

## Report Highlights:

- **Sixty mosquito pools tested positive for West Nile Virus (WNV) this week in twelve counties (additional tests pending). The number of positive pools this week is higher than the 5-year average. There has been a total of 193 WNV positive pools in 2024.**
- **There have been no human or animal cases of WNV reported in New Jersey in 2024.**
- **One mosquito pool tested positive for Eastern Equine Encephalitis (EEE) this week in Union County. Three mosquito pools have tested positive for EEE in 2024 in Cape May, Morris, and Union counties.**
- **New Jersey is reporting one human case of Jamestown Canyon Virus (JCV) in week 19 from Sussex County. There was 1 JCV case in New Jersey in 2023 from Sussex County.**
- **The number of travel-associated dengue cases is considerably higher in 2024 (52 cases) compared to the same timeframe in 2023 (16 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week decreased and is below the average number reported this week in the past two years.**
- **In week 29, the number of tick-related ED visits continued to decrease and is consistent with the 5-year average. The highest number of visits continues to be 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	1	13	Alpha-gal syndrome	87	360
Dengue	52	98	Anaplasmosis	69	195
Eastern equine encephalitis	-	-	Babesiosis	88	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	5	18
Malaria	33	102	Ehrlichiosis	31	109
West Nile	-	14	Lyme disease*	3,677	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	5	24
			Tularemia	2	2

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

## Mosquito-borne Disease Activity

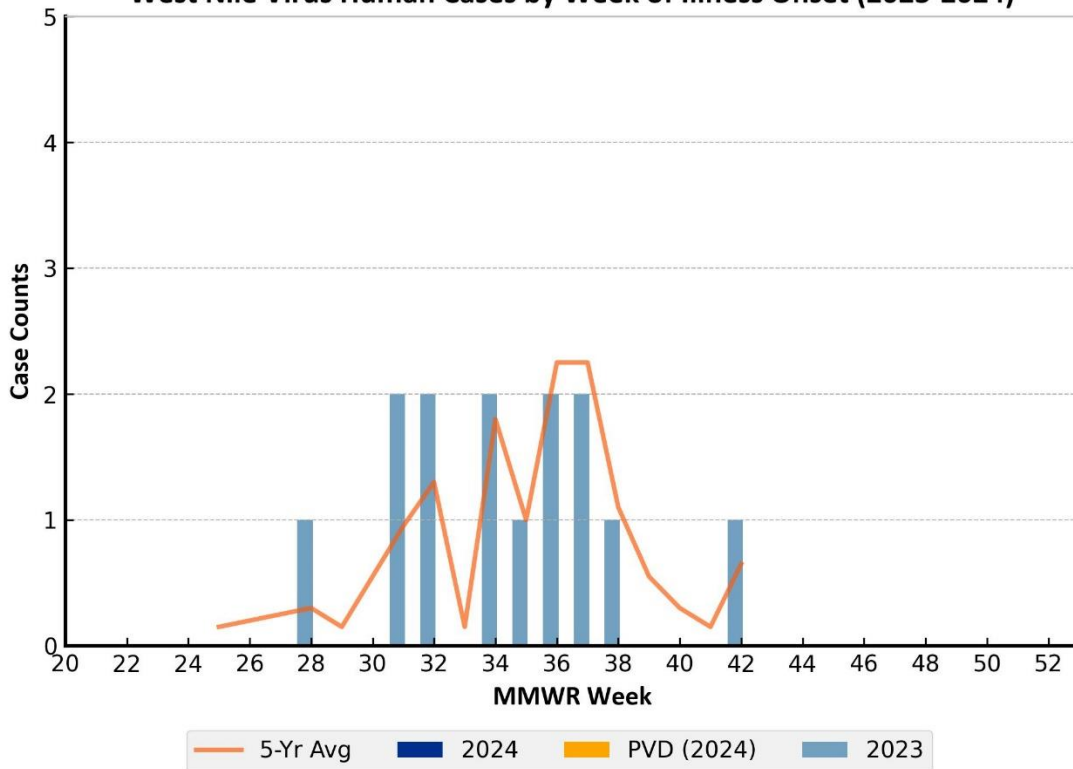
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.\*

*\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on July 24, 2024.*

## West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 5,010 mosquito pools submitted for testing, 193 mosquito pools have tested positive for WNV so far this year. 60 pools tested positive in Week 29 in twelve counties. WNV has been detected in *Culex pipiens/restuans/salinarius* (175), *Aedes japonicus* (5), *Cx. pipiens* (4), *Cx. restuans* (4), *Aedes albopictus* (3), *Aedes triseriatus* (1), and *Culiseta melanura* (1) mosquitoes.
- The earliest WNV positive mosquito pools (*Culex pipiens/restuans/salinarius*) were detected in week 18 from Gloucester County (2), considerably earlier than 2023, when WNV was initially detected in Week 29 from Bergen County.

