

## Report Highlights:

- **Two mosquito pools have tested positive for West Nile Virus (WNV) in 2024: one pool in Warren County in week 21 (additional tests pending) and 1 pool in week 18 in Gloucester County. Detecting WNV in mosquito pools this early in the season is unusual.**
- **There have been no human or animal cases of WNV reported in New Jersey in 2024.**
- **The number of travel-associated dengue cases is considerably higher in 2024 (32 cases) compared to the same timeframe in 2023 (8 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week is lower than the number reported this week last year.**
- **In week 21, the number of tick-related ED visits was higher than the previous week and is similar to last year and the 5-year average. The highest number of visits was in the central east region.**

## Human Vector-borne Disease Cases

N.J.A.C. 8:57 mandates public health reporting of communicable diseases. 2024 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 (except for Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2024 numbers are preliminary and subject to change. Some cases considered “presumptive positive” are pending additional testing. Case counts for 2023 reflect the annual total for that year.

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2024	2023		2024	2023
Chikungunya	-	13	Alpha-gal syndrome	49	360
Dengue	32	99	Anaplasmosis	23	195
Eastern equine encephalitis	-	-	Babesiosis	6	407
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	18
Malaria	23	102	Ehrlichiosis	1	109
West Nile	-	14	Lyme disease*	2,010	7,225
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	1	24
			Tularemia	-	2

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

## Mosquito-borne Disease Activity

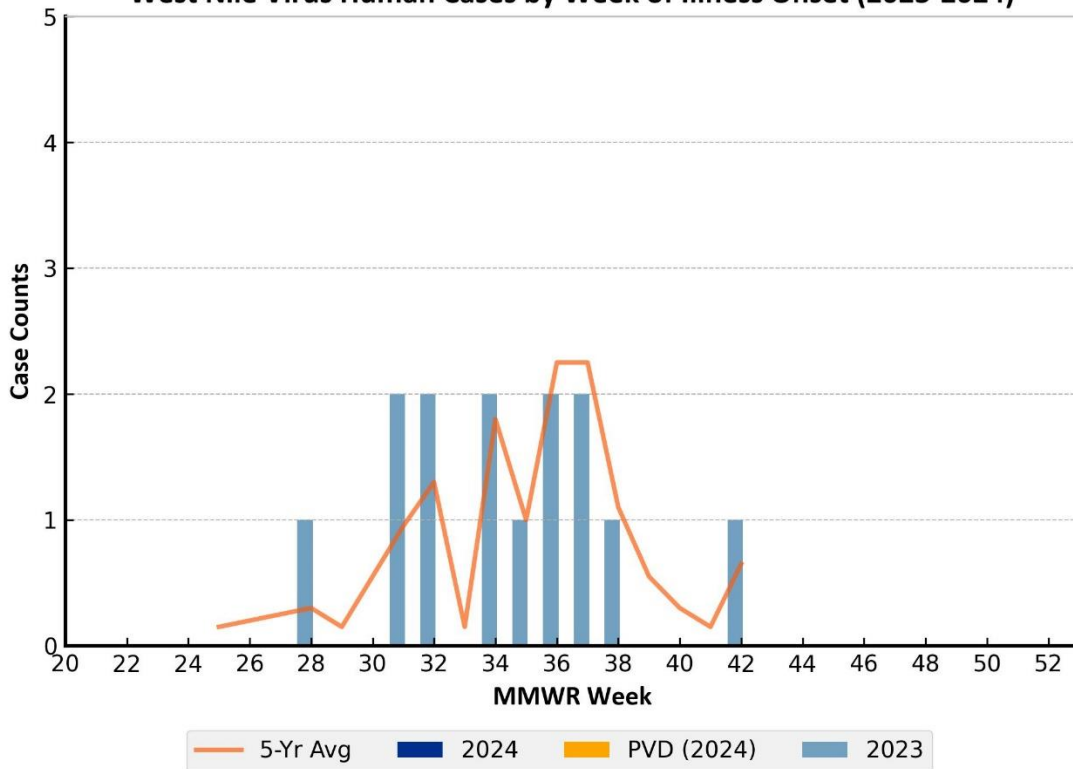
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on May 30, 2024.

## West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 684 mosquito pools from 16 counties tested for WNV, 1 pool tested positive in week 21 in Warren County. Two mosquito pools have tested positive for WNV so far this year, both in *Culex pipiens/restuans/salinarius* mosquitoes.
- The earliest WNV positive mosquito pool (*Culex pipiens/restuans/salinarius*) was detected in week 18 from Gloucester County, considerably earlier than 2023, which was detected in week 24 from Bergen County.
- 169 mosquito pools were submitted by 8 counties and are considered “early season” samples (collected prior to Week 20).

