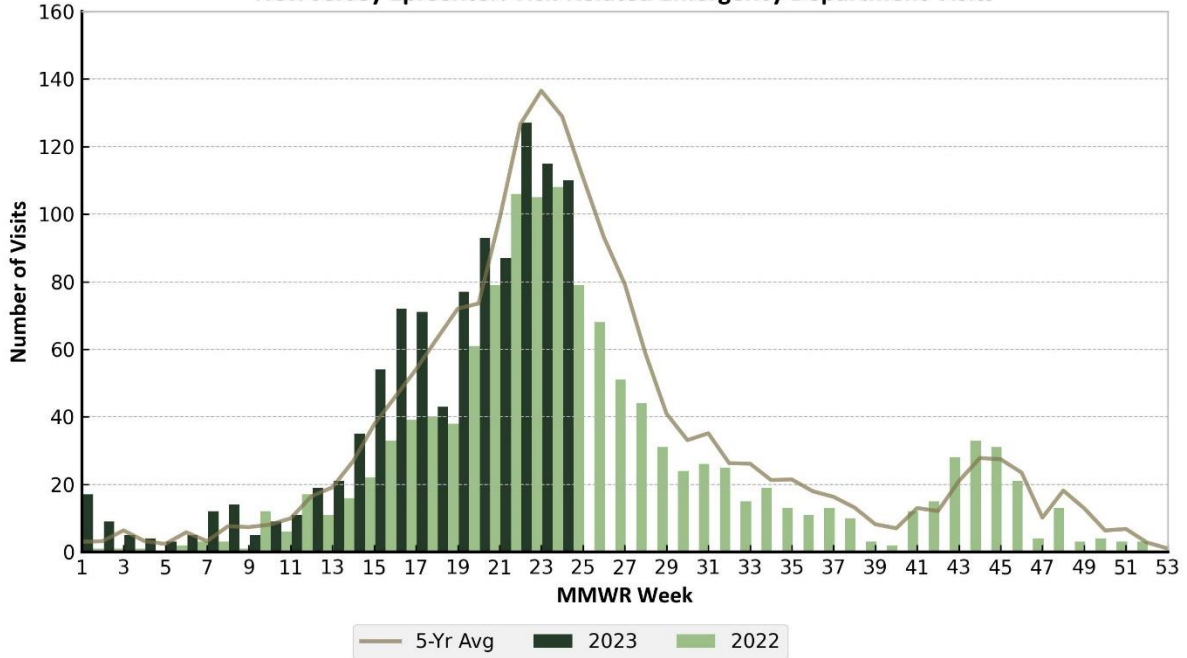
### Tick-related Emergency Department Visits

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.

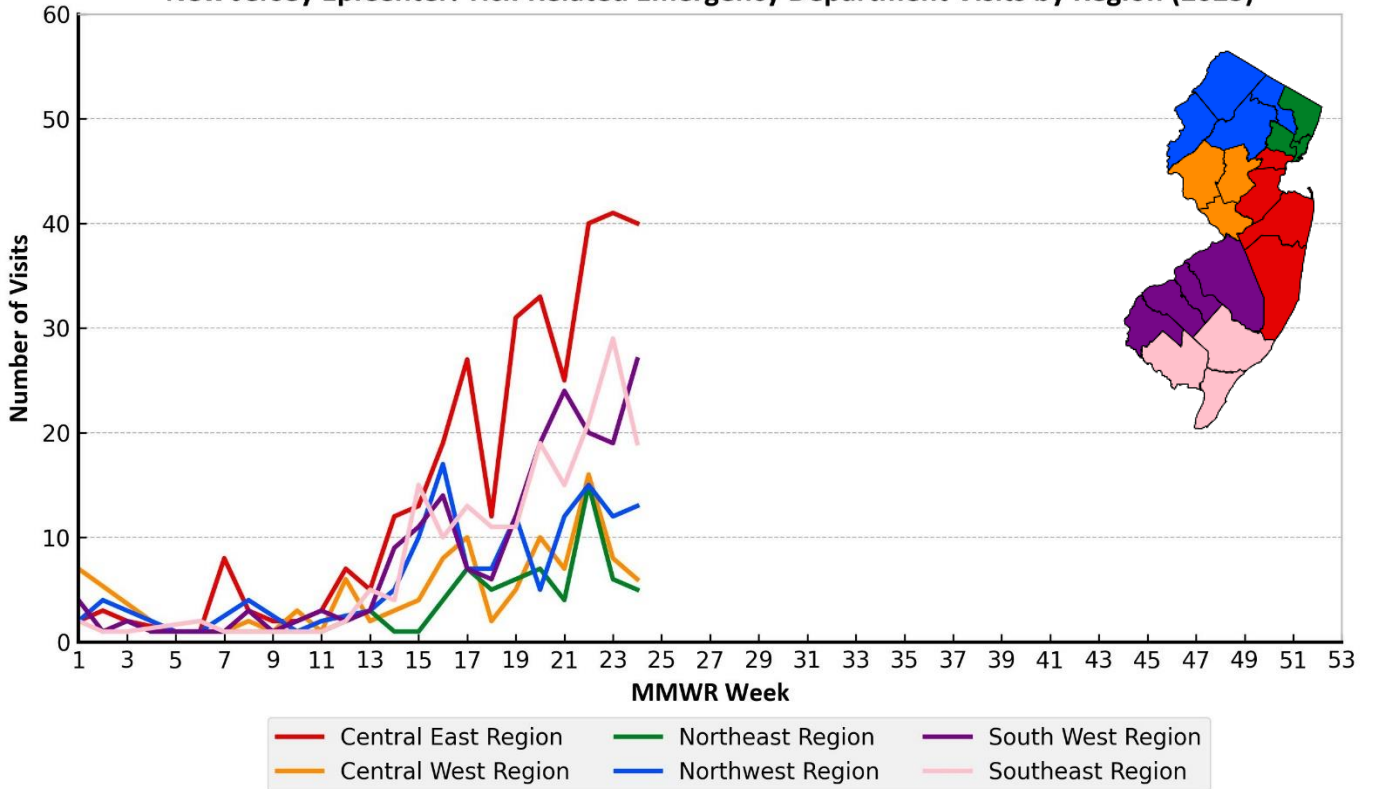
In Week 24, the number of tick-related ED visits is higher than in 2022 but below the 5-year average.



**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 June 20, 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/>