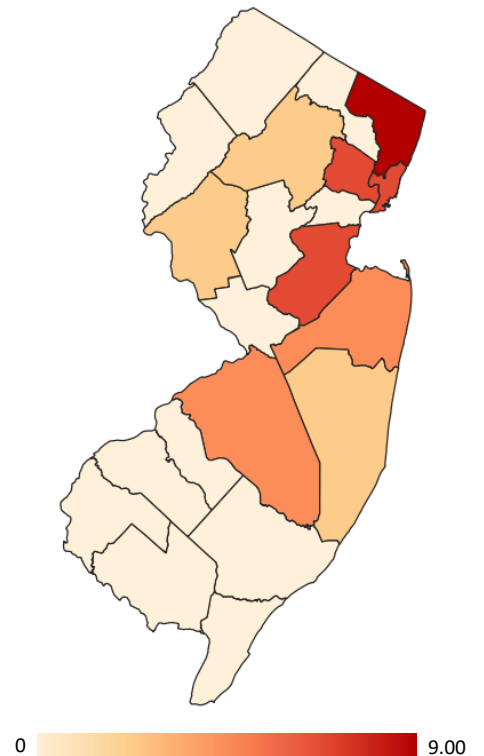
### West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



### WNV Mosquito Pool Testing

County	WEEK 29 Positive Pools		Cumulative Pos. Total* (WEEK 29)		# Pools Tested*	WEEK 29 Vector Index	
	2024	2023	2024	2023		2024 <sup>t</sup>	
Union	5	2	27	8	121	0.00	(↓)
Hudson	6	3	24	3	123	1.22	(↑)
Middlesex	12		23		159	2.25	(↑)
Bergen	10	14	19	27	151	9.00	(↑)
Passaic			11		115	0.00	(↑)
Burlington	6	1	10	1	88	0.75	(↑)
Essex	5		9		152	0.96	(↑)
Hunterdon	2	2	9	4	181	0.36	(↑)
Monmouth	5		9		203	0.62	(↑)
Somerset		1	9	2	122	0.00	(-)
Cape May	1		8	3	1735	0.01	(↑)
Morris	3	2	8	3	198	0.42	(↑)
Mercer	3		7	1	198	0.16	(↑)
Gloucester		1	6	1	284	0.00	(-)
Ocean	2		5		163	0.46	(↑)
Salem		1	3	1	199	0.00	(-)
Warren			3		179	0.00	(-)
Atlantic		1	1	3	156	0.00	(-)
Camden		2	1	5	103	0.00	(↓)
Sussex			1		180	0.00	(-)
Cumberland					200	0.00	(-)
<b>Total</b>	<b>60</b>	<b>30</b>	<b>193</b>	<b>62</b>	<b>5,010</b>	-	