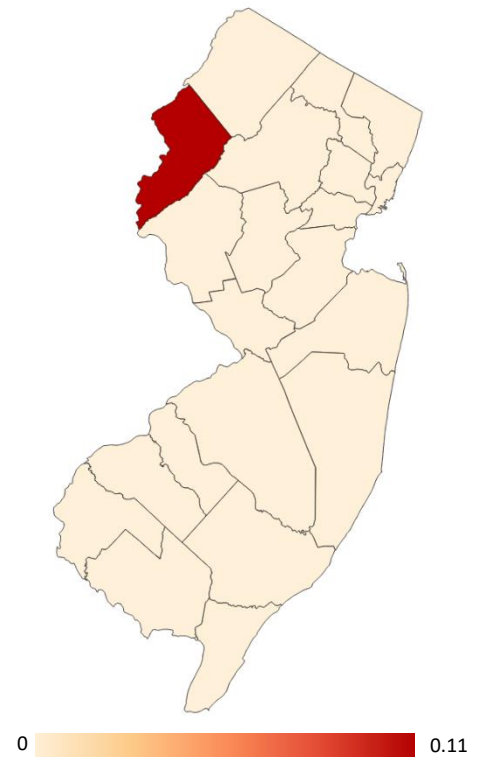
**West Nile Virus Human Cases by Week of Illness Onset (2023-2024)**



**WNV Mosquito Pool Testing**

County	WEEK 21 Positive Pools		Cumulative Pos. Total* (WEEK 21)		# Pools Tested*	WEEK 43 Vector Index	
	2024	2023	2024	2023		2024 <sup>t</sup>	
Gloucester			1		36	0.00	(-)
Warren	1		1		40	0.11	(↑)
Atlantic					13	0.00	(-)
Bergen					20	0.00	(-)
Burlington					2	0.00	(-)
Camden					4	0.00	(-)
Cape May					301	0.00	(-)
Cumberland					40	0.00	(-)
Essex						0.00	(-)
Hudson						0.00	(-)
Hunterdon					36	0.00	(-)
Mercer					38	0.00	(-)
Middlesex						0.00	(-)
Monmouth					22	0.00	(-)
Morris					40	0.00	(-)
Ocean					4	0.00	(-)
Passaic						0.00	(-)
Salem					33	0.00	(-)
Somerset					15	0.00	(-)
Sussex					40	0.00	(-)
Union						0.00	(-)
<b>Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>684</b>	-	

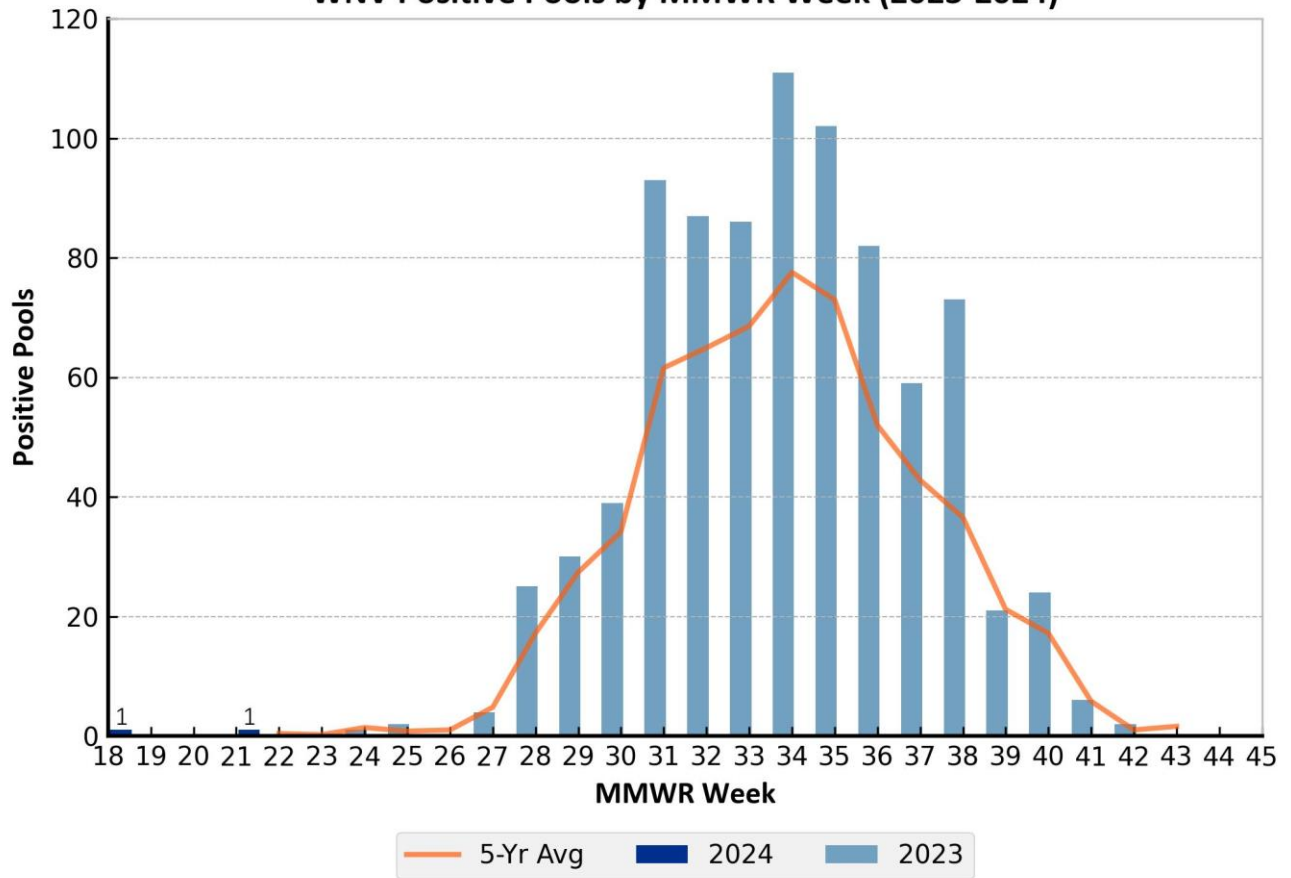
**WNV Vector Index, WEEK 21<sup>t</sup>**



