

## Report Highlights:

- **Two mosquito pools tested positive for West Nile Virus (WNV) this week (additional tests pending), for a total of 4 WNV positive pools in 2024: 2 pools in Gloucester County in week 18 and 1 pool each in Morris and Warren counties in week 21.**
- **There have been no human or animal cases of WNV reported in New Jersey in 2024.**
- **The number of travel-associated dengue cases in considerably higher in 2024 (37 cases) compared to the same timeframe in 2023 (9 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week is lower than the average number reported this week in the past two years.**
- **In week 22, the number of tick-related ED visits was higher than the previous week but lower compared to this time last year and to 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	53	360
Dengue	37	99	Anaplasmosis	27	195
Eastern equine encephalitis	-	-	Babesiosis	8	407
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	18
Malaria	23	102	Ehrlichiosis	3	109
West Nile	-	14	Lyme disease*	2,248	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

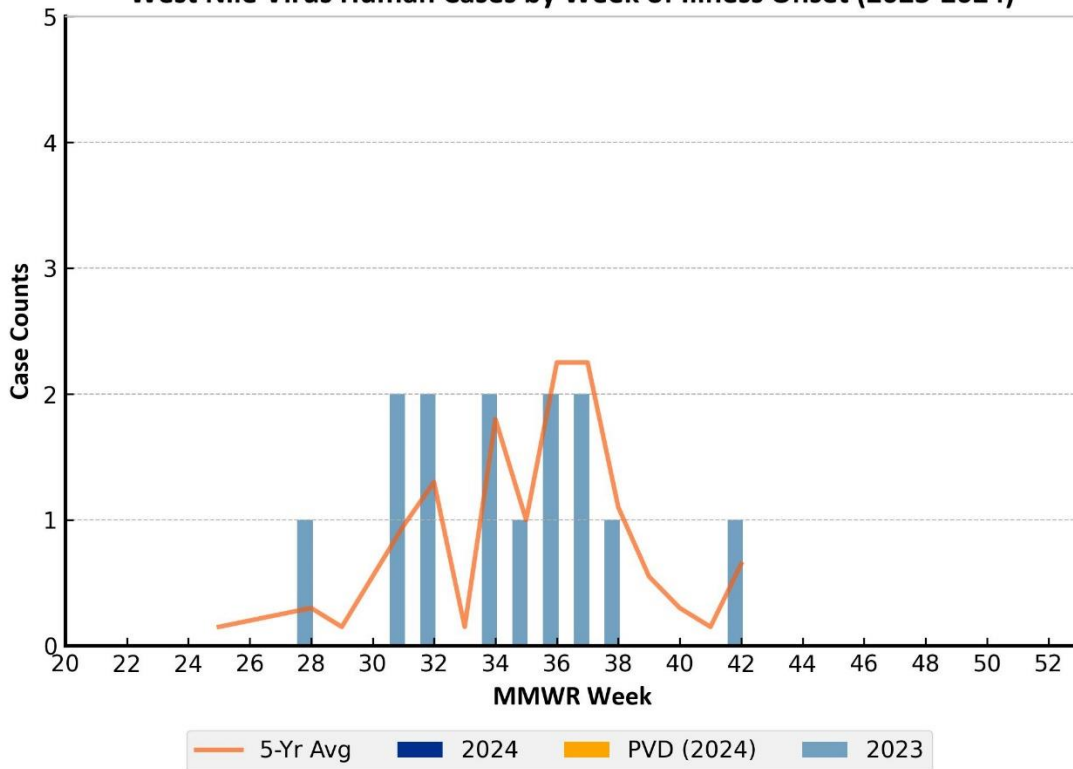
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

*\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on June 5, 2024.*

## West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 965 mosquito pools from 17 counties, 4 mosquito pools have tested positive for WNV so far this year (none collected in week 22), all in *Culex pipiens/restuans/salinarius* mosquitoes.
- The earliest WNV positive mosquito pools (*Culex pipiens/restuans/salinarius*) were detected in week 18 from Gloucester County (2), considerably earlier than 2023, which was initially detected in week 24 from Bergen County.
- 182 mosquito pools submitted by 8 counties are considered “early season” samples (collected prior to Week 20).

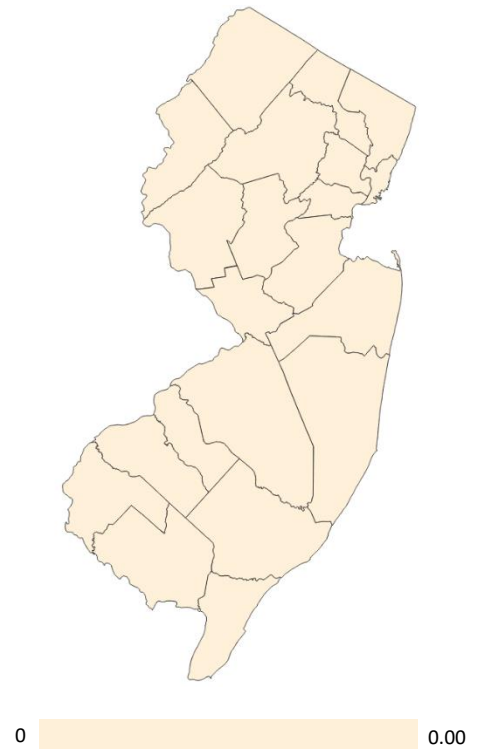
**West Nile Virus Human Cases by Week of Illness Onset (2023-2024)**