### WNV Vector Index, WEEK 29<sup>t</sup>

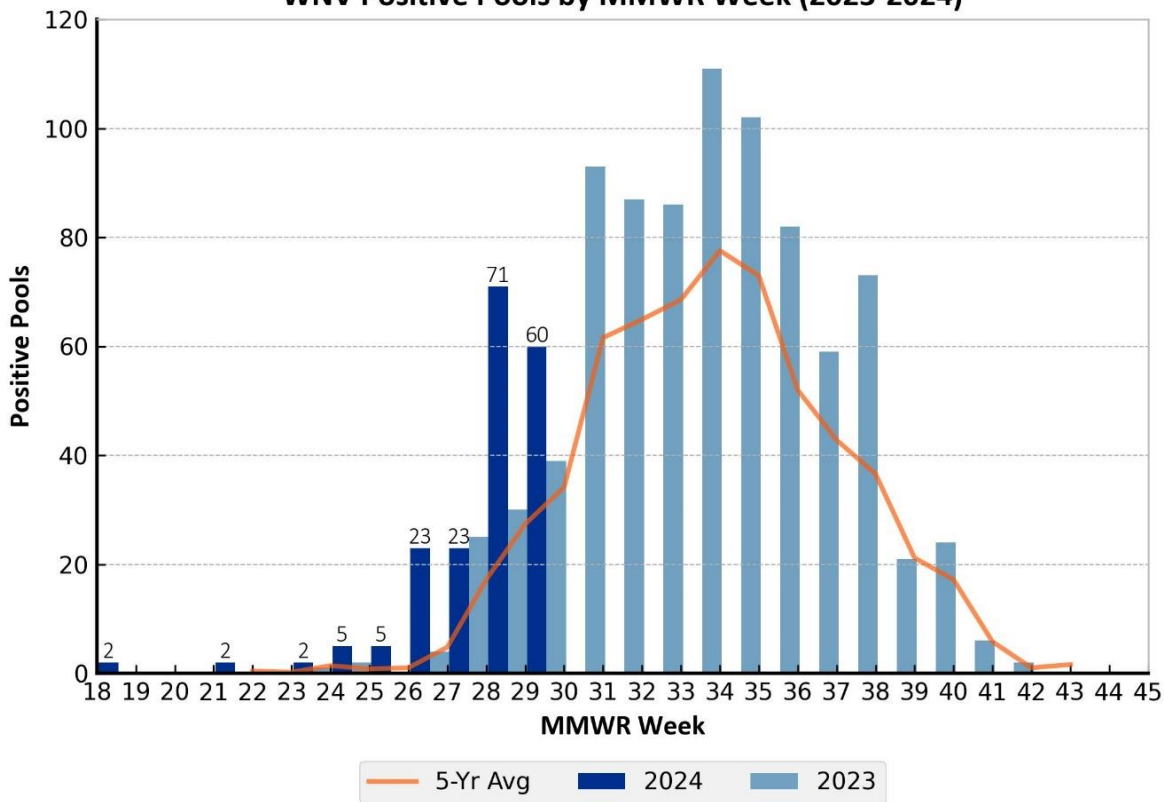


<sup>t</sup>Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

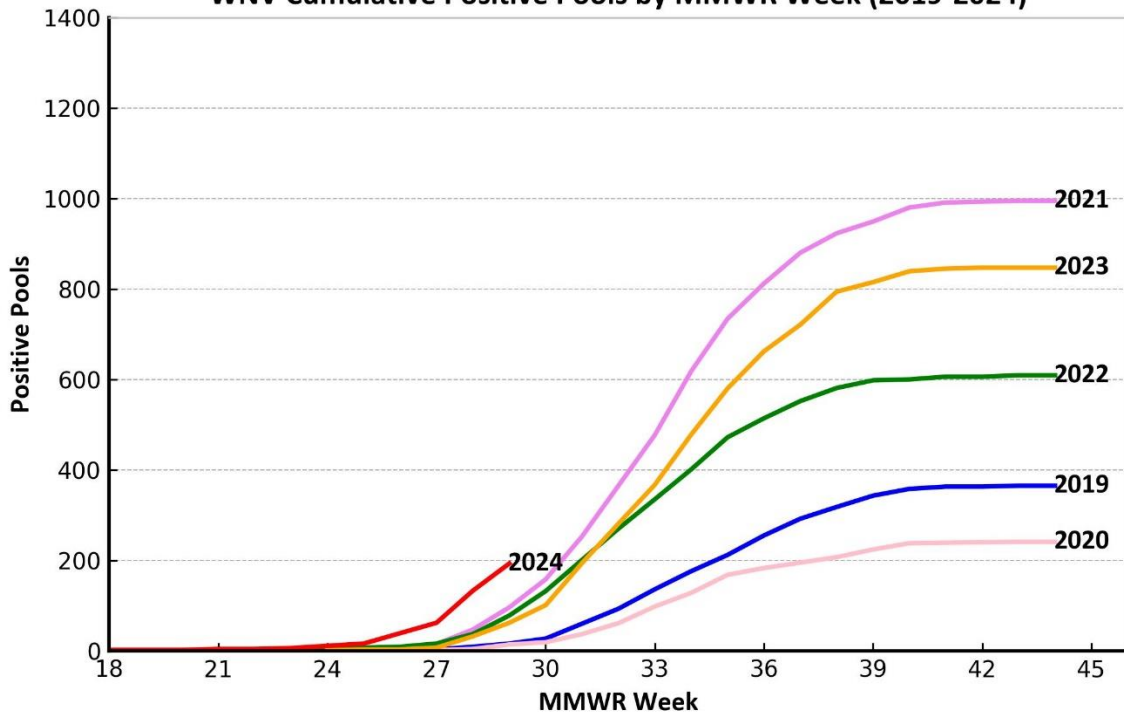
WEEK 29: July 16 - 22, 2023; July 14 - 20, 2024.

\*184 mosquito pools submitted by 8 counties are considered "early season" samples (collected prior to Week 20).

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



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

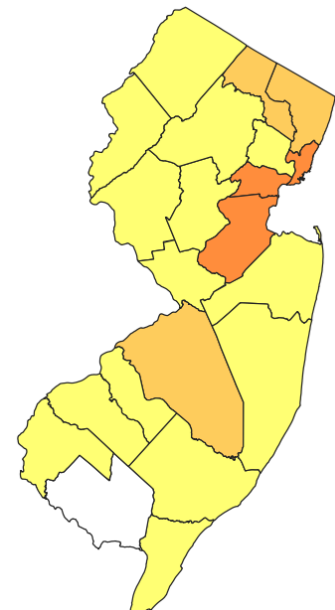
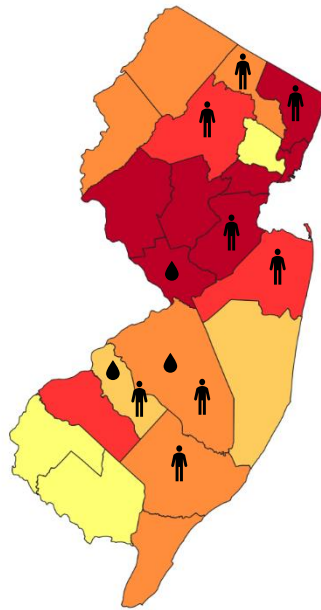


### 2023 WNV Activity

### Cumulative WNV Activity, 2024

#### WNV Positive Pools

- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- ≥ 1 WNV human case
- ≥ 1 WNV presumptive viremic donor



### 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 4,968 mosquito pools tested for EEE, three pools tested positive so far in 2024. One pool tested positive in week 29 in Union County. The positive pools were found in *Coquilleltidia perturbans* (1), *Cx. restuans* (1), and *Cx. pipiens/restuans/salinarius* (1) mosquitoes.
- The earliest EEE positive mosquito pool (*Cx. restuans*) was detected in week 27 from Cape May County. In 2023, the first EEE positive pool was detected in Week 30 from Cumberland County.