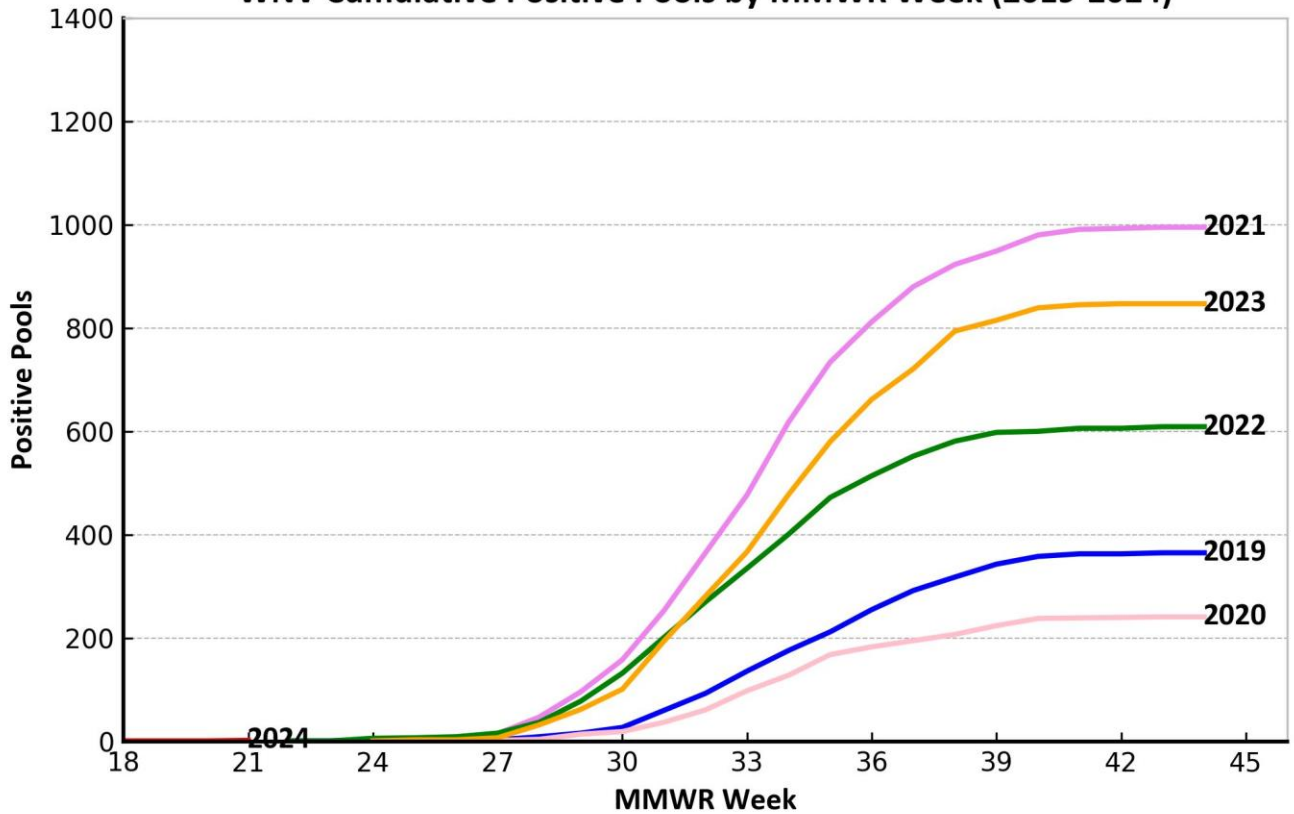
<sup>t</sup> Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

WEEK 21: May 21 - 27, 2023; May 19 - 25, 2024.