**WNV Mosquito Pool Testing**

County	WEEK 22 Positive Pools		Cumulative Pos. Total* (WEEK 22)		# Pools Tested*	WEEK 43 Vector Index	
	2024	2023	2024	2023		2024 <sup>t</sup>	
Gloucester			2		71	0.00	(-)
Morris			1		60	0.00	(↓)
Warren			1		40	0.00	(↓)
Atlantic					33	0.00	(-)
Bergen					20	0.00	(-)
Burlington					3	0.00	(-)
Camden					17	0.00	(-)
Cape May					386	0.00	(-)
Cumberland					60	0.00	(-)
Essex						0.00	(-)
Hudson						0.00	(-)
Hunterdon					51	0.00	(-)
Mercer					56	0.00	(-)
Middlesex					20	0.00	(-)
Monmouth					45	0.00	(-)
Ocean					13	0.00	(-)
Passaic						0.00	(-)
Salem					35	0.00	(-)
Somerset					15	0.00	(-)
Sussex					40	0.00	(-)
Union						0.00	(-)
<b>Total</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>965</b>	-	

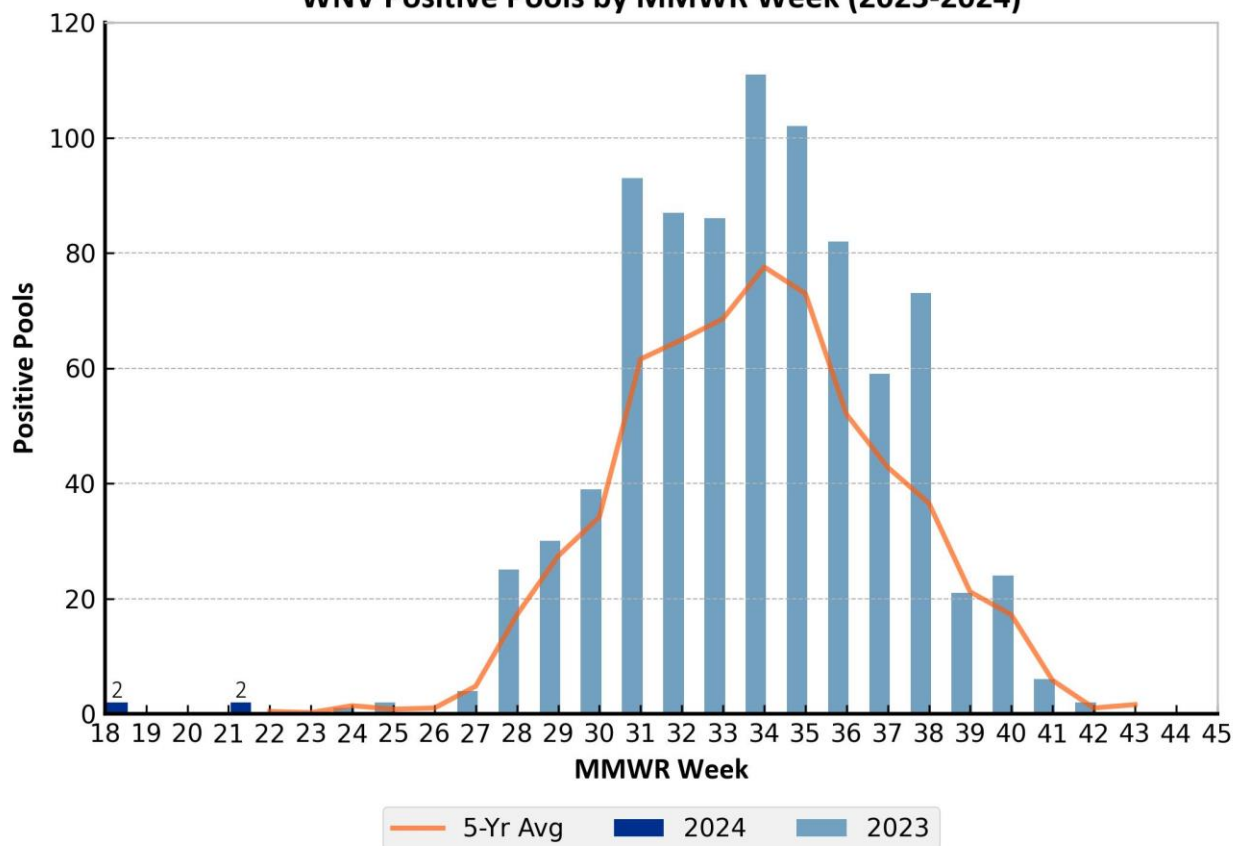
**WNV Vector Index, WEEK 22<sup>t</sup>**