#### EEE Mosquito Pool Testing

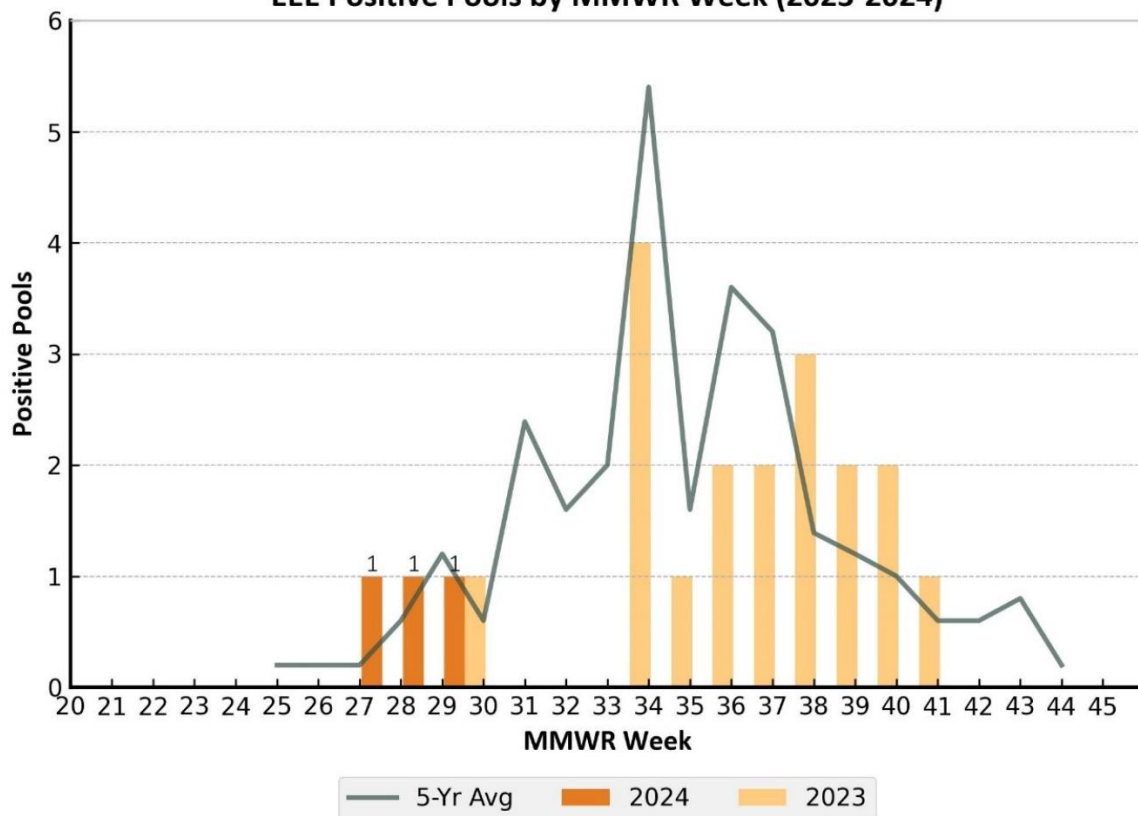
County	WEEK 29 Positive Pools		Cumulative Pos. Total* (WEEK 29)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cape May			1		1735	0.05
Morris			1		198	0.11
Union	1		1		121	0.17
Atlantic					156	
Bergen					151	
Burlington					87	
Camden					98	
Cumberland					200	
Essex					152	
Gloucester					284	
Hudson					123	
Hunterdon					180	
Mercer					196	
Middlesex					153	
Monmouth					203	
Ocean					161	
Passaic					115	
Salem					199	
Somerset					122	
Sussex					165	
Warren					169	
<b>Total</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>4,968</b>	<b>-</b>

### Cumulative EEE MFIR, 2024



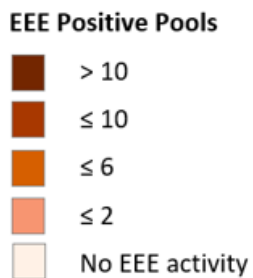
WEEK 29: July 16 - 22, 2023; July 14 - 20, 2024

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

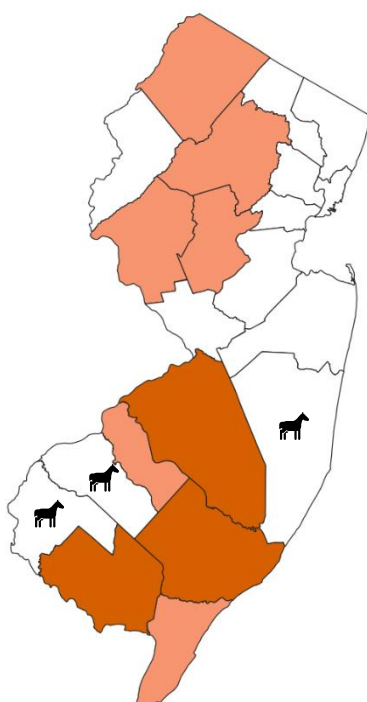


**2023 EEE Activity**

**Cumulative EEE Activity, 2024**



Equine case



## Jamestown Canyon Virus (JCV)

- There has been one human case of JCV reported in New Jersey in 2024 in week 19 from Sussex County. In 2023, there was one human case of JCV in week 42 from Sussex County.
- Out of 4,968 mosquito pools tested for JCV, two pools tested positive in week 23 from Cumberland County. The positive pools were found in *Aedes cantator* (1) and *Cx. salinarius* (1) mosquitoes.
- In 2023, the first JCV positive pool was detected in week 23 from Cumberland County.

**JCV Mosquito Pool Testing**

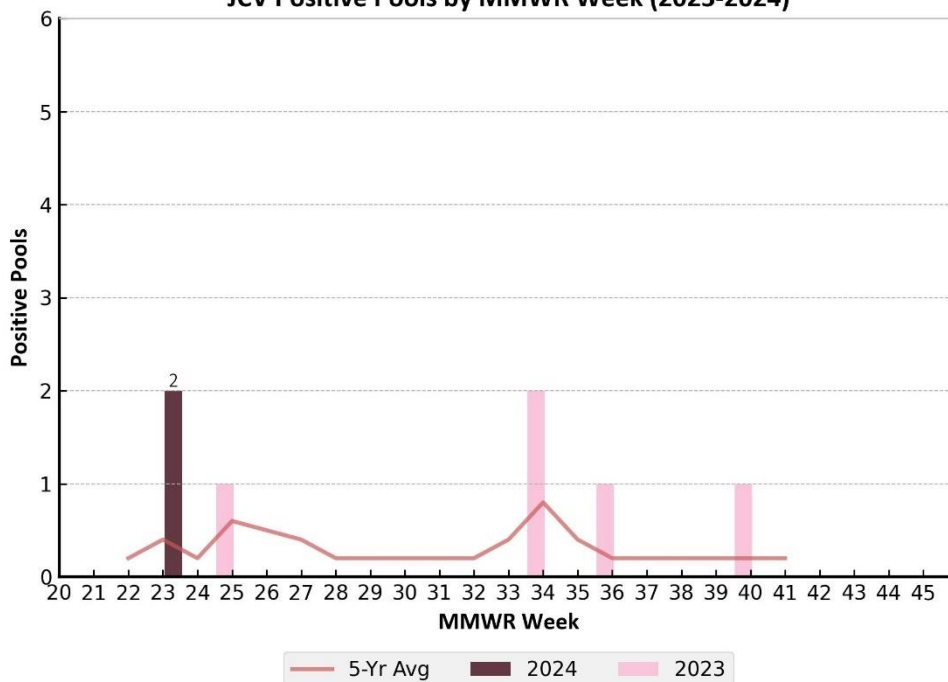
County	WEEK 29 Positive Pools		Cumulative Pos. Total* (WEEK 29)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	200	1.12
Atlantic					156	
Bergen					151	
Burlington					87	
Camden					98	
Cape May					1735	
Essex					152	
Gloucester					284	
Hudson					123	
Hunterdon					180	
Mercer					196	
Middlesex					153	
Monmouth					203	
Morris					198	
Ocean					161	
Passaic					115	
Salem					199	
Somerset					122	
Sussex					165	
Union					121	
Warren					169	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	4,968	-

**Cumulative JCV MFIR, 2024**



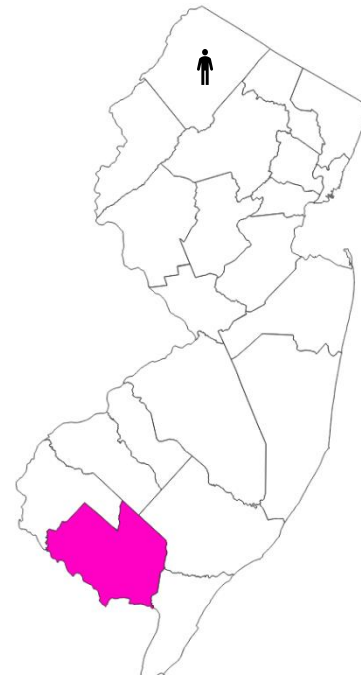
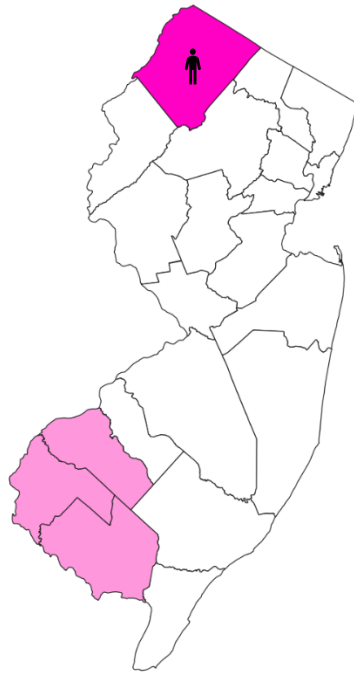
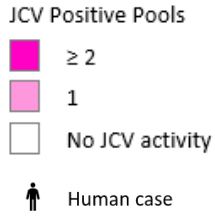
WEEK 29: July 16 - 22, 2023; July 14 - 20, 2024