**WNV Positive Pools by MMWR Week (2023-2024)**

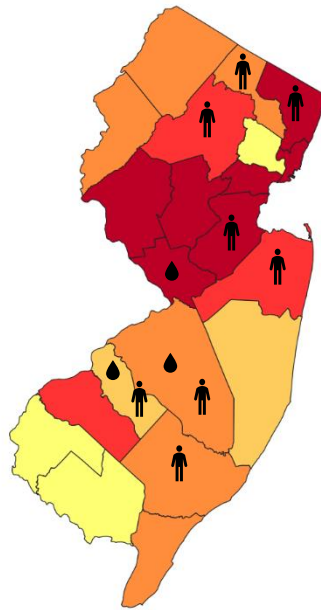
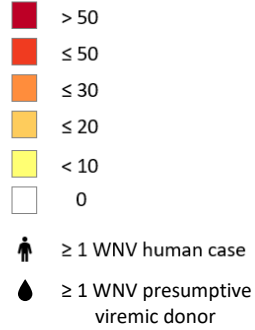


**WNV Cumulative Positive Pools by MMWR Week (2019-2024)**

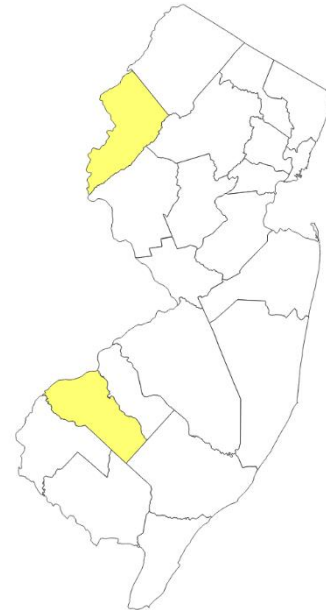


### 2023 WNV Activity

#### WNV Positive Pools



### Cumulative WNV Activity, 2024



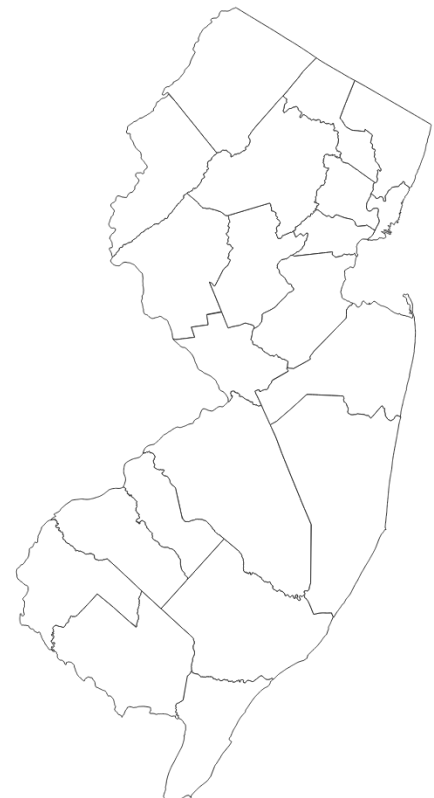
### Eastern Equine Encephalitis (EEE)

- There have been no human or animal cases of EEE reported in New Jersey in 2024. EEE human cases were last reported in 2019 (4 cases).
- Out of 684 mosquito pools from 16 counties tested for EEE, none have tested positive.
- In 2023, the first EEE positive pool was detected in Week 30 from Cumberland County.