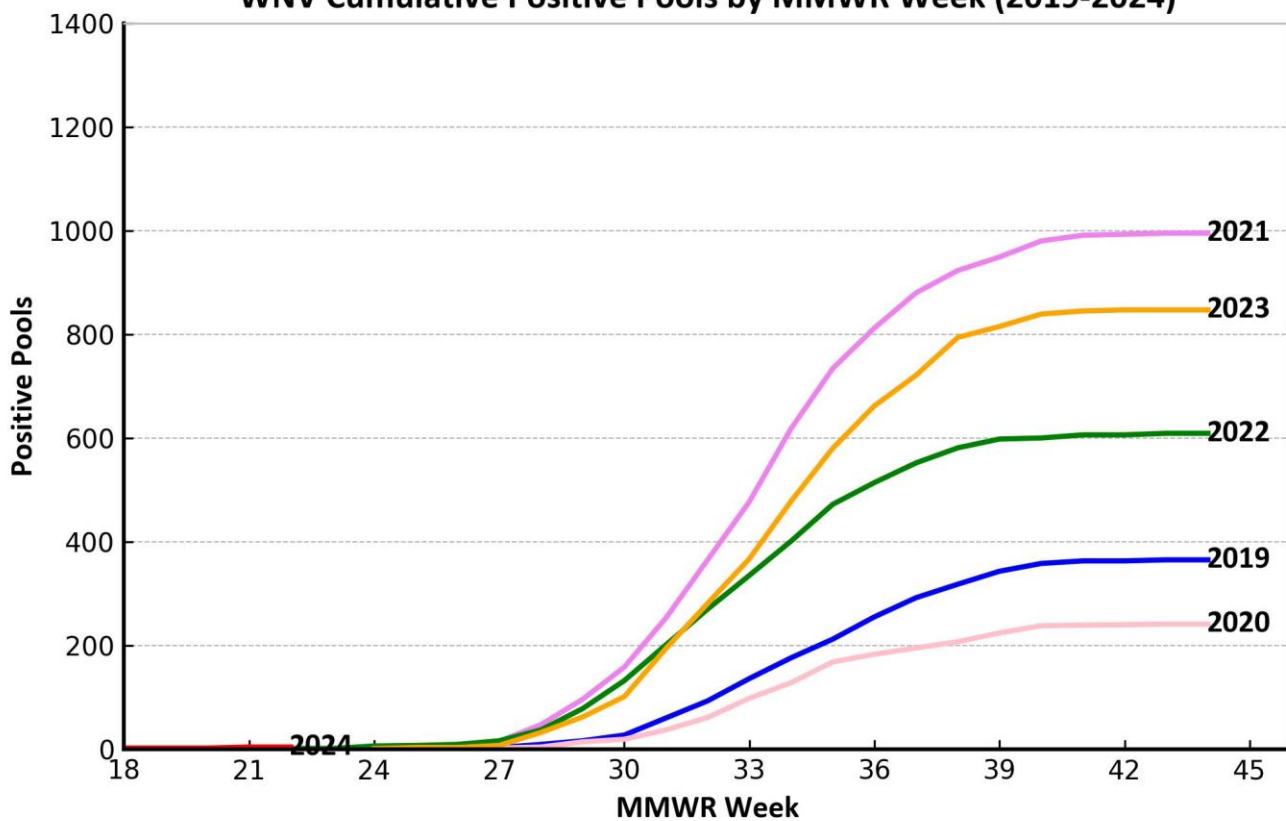
WEEK 22: May 28 – June 3, 2023; May 26 - June 1, 2024.

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

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

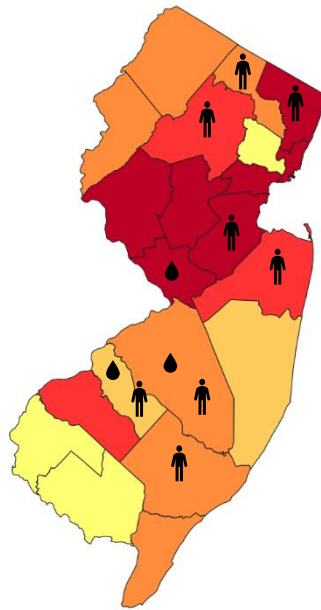
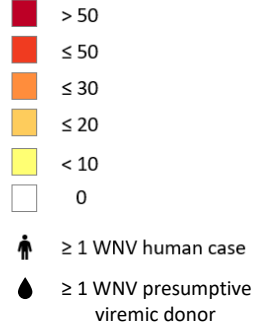