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



### 2023 JCV Activity

### Cumulative JCV Activity, 2024



### Other Mosquito-borne Viruses

- Mosquito pools 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	156									
Bergen	151		4		4		4		4	
Burlington	87		1							
Camden	98		5		1		1		1	
Cape May	1735		99		54		54		54	
Cumberland	200									
Essex	152				1		1		1	
Gloucester	284									
Hudson	123									
Hunterdon	180		1							
Mercer	196		2		1		1		1	
Middlesex	153		6							
Monmouth	203									
Morris	198				2		2		2	
Ocean	161		2							
Passaic	115		2							
Salem	199		5							
Somerset	122									
Sussex	165		15							
Union	121									
Warren	169		10							
<b>Total</b>	<b>4,968</b>	<b>-</b>	<b>152</b>	<b>-</b>	<b>63</b>	<b>-</b>	<b>63</b>	<b>-</b>	<b>63</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

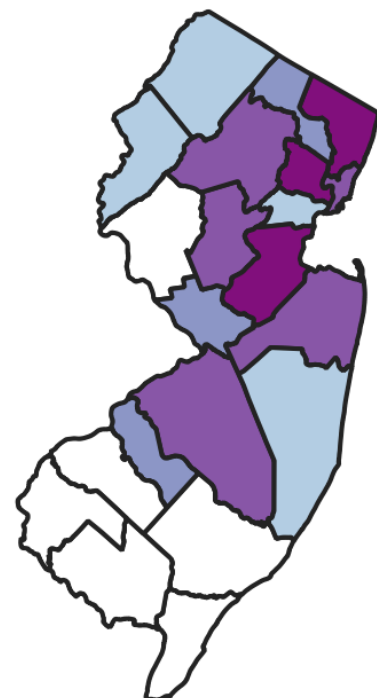


## Human Dengue Virus Cases

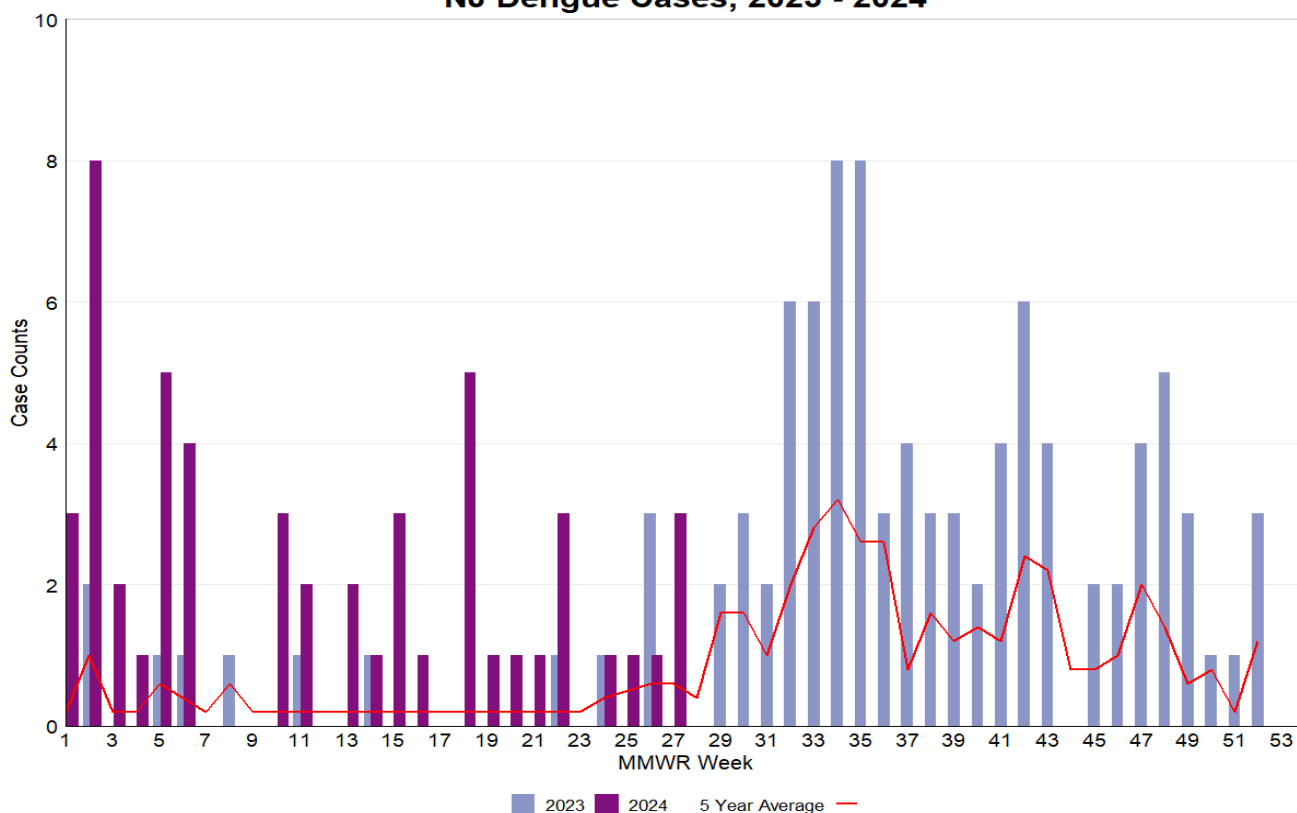
- There have been 52 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (16).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (50) cases have 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 (10), Essex (8), and Middlesex (6) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	10
Puerto Rico	7
Brazil	4
Colombia	4
Guatemala	4
Ecuador	3
Mexico	3
Aruba	2
Costa Rica	2
Guyana	2
India	2
Martinique	2
Antigua and Barbuda	1
Cuba	1
El Salvador	1
Honduras	1
Paraguay	1
Peru	1
U.S. Virgin Islands	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024