#### EEE Mosquito Pool Testing

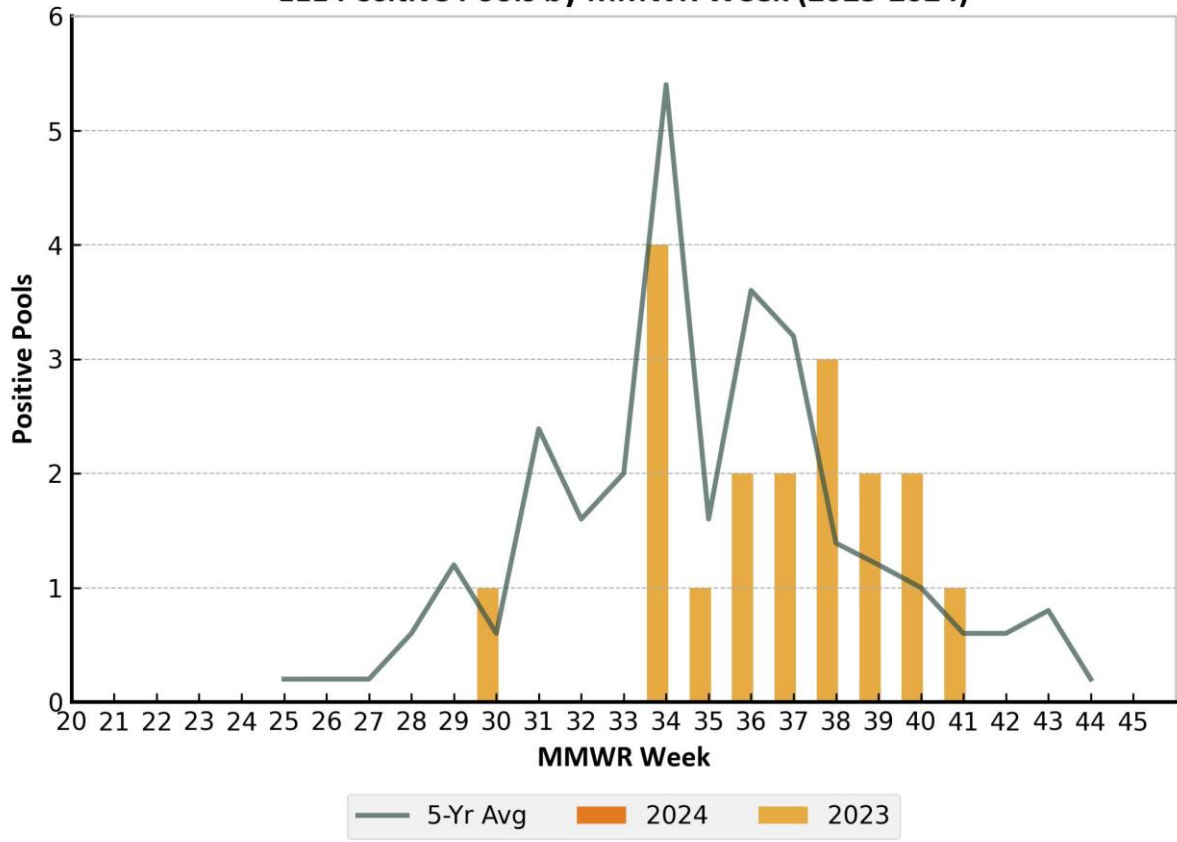
County	WEEK 21 Positive Pools		Cumulative Pos. Total* (WEEK 21)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					13	
Bergen					20	
Burlington					2	
Camden					4	
Cape May					301	
Cumberland					40	
Essex						
Gloucester					36	
Hudson						
Hunterdon					36	
Mercer					38	
Middlesex						
Monmouth					22	
Morris					40	
Ocean					4	
Passaic						
Salem					33	
Somerset					15	
Sussex					40	
Union						
Warren					40	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>684</b>	<b>-</b>

### Cumulative EEE MFIR, 2024



WEEK 21: May 21 - 27, 2023; May 19 - 25, 2024

EEE Positive Pools by MMWR Week (2023-2024)



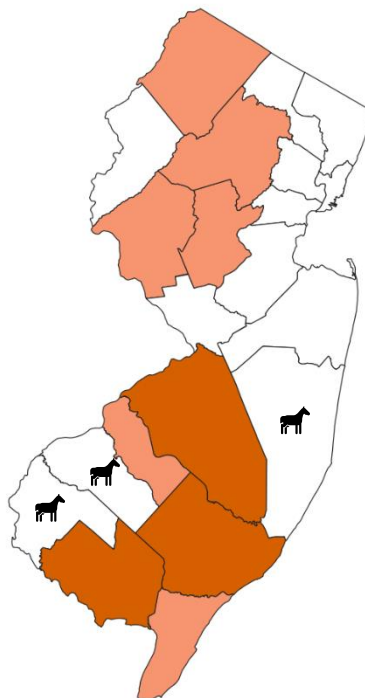
2023 EEE Activity

Cumulative EEE Activity, 2024

EEE Positive Pools

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

Equine case



## Jamestown Canyon Virus (JCV)

- There have been no human cases of JCV reported in New Jersey in 2024. In 2023 there was one human case of JCV in week 42 from Sussex County.
- Out of 684 mosquito pools from 16 counties tested for JCV, none have tested positive.
- In 2023, the first JCV positive pool was detected in week 25 from Cumberland County.