**WNV Cumulative Positive Pools by MMWR Week (2019-2024)**

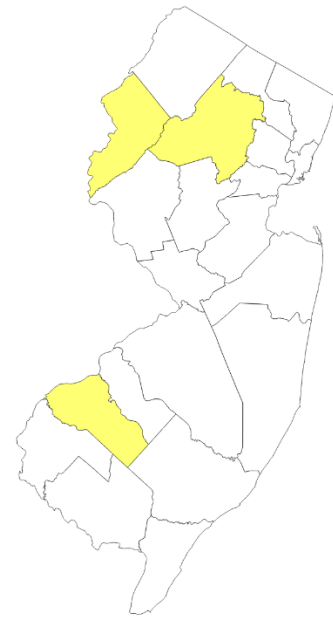


### 2023 WNV Activity

#### WNV Positive Pools



### Cumulative WNV Activity, 2024



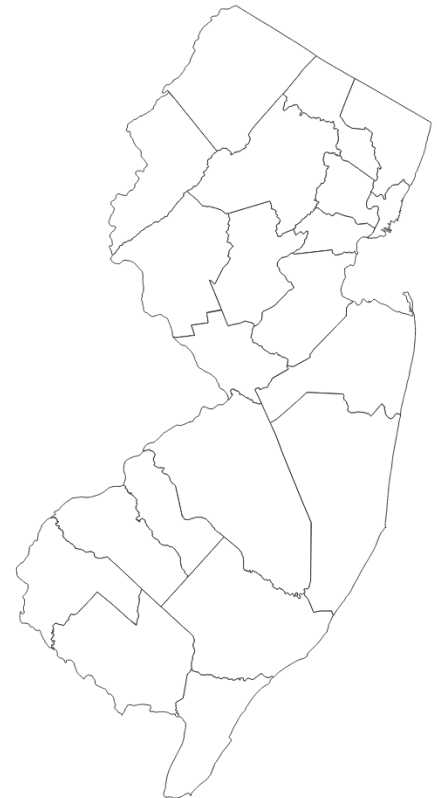
### Eastern Equine Encephalitis (EEE)

- 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 965 mosquito pools from 17 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

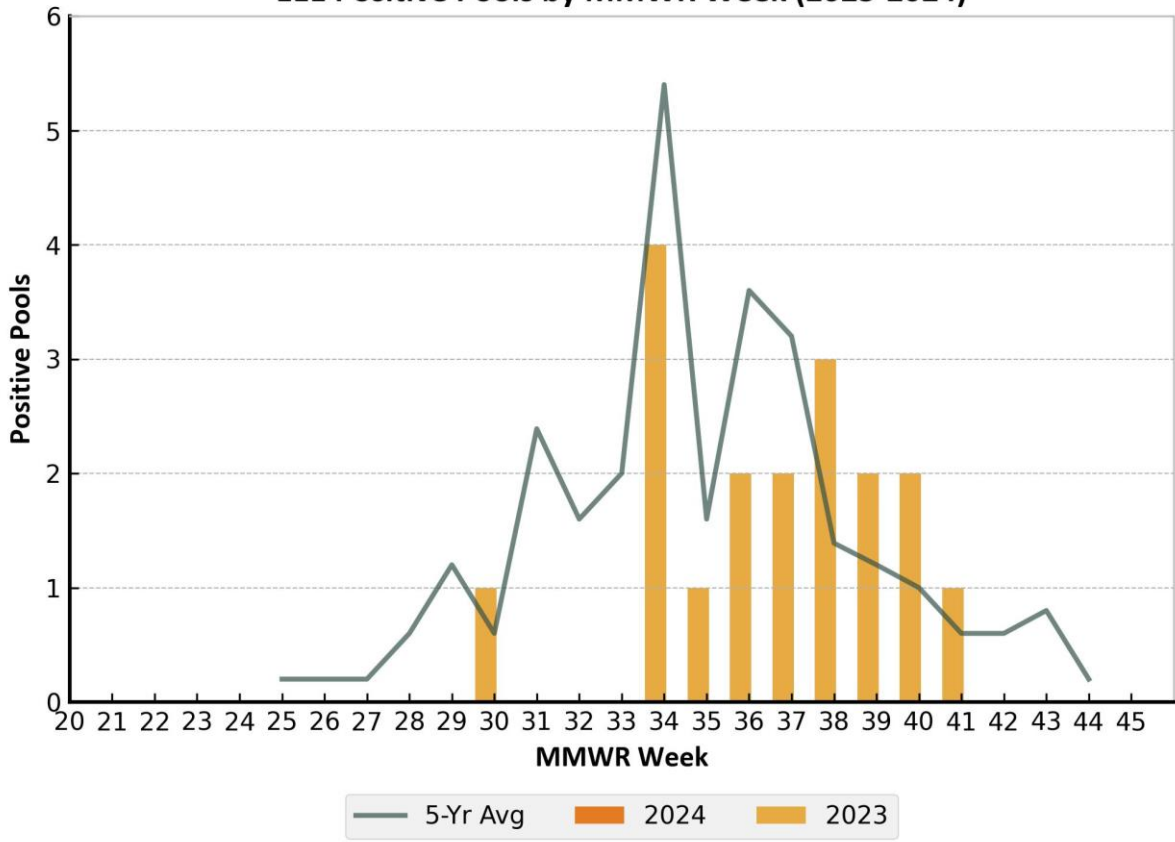
County	WEEK 22 Positive Pools		Cumulative Pos. Total* (WEEK 22)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023	2024	2024
Atlantic					33	
Bergen					20	
Burlington					3	
Camden					17	
Cape May					386	
Cumberland					60	
Essex						
Gloucester					71	
Hudson						
Hunterdon					51	
Mercer					56	
Middlesex					20	
Monmouth					45	
Morris					60	
Ocean					13	
Passaic						
Salem					35	
Somerset					15	
Sussex					40	
Union						
Warren					40	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>965</b>	<b>-</b>

### Cumulative EEE MFIR, 2024



WEEK 22: May 28 – June 3, 2023; May 26 - June 1, 2024

EEE Positive Pools by MMWR Week (2023-2024)