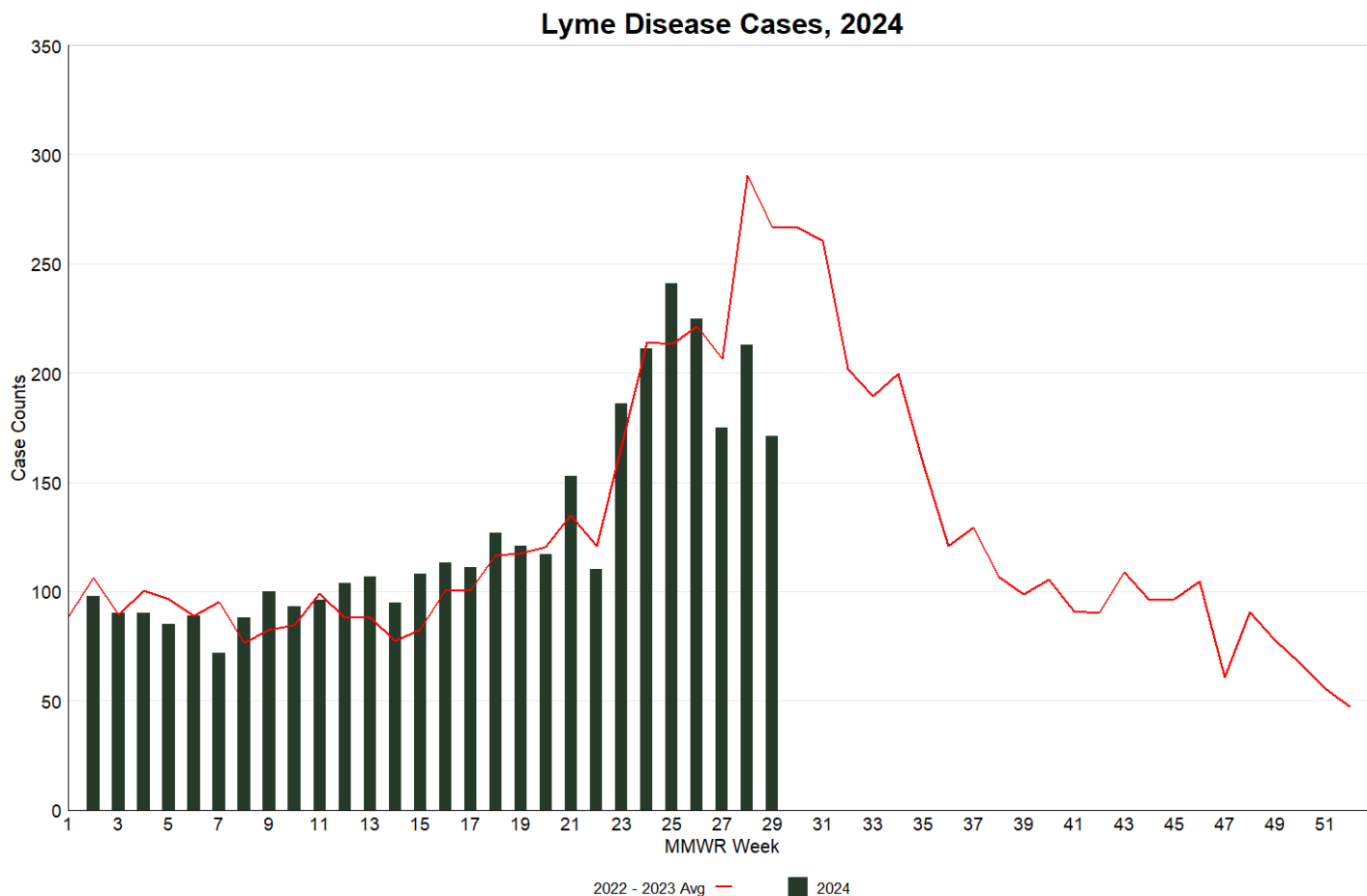




## Tickborne Disease Activity

### Lyme Disease

- There have been 3,677 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 29 continued to decrease and is below the average number of cases reported this week.