JCV Mosquito Pool Testing

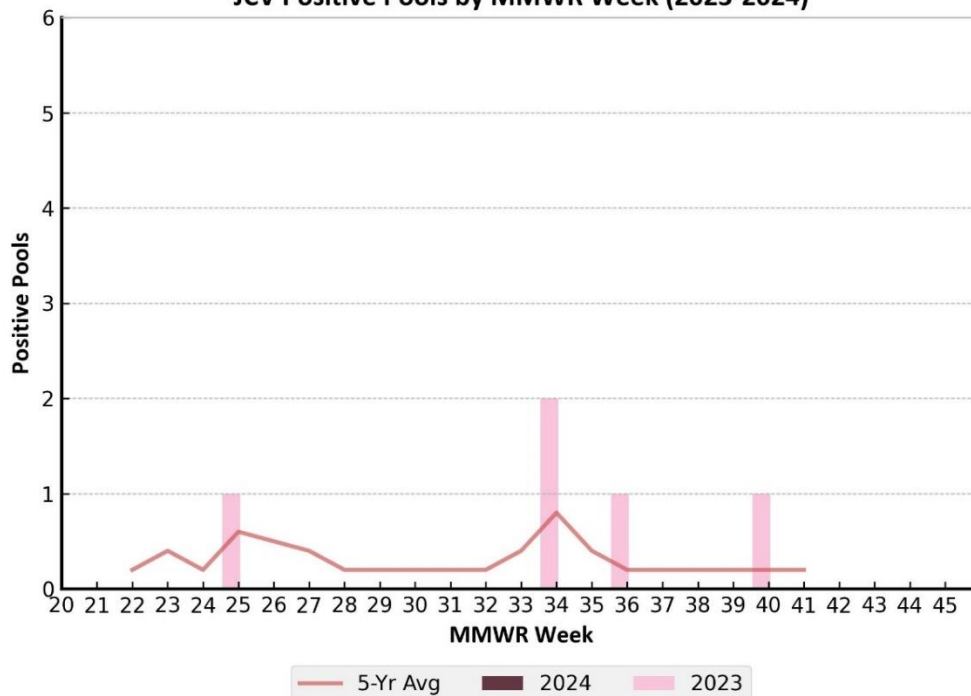
County	WEEK 21 Positive Pools		Cumulative Pos. Total* (WEEK 21)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					13	
Bergen					20	
Burlington					2	
Camden					4	
Cape May					301	
Cumberland					40	
Essex						
Gloucester					36	
Hudson						
Hunterdon					36	
Mercer					38	
Middlesex						
Monmouth					22	
Morris					40	
Ocean					4	
Passaic						
Salem					33	
Somerset					15	
Sussex					40	
Union						
Warren					40	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>684</b>	<b>-</b>

Cumulative JCV MFIR, 2024



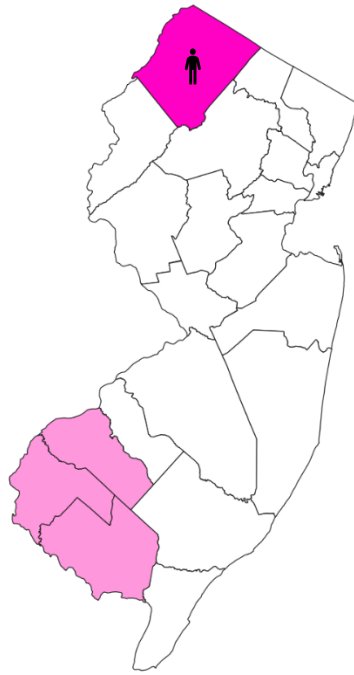
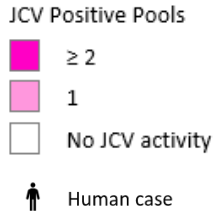
WEEK 21: May 21 - 27, 2023; May 19 - 25, 2024

JCV Positive Pools by MMWR Week (2023-2024)



### 2023 JCV Activity

### Cumulative JCV Activity, 2024



### Other Mosquito-borne Viruses

- Mosquito pools in 16 counties have been tested for St. Louis encephalitis with no positive results.