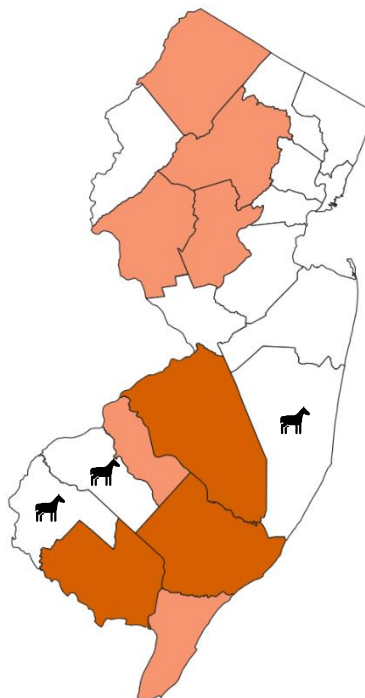
2023 EEE Activity

Cumulative EEE Activity, 2024

EEE Positive Pools

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

Equine case



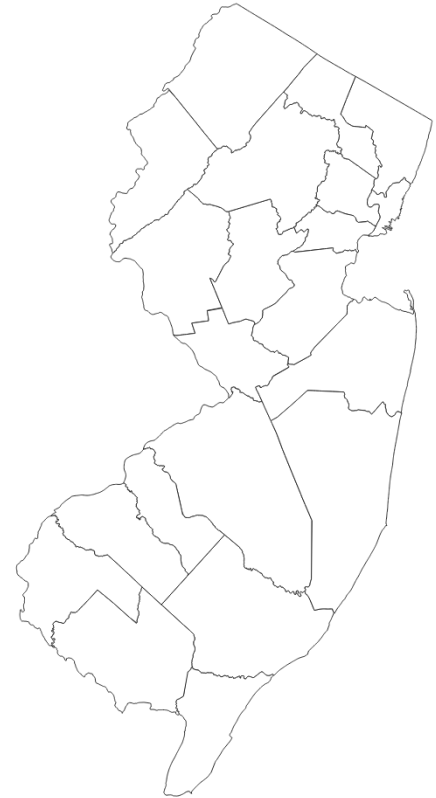
## Jamestown Canyon Virus (JCV)

- 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 965 mosquito pools from 17 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

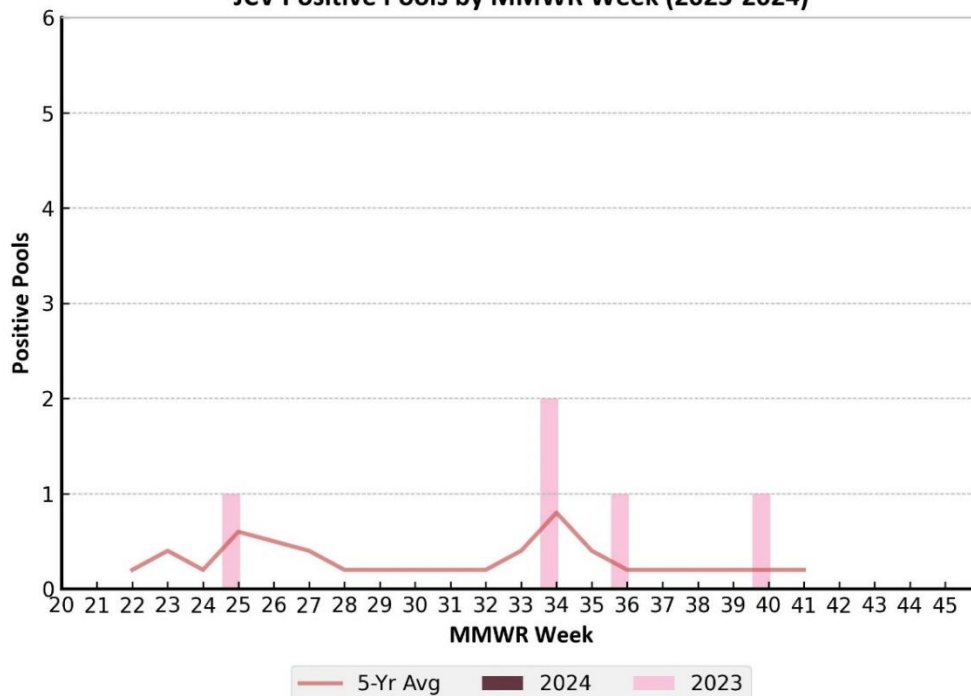
County	WEEK 22 Positive Pools		Cumulative Pos. Total* (WEEK 22)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					33	
Bergen					20	
Burlington					3	
Camden					17	
Cape May					386	
Cumberland					60	
Essex						
Gloucester					71	
Hudson						
Hunterdon					51	
Mercer					56	
Middlesex					20	
Monmouth					45	
Morris					60	
Ocean					13	
Passaic						
Salem					35	
Somerset					15	
Sussex					40	
Union						
Warren					40	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>965</b>	<b>-</b>

Cumulative JCV MFIR, 2024



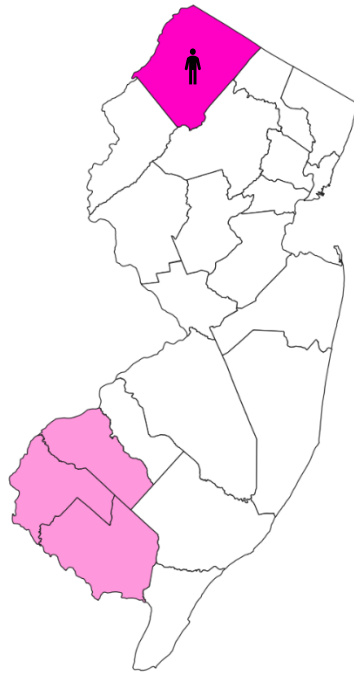
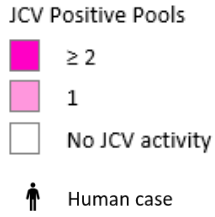
WEEK 22: May 28 – June 3, 2023; May 26 – June 1, 2024