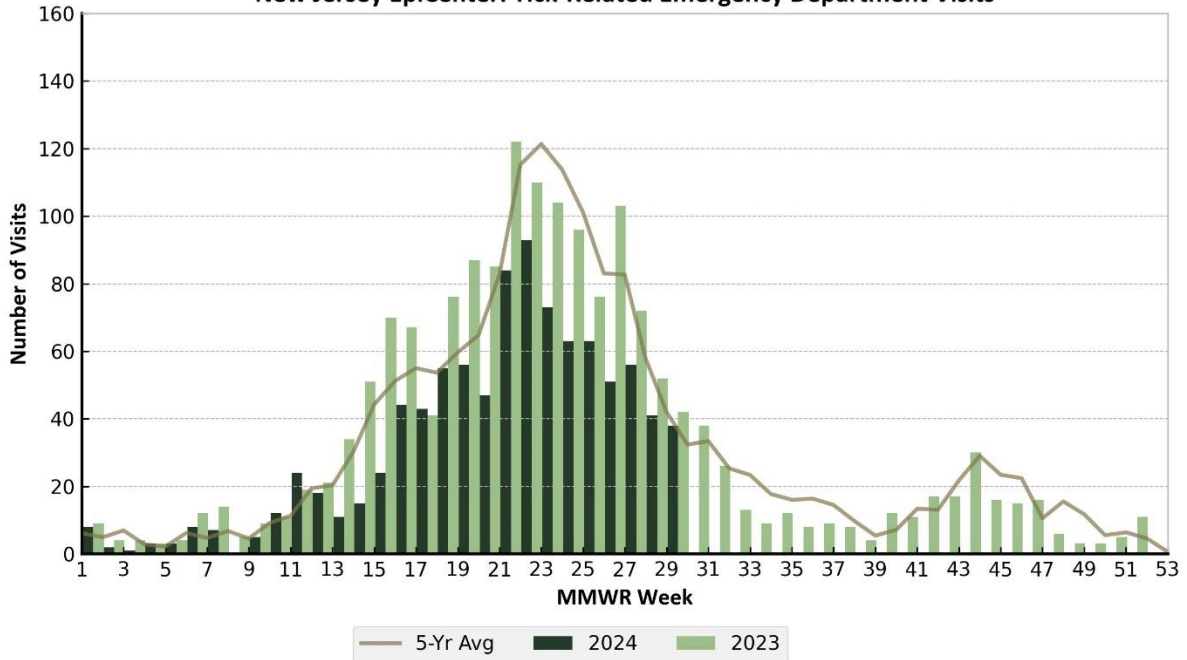


### Tick-related Emergency Department Visits

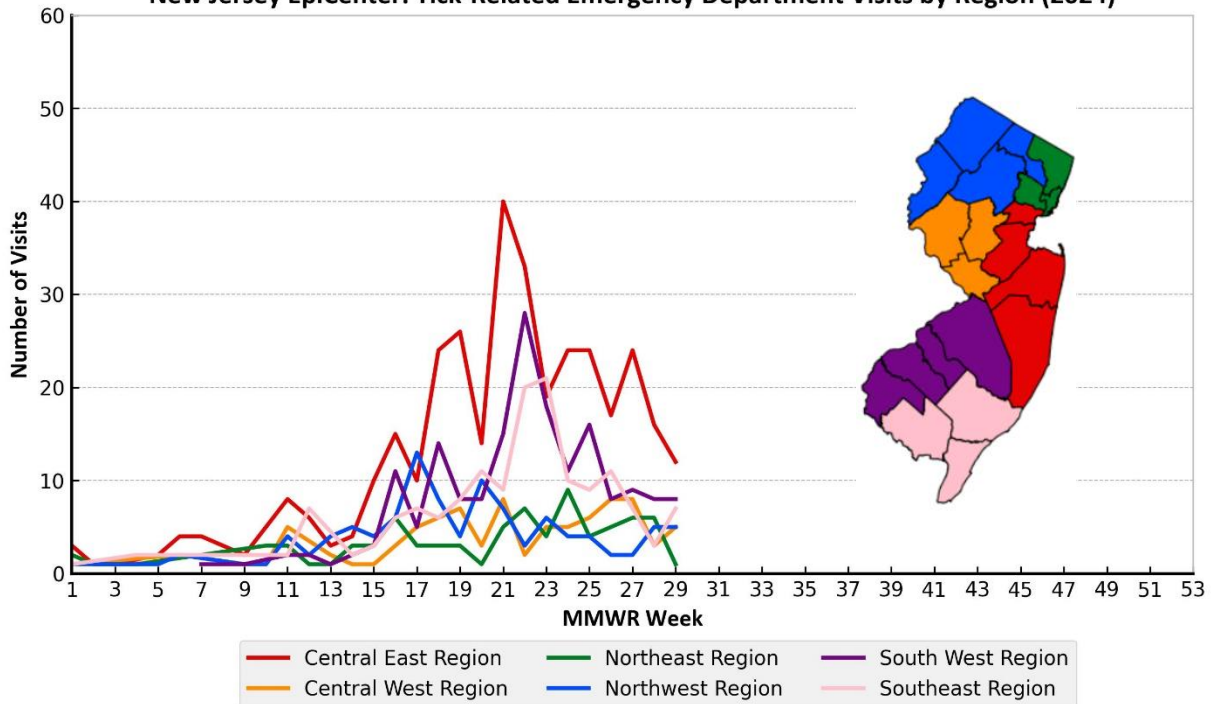
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 29, the number of tick-related ED visits continued to decrease and is consistent with 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/>