### Cumulative 2024 Mosquito Pool Testing (Other Viruses<sup>a</sup>)

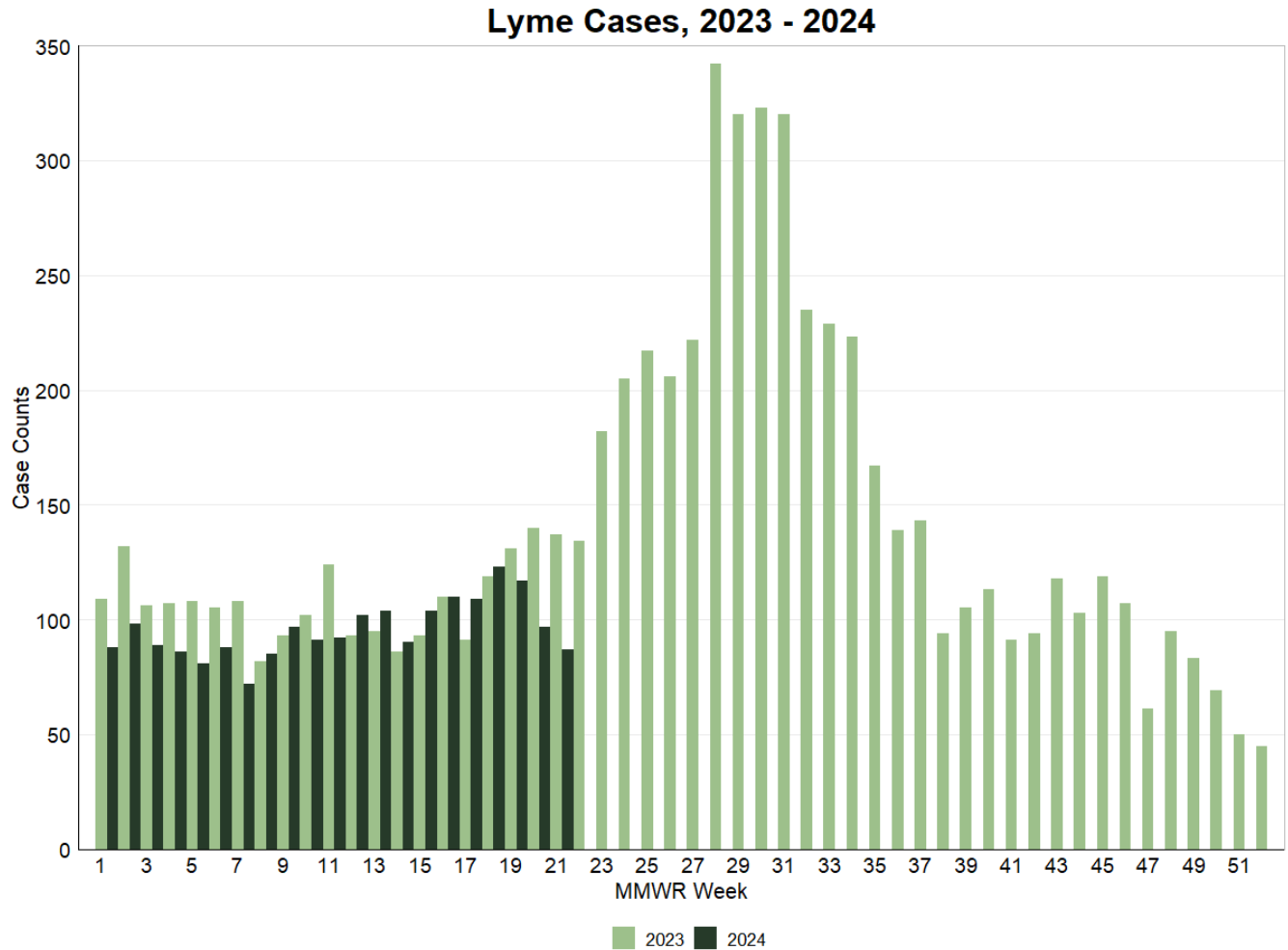
County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	13									
Bergen	20									
Burlington	2									
Camden	4									
Cape May	301									
Cumberland	40									
Essex										
Gloucester	36									
Hudson										
Hunterdon	36									
Mercer	38									
Middlesex										
Monmouth	22									
Morris	40									
Ocean	4									
Passaic										
Salem	33									
Somerset	15									
Sussex	40									
Union										
Warren	40									
<b>Total</b>	<b>684</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 2024  
 Number in green shaded columns represent positive pools in 2024

## Tickborne Disease Activity

### Lyme Disease

- There have been 2,010 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in Week 21 decreased from the previous weeks and is below the number of cases reported this week last year.



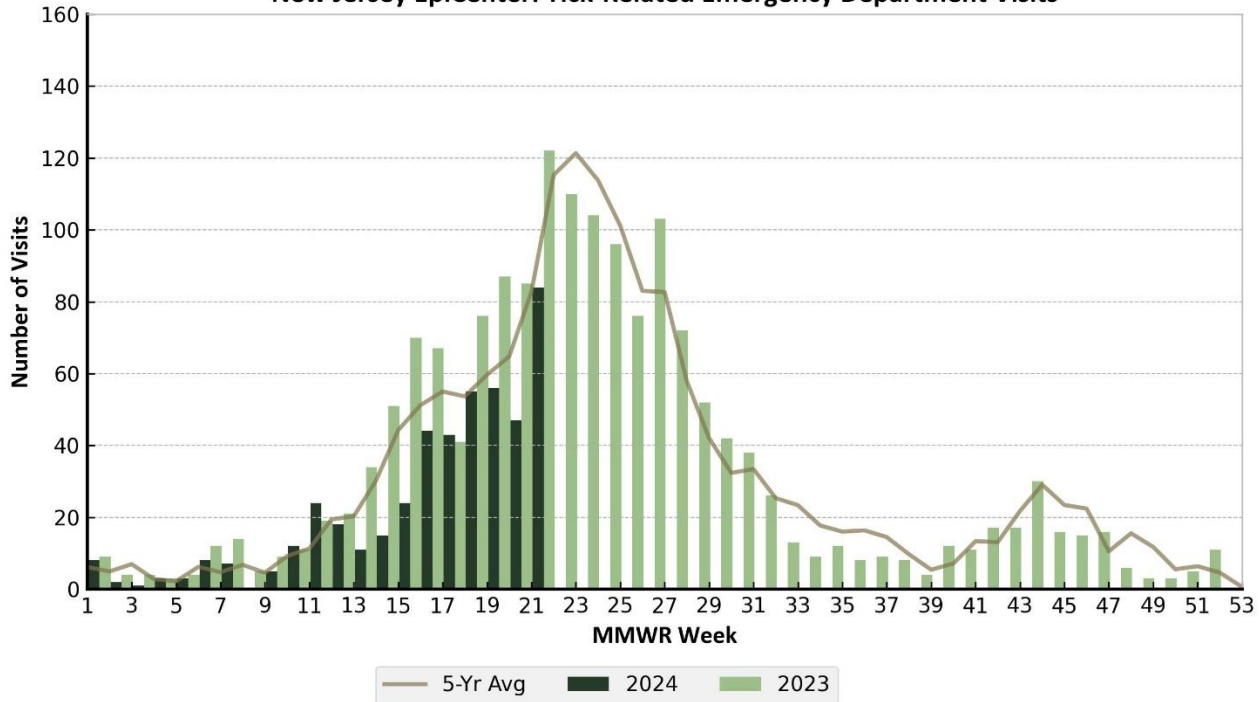
### Tick-related Emergency Department Visits

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.

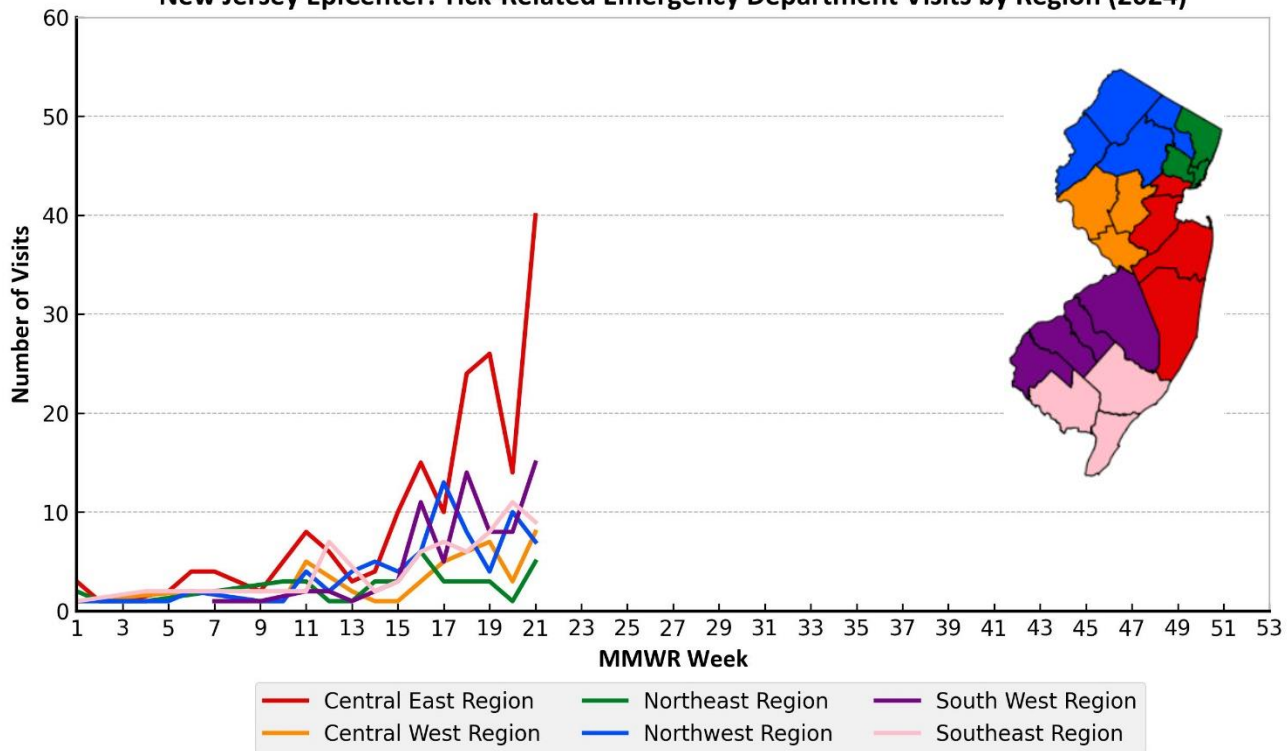
In Week 21, the number of tick-related ED visits increased from the previous week and is similar to last year and the 5-year average.



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



### New Jersey EpiCenter: Tick-Related Emergency Department Visits by Region (2024)



#### For more information

- NJDOH Communicable Disease Service: <https://www.nj.gov/health/cd/topics/vectorborne.shtml>
- New Jersey Vector-borne Disease Dashboard: [https://dashboards.doh.nj.gov/views/public\\_dashboard/Intro](https://dashboards.doh.nj.gov/views/public_dashboard/Intro)
- New Jersey Arboviral Activity Maps: <http://bit.ly/JerseySurv>
- NJDEP Office of Mosquito Control Coordination: <https://www.nj.gov/dep/mosquito/>
- NJDA Division of Animal Health: <https://www.nj.gov/agriculture/divisions/ah/>