JCV Positive Pools by MMWR Week (2023-2024)



### 2023 JCV Activity

### Cumulative JCV Activity, 2024



### Other Mosquito-borne Viruses

- Mosquito pools in 17 counties have been tested for other arboviruses 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	33									
Bergen	20									
Burlington	3									
Camden	17				1		1		1	
Cape May	386									
Cumberland	60									
Essex										
Gloucester	71									
Hudson										
Hunterdon	51									
Mercer	56									
Middlesex	20									
Monmouth	45									
Morris	60									
Ocean	13									
Passaic										
Salem	35									
Somerset	15									
Sussex	40									
Union										
Warren	40									
<b>Total</b>	<b>965</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>

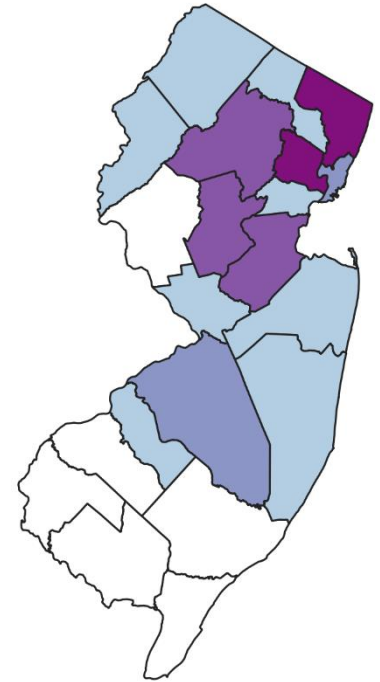
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2024  
 Number in green shaded columns represent positive pools in 2024

## Human Dengue Virus Cases

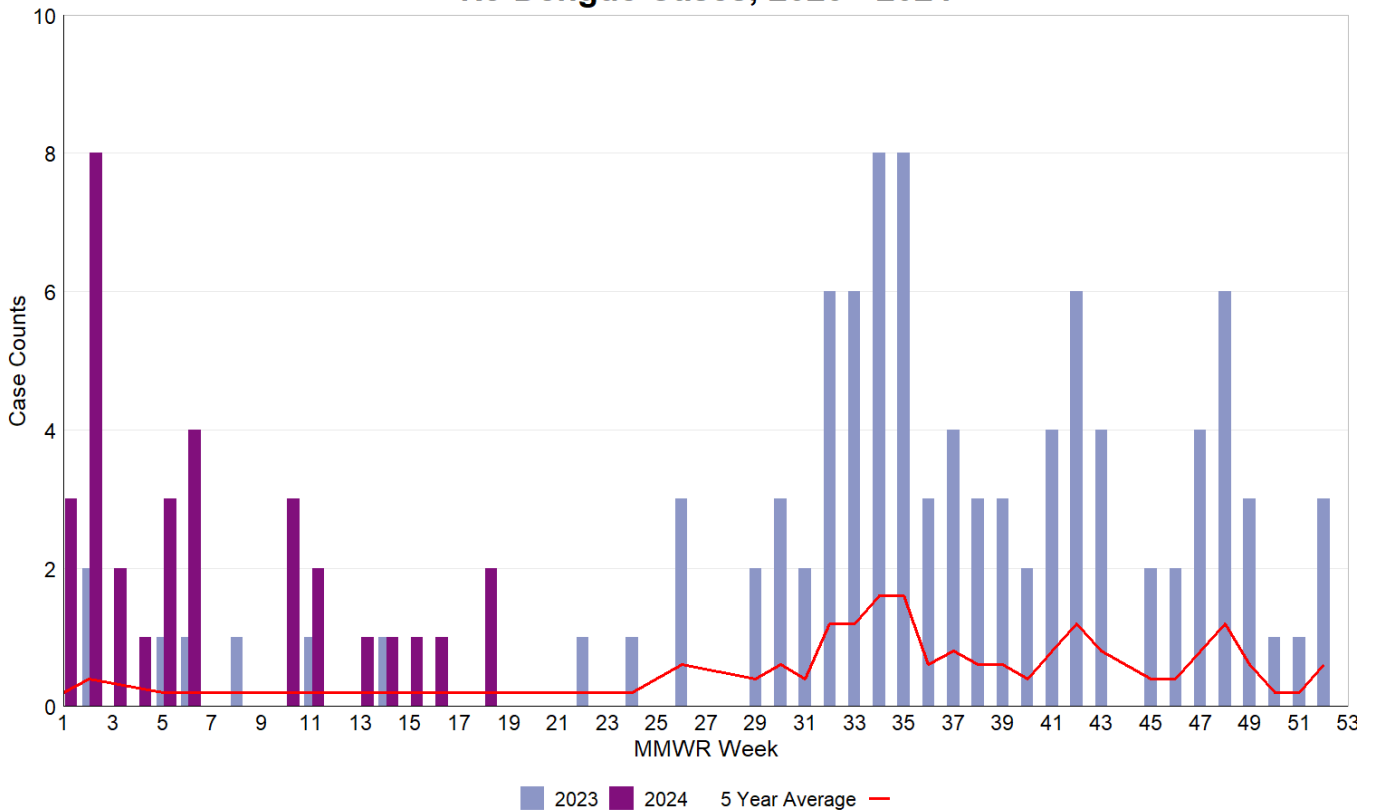
- There have been 37 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (9).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (36) cases have reported travel to a country or U.S. territory in Latin America or the Caribbean.
- Many of the NJ cases are concentrated in the northeast region, with most cases residing in Bergen (7), Essex (6), and Middlesex (5) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	8
Puerto Rico	4
Brazil	3
Ecuador	3
Aruba	2
Colombia	2
Costa Rica	2
Guatemala	2
Guyana	2
Martinique	2
Mexico	2
Antigua and Barbuda	1
Cuba	1
India	1
Paraguay	1
Peru	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024



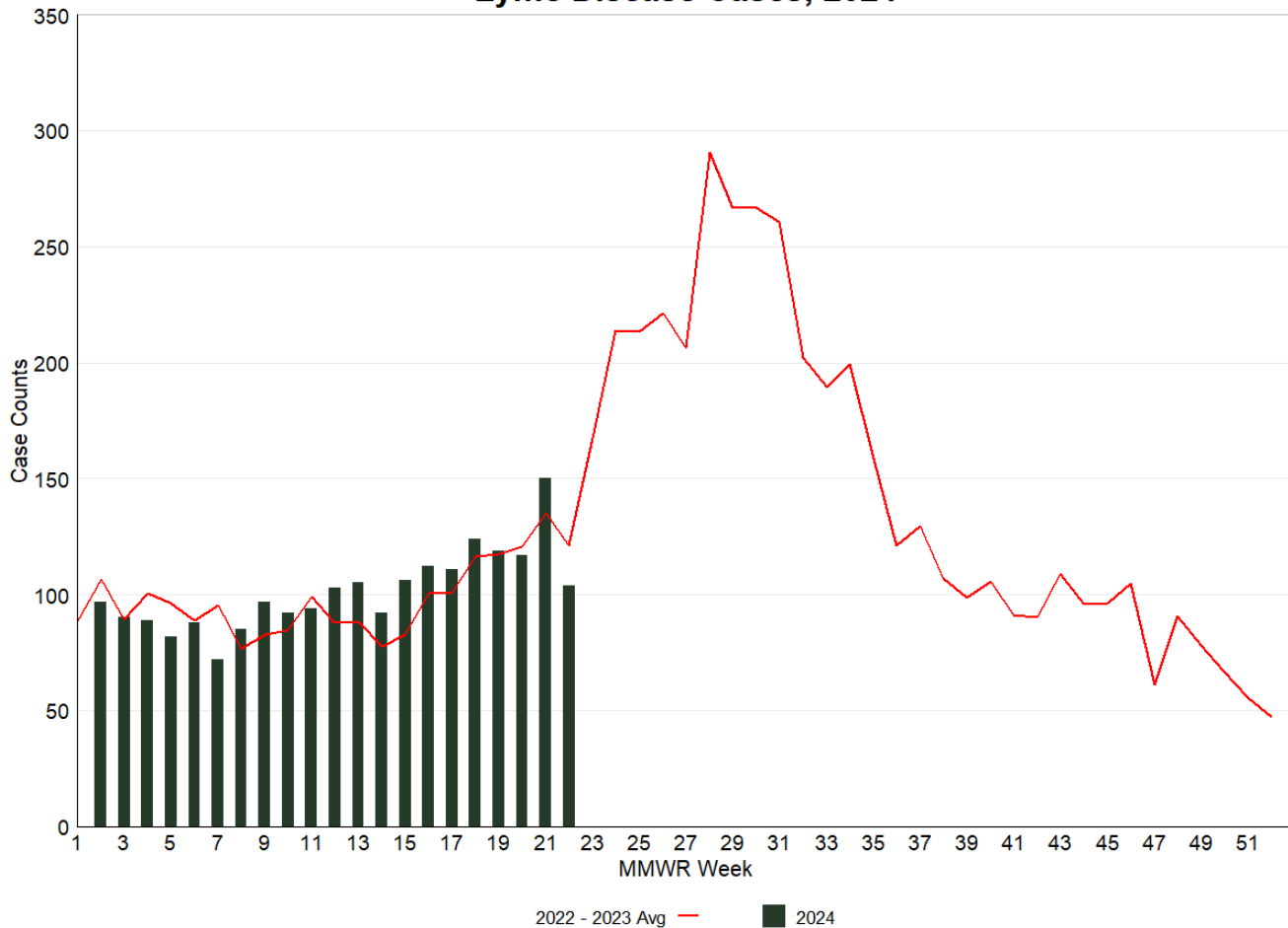


## Tickborne Disease Activity

### Lyme Disease

- There have been 2,248 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 22 decreased and is below the average number of cases reported this week in the past two years.

### Lyme Disease Cases, 2024

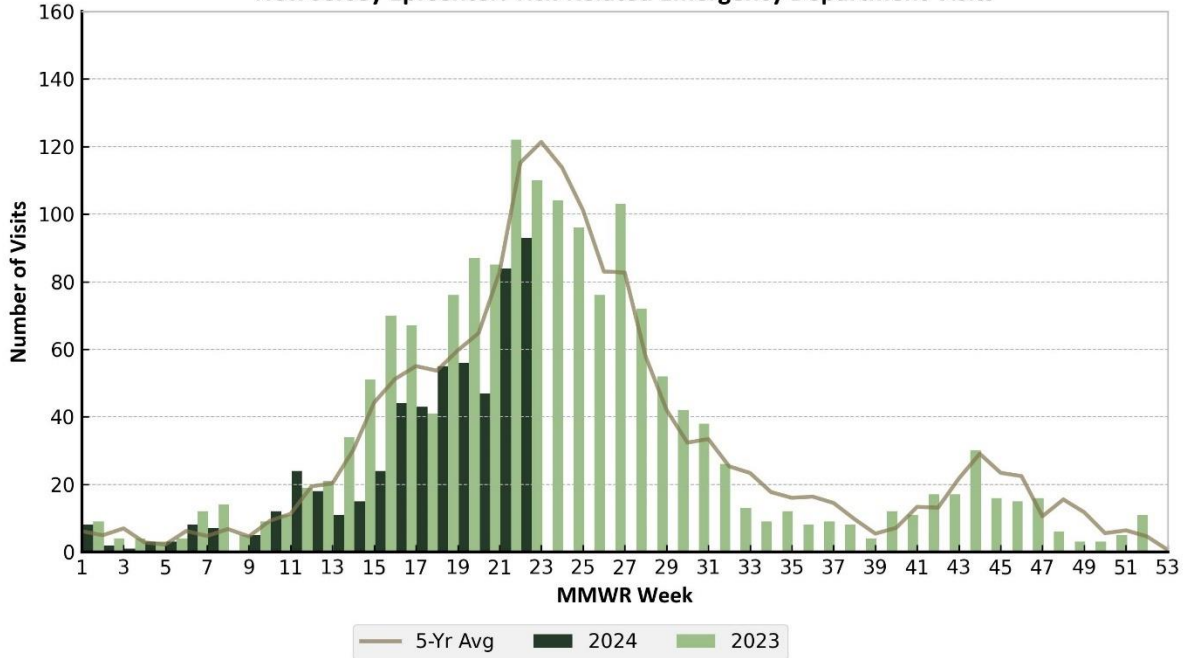


### Tick-related Emergency Department Visits

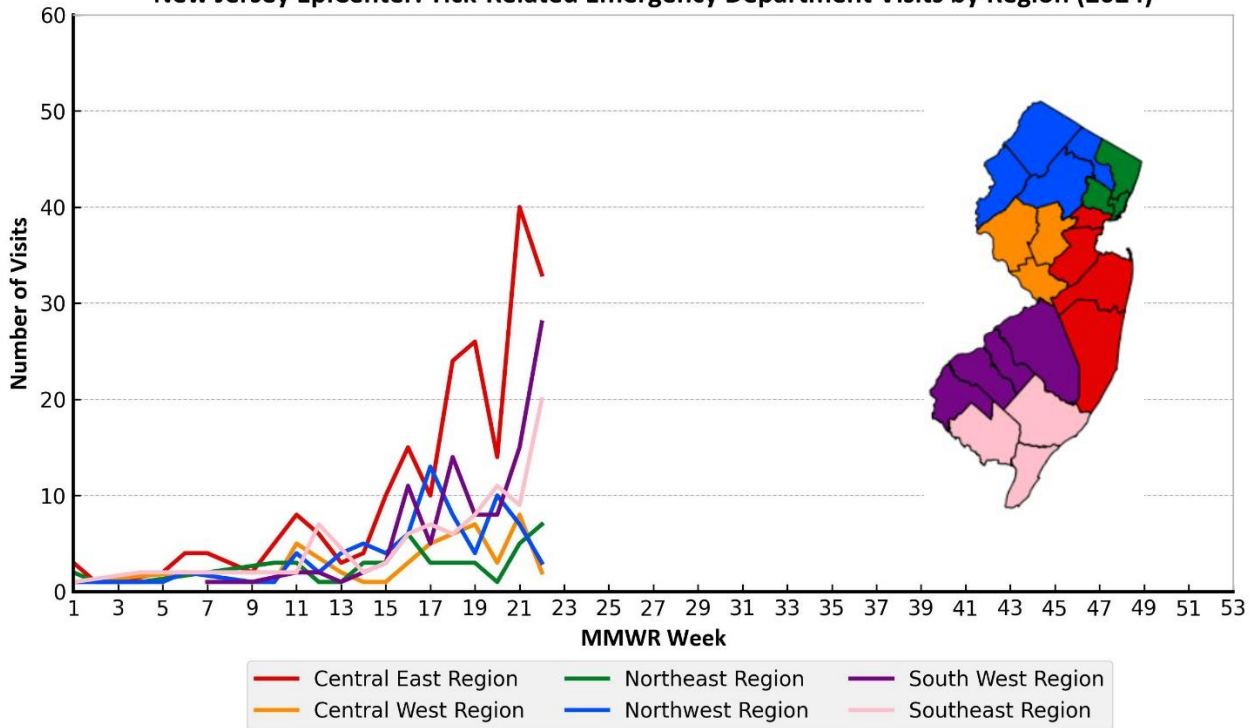
New Jersey’s syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing 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 increased from the previous week but is below the number of visits from this time 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/>