

## Report Highlights:

- **No new human cases of West Nile Virus (WNV) are reported this week. To date, there have been 34 reported WNV cases, including six deaths and six presumptive viremic donors (PVDs) including one that met the case definition. Ninety-one percent of WNV cases were hospitalized. An additional 6 mosquito pools tested positive for WNV since last report, including 1 this week (additional tests pending) for a total of 984 WNV positive pools in 2024.**
- **No new human or animal cases of Eastern Equine encephalitis (EEE) or mosquito detections are reported this week. To date, there has been one human EEE case from Atlantic County and four horses from Atlantic, Ocean (2), and Salem counties that tested positive for EEE. There has been a total of 17 EEE positive mosquito pools in 2024.**
- **No new human cases of Jamestown Canyon virus (JCV) or mosquito detections are reported this week. To date, there has been one human case of JCV in Sussex County and detections in three mosquito pools in Cumberland and Monmouth counties.**
- **Two additional travel-associated dengue cases are reported this week. To date in 2024, there are 102 travel-associated dengue cases compared to 98 cases in all of 2023. Cases are associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases is below average this week. The number of tick-related emergency department visits increased slightly this week but remains lower than average.**

## 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. Lyme disease surveillance transitioned to laboratory-based surveillance in 2022. All 2024 numbers are preliminary and subject to change. Some cases are considered “presumptive positive” and may be 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	8	13	Alpha-gal syndrome	181	360
Dengue	102	98	Anaplasmosis	112	195
Eastern equine encephalitis	1	-	Babesiosis	215	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	12	18
Malaria	58	102	Ehrlichiosis	71	109
West Nile	34	14	Lyme disease	5,327	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	12	24
			Tularemia	2	2

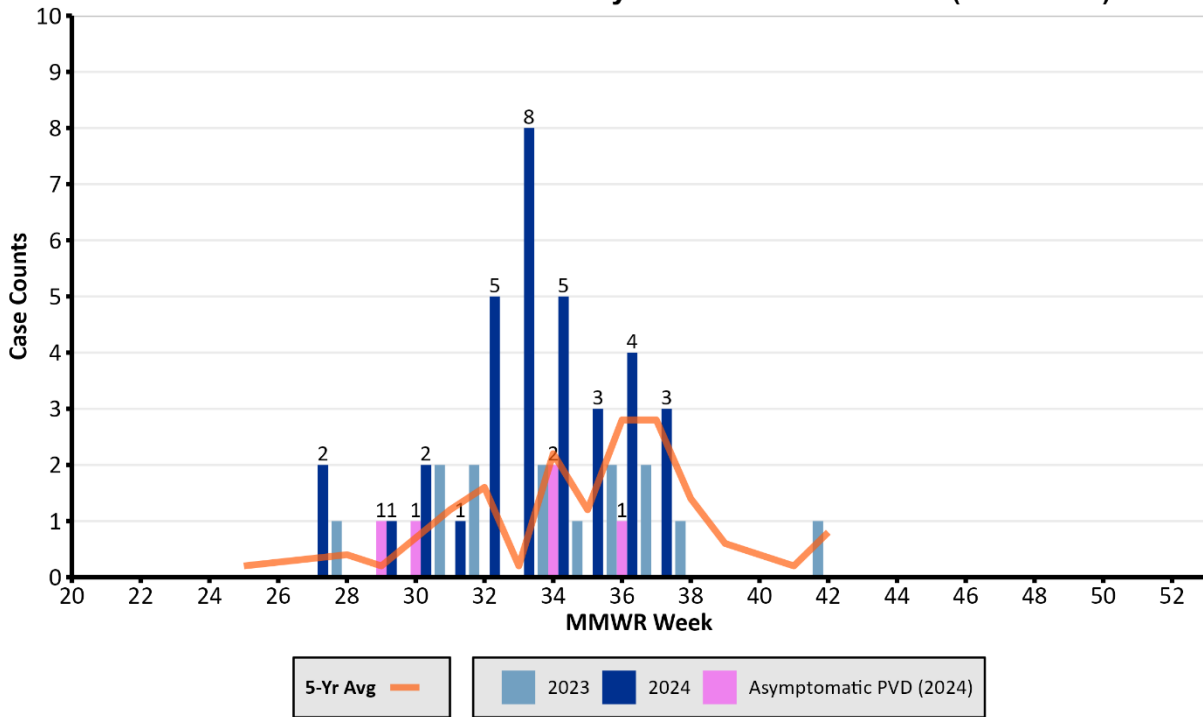
## Mosquito-borne Disease Activity\*

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

### West Nile Virus

- Thirty-four human cases of WNV have been reported in 2024 from Bergen (6), Burlington (2), Camden (3), Cape May, Cumberland (2), Essex (2), Hudson, Hunterdon, Mercer (2), Middlesex (3), Monmouth (4), Ocean (3), Union (2), and Warren (2) counties. There were six deaths reported in Bergen, Cumberland, Mercer, Middlesex, Monmouth, and Ocean counties. There have been six PVDs in Bergen, Camden (2), Essex, Passaic, and Somerset counties including one that met the case definition.
- One emu tested positive for WNV in week 36 from Monmouth County. Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.
- Out of 12,175 mosquito pools submitted for testing, 984 mosquito pools have tested positive for WNV this year with 1 pool positive in week 42 (additional tests pending). The most WNV positive pools have been detected in *Culex pipiens/restuans/salinarius* (829), *Cx. pipiens* (63), and *Ae. albopictus* (41) mosquitoes.
- The earliest WNV positive mosquito pools (*Cx. pipiens/restuans/salinarius*) were detected in week 18 from Gloucester County (2), considerably earlier than 2023, when WNV was initially detected in week 24 from Bergen County.

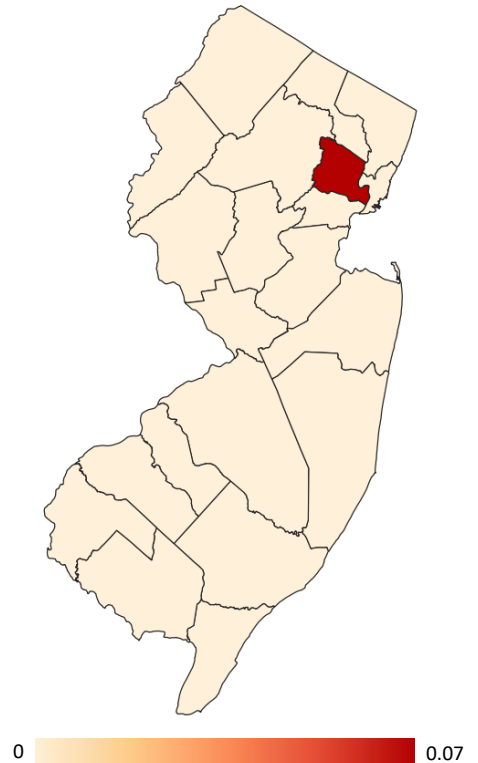
### West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



### WNV Mosquito Pool Testing

County	WEEK 42 Positive Pools		Cumulative Pos. Total* (WEEK 42)		# Pools Tested*	WEEK 42 Vector Index	
	2024	2023	2024	2023		2024	2024 <sup>†</sup>
Bergen			127	118	410	0.00	(↓)
Middlesex			95	67	390	0.00	(-)
Hudson			92	81	328	0.00	(↓)
Union			86	57	291	0.00	(-)
Somerset			62	65	321	0.00	(-)
Hunterdon			61	64	385	0.00	(-)
Cape May		1	58	27	3,706	0.00	(-)
Morris			52	41	441	0.00	(-)
Passaic			51	26	285	0.00	(-)
Monmouth			46	33	506	0.00	(-)
Mercer			40	54	462	0.00	(-)
Essex	1		36	7	459	0.07	(↑)
Gloucester		1	34	47	773	0.00	(-)
Sussex			33	30	440	0.00	(-)
Warren			28	29	448	0.00	(-)
Burlington			26	27	320	0.00	(-)
Atlantic			25	27	456	0.00	(-)
Camden			13	20	360	0.00	(-)
Ocean			11	20	401	0.00	(-)
Salem			6	6	571	0.00	(-)
Cumberland			2	1	422	0.00	(-)
<b>Total</b>	<b>1</b>	<b>2</b>	<b>984</b>	<b>847</b>	<b>12,175</b>	-	

### WNV Vector Index, WEEK 42<sup>†</sup>



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

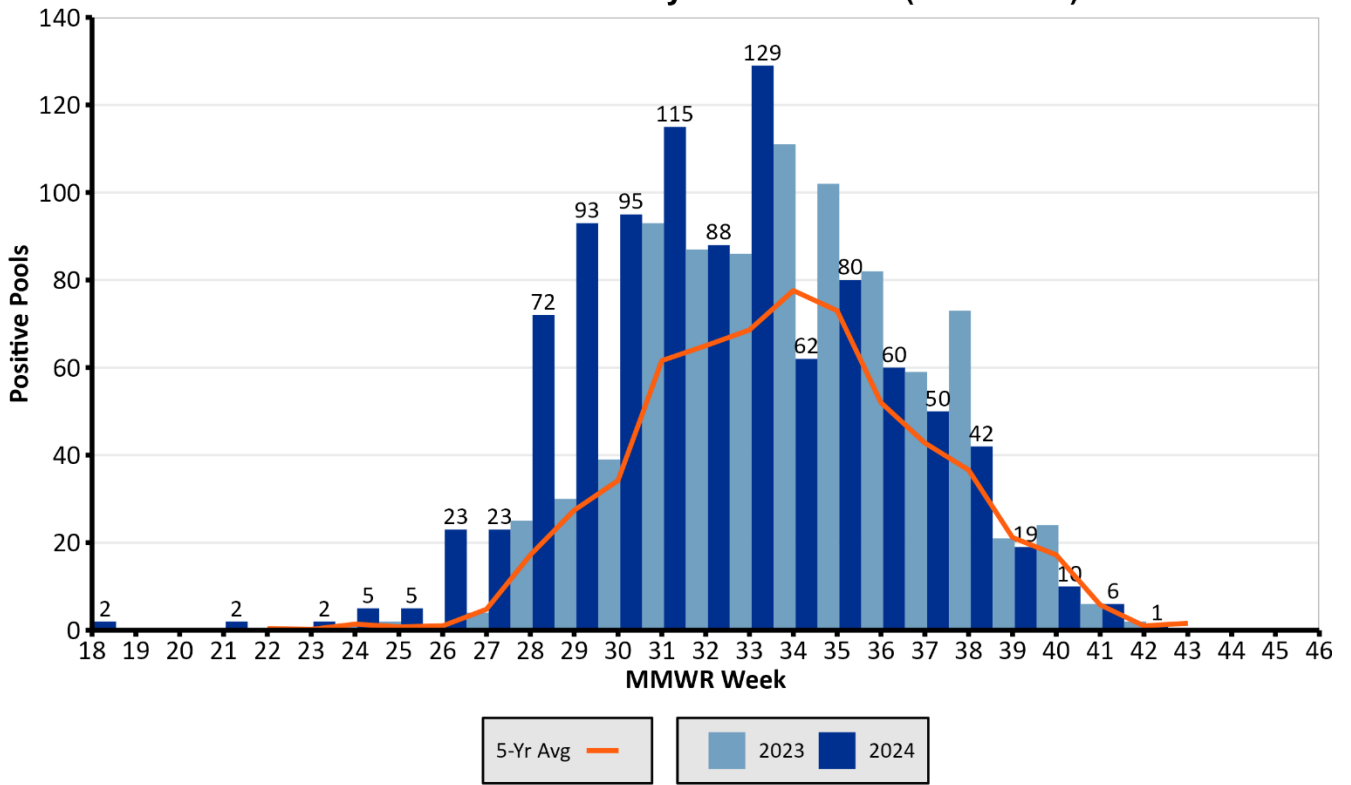
WEEK 42: Oct 15 - 21, 2023; Oct 13 - 19, 2024.

\*184 mosquito pools submitted by 8 counties were collected prior to Week 20.

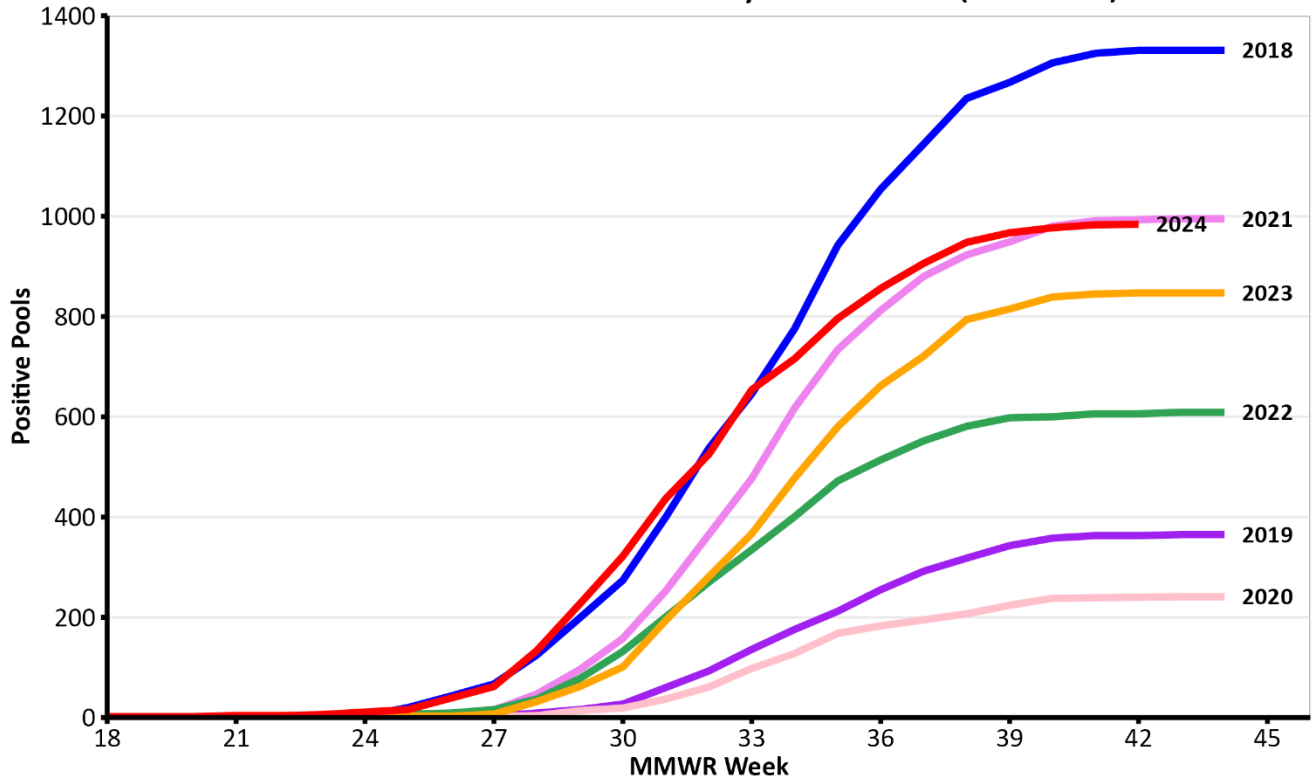
\*If all tested pools are positive, Vector Index cannot be calculated. In these situations, the county is shown on the map with red stripes to indicate elevated activity.

<sup>‡</sup> Prior 2024 reports included results from rapid tests for Bergen County. Numbers have been

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



**WNV Cumulative Positive Pools by MMWR Week (2018-2024)**

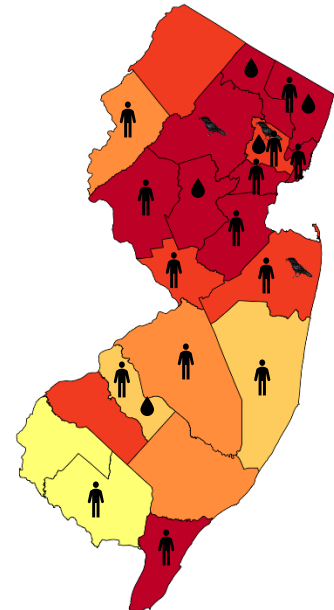
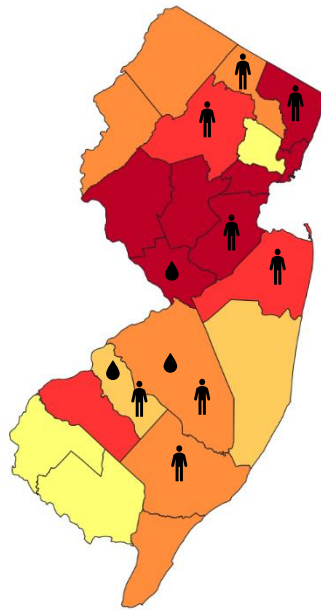


### 2023 WNV Activity

### Cumulative WNV Activity, 2024

#### WNV Positive Pools

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



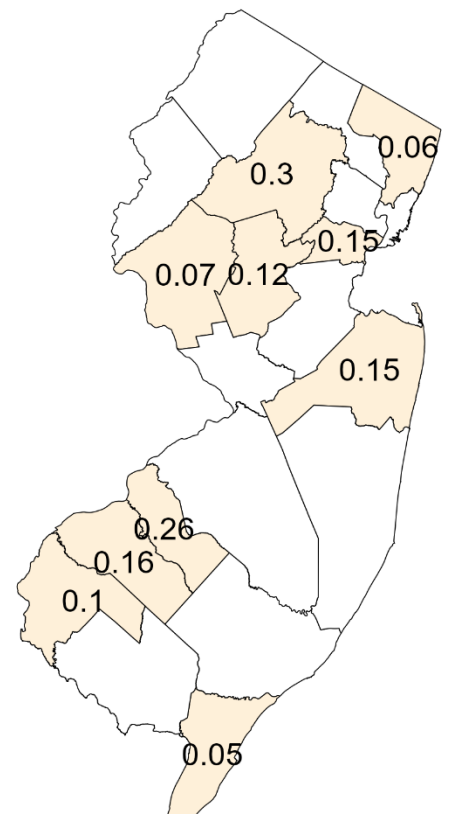
### Eastern Equine Encephalitis (EEE)

- One human case of EEE was reported in week 27 in Atlantic County. EEE human cases were last reported in 2019 (4 cases).
- Four horses tested positive for EEE in week 31 in Atlantic County, week 33 in Ocean County (2), and in week 36 in Salem County. None of the horses were vaccinated.
- Out of 12,082 mosquito pools tested for EEE, 17 pools have tested positive in 2024. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (9), *Culiseta morsitans* (1), and *Cx. pipiens/restuans/salinarius* (5) 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

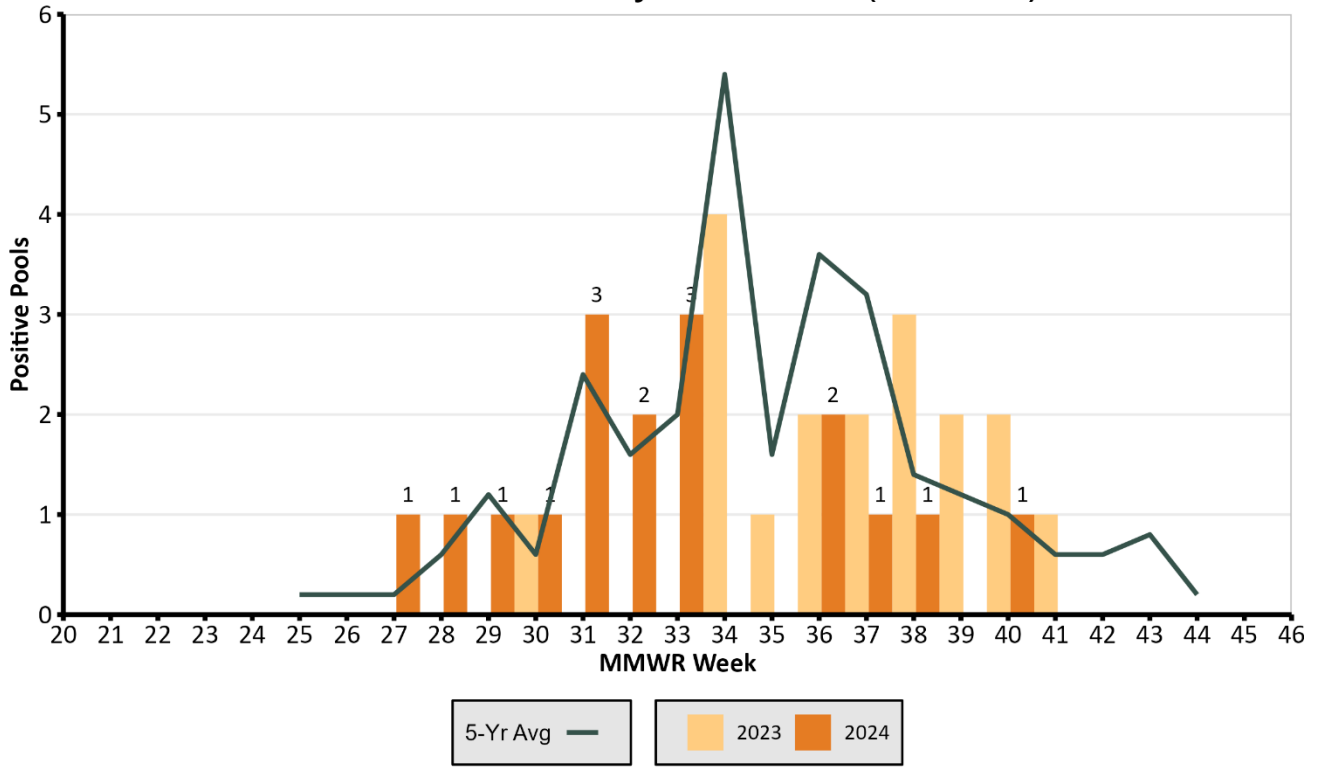
County	WEEK 42 Positive Pools		Cumulative Pos. Total* (WEEK 42)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Morris			4	1	441	0.30
Cape May			2	2	3,706	0.05
Gloucester			2		773	0.16
Monmouth			2		506	0.15
Union			2		291	0.15
Bergen			1		410	0.06
Camden			1	2	351	0.26
Hunterdon			1	1	382	0.07
Salem			1		571	0.10
Somerset			1	1	321	0.12
Atlantic				3	456	
Burlington				3	317	
Cumberland				3	422	
Essex					459	
Hudson					328	
Mercer					460	
Middlesex					384	
Ocean					399	
Passaic					285	
Sussex				2	398	
Warren					422	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>18</b>	<b>12,082</b>	<b>-</b>

#### Cumulative EEE MFIR, 2024



WEEK 42: Oct 15 - 21, 2023; Oct 13 - 19, 2024

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

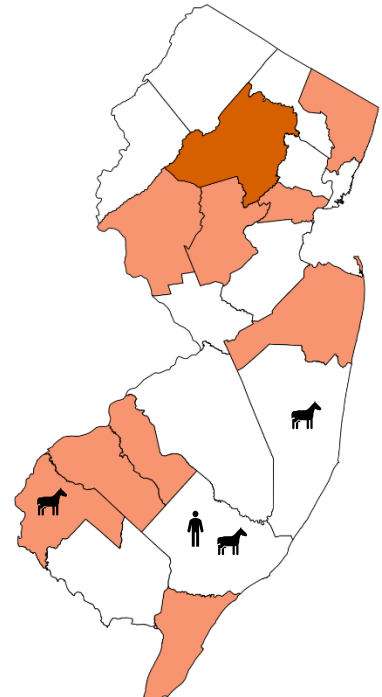
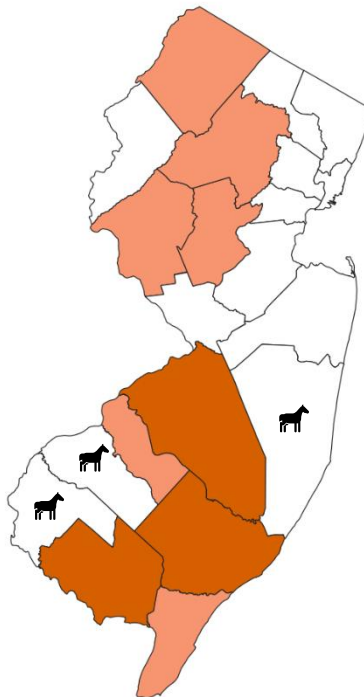


2023 EEE Activity

Cumulative EEE Activity, 2024

#### EEE Positive Pools

- > 10
- ≤ 10
- ≤ 6
- ≤ 2
- No EEE activity
- ≥ 1 EEE human case
- ≥ 1 EEE equine case



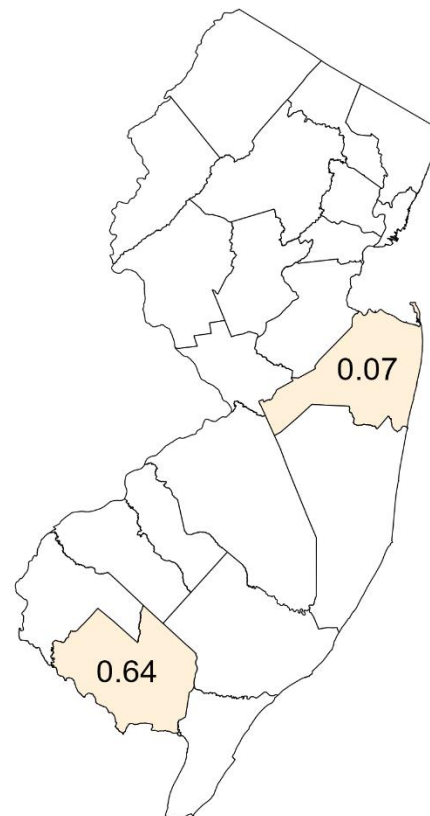
## Jamestown Canyon Virus (JCV)

- There was one human case of JCV reported in New Jersey in 2024 in week 19 in Sussex County. In 2023, there was one human case of JCV in week 42 in Sussex County.
- Out of 12,082 mosquito pools tested for JCV, 3 pools have tested positive in 2024. The positive pools were found in *Aedes cantator* (1), *Cx. salinarius* (1), and *Psorophora columbiae* (1) mosquitoes.
- In 2023, the first JCV positive pool was detected in week 23 from Cumberland County.

**JCV Mosquito Pool Testing**

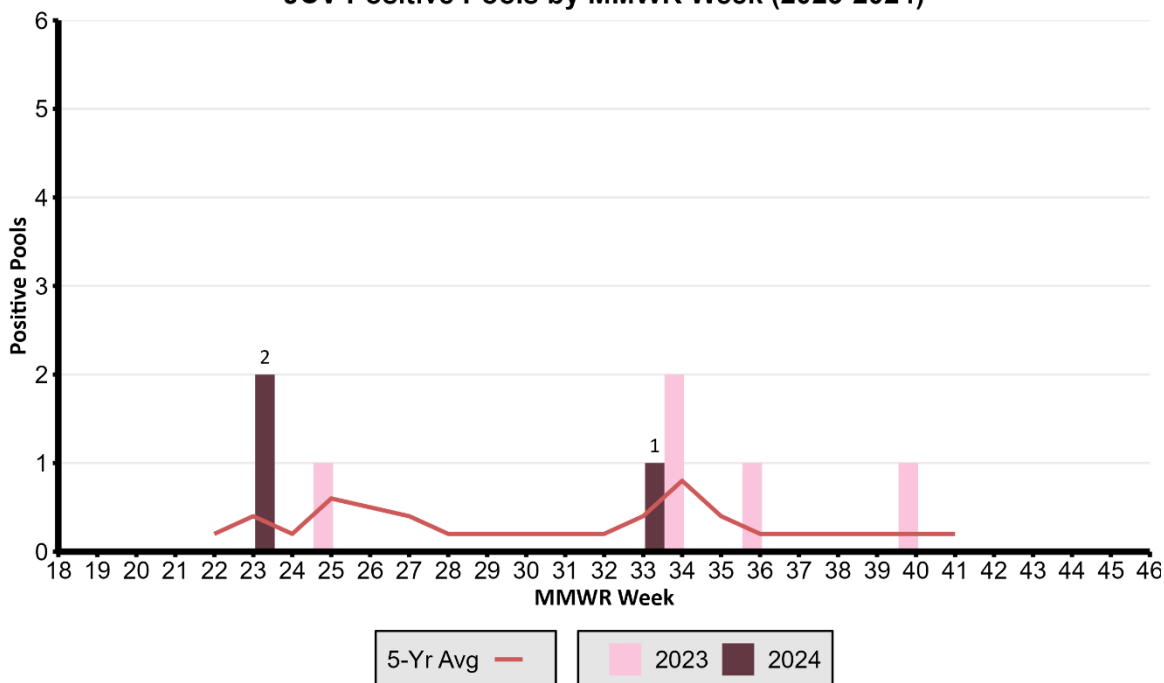
County	WEEK 42 Positive Pools		Cumulative Pos. Total* (WEEK 42)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	422	0.64
Monmouth			1		506	0.07
Atlantic					456	
Bergen					410	
Burlington					317	
Camden					351	
Cape May					3,706	
Essex					459	
Gloucester				1	773	
Hudson					328	
Hunterdon					382	
Mercer					460	
Middlesex					384	
Morris					441	
Ocean					399	
Passaic					285	
Salem				1	571	
Somerset					321	
Sussex				2	398	
Union					291	
Warren					422	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>5</b>	12,082	-

**Cumulative JCV MFIR, 2024**



WEEK 42: Oct 15 - 21, 2023; Oct 13 - 19, 2024

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

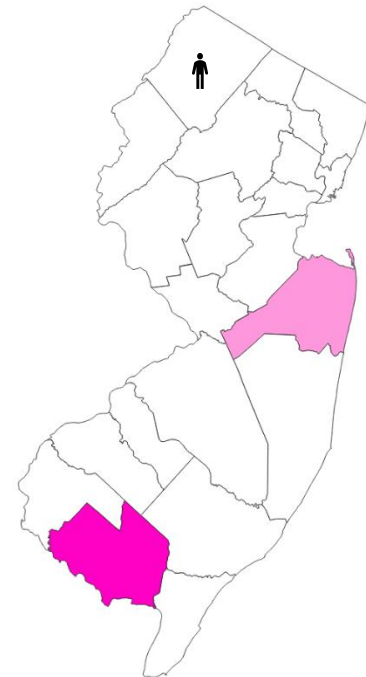
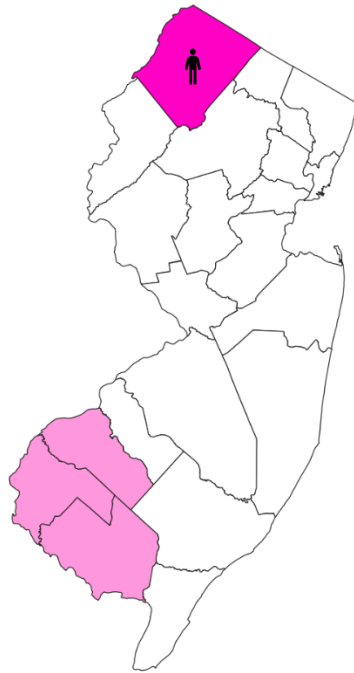


### 2023 JCV Activity

### Cumulative JCV Activity, 2024

#### JCV Positive Pools

- ≥ 2
- 1
- No JCV activity
- ≥ 1 JCV human case



### 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	456				5		5		5	
Bergen	410		9		12		12		12	
Burlington	317		3							
Camden	351		9		5		5		5	
Cape May	3,706		217		242		242		242	
Cumberland	422									
Essex	459				3		3		3	
Gloucester	773				7		7		7	
Hudson	328									
Hunterdon	382		3		3		3		3	
Mercer	460		2		3		3		3	
Middlesex	384		6		5		5		5	
Monmouth	506									
Morris	441				6		6		6	
Ocean	399		2		1		1		1	
Passaic	285		3							
Salem	571		19							
Somerset	321									
Sussex	398		42							
Union	291									
Warren	422		26		3		3		3	
<b>Total</b>	<b>12,082</b>	<b>-</b>	<b>341</b>	<b>-</b>	<b>295</b>	<b>-</b>	<b>295</b>	<b>-</b>	<b>295</b>	<b>-</b>

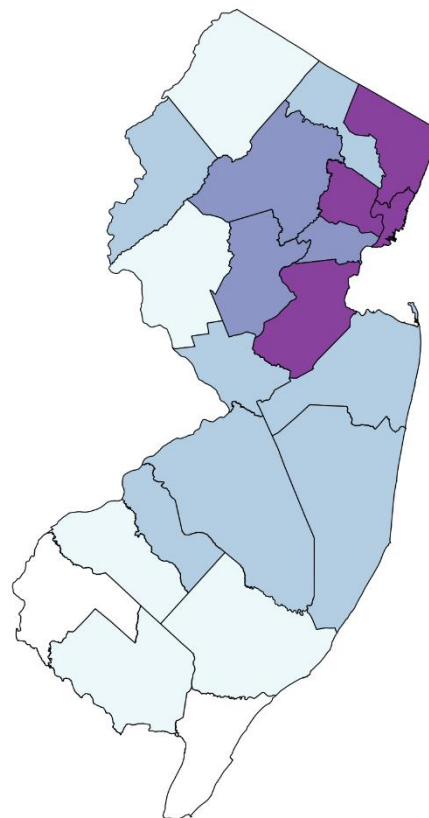
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2024  
 Number in green shaded columns represent positive pools in 2024

## Human Dengue Virus Cases

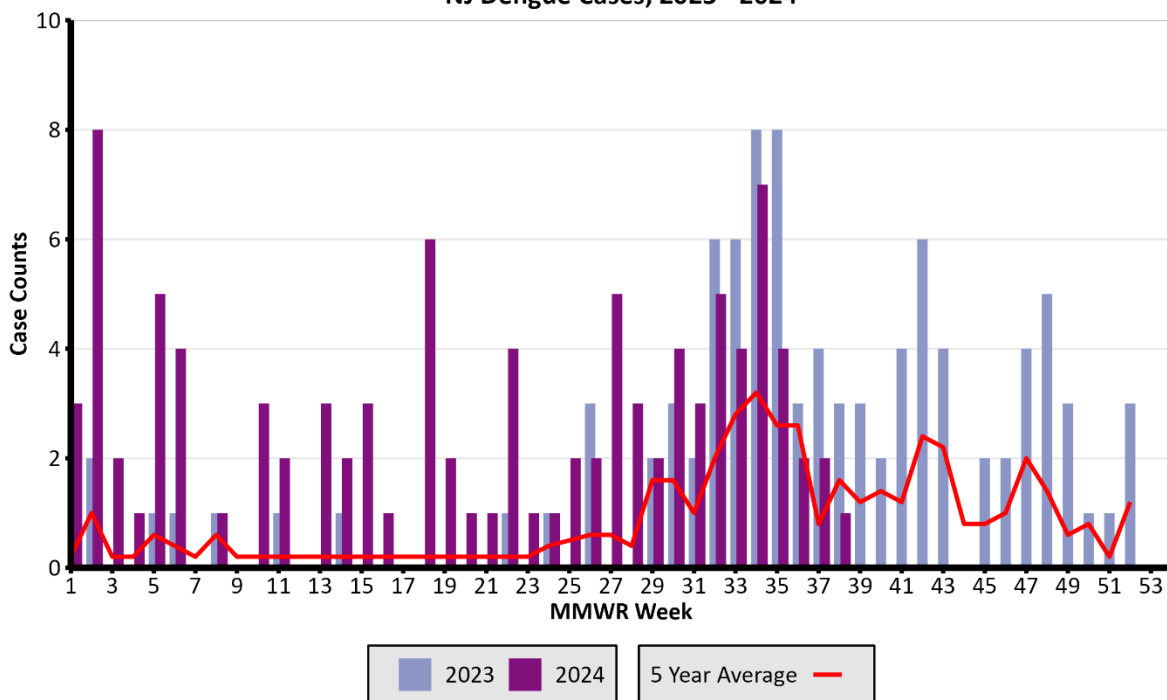
- There have been 102 cases of dengue virus reported to date in 2024, which is considerably higher than the number reported this time last year (74).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Most NJ cases reported travel to a country or US territory in Latin America or the Caribbean.
- Many of the NJ cases are concentrated in the northeast region, with most cases residing in Bergen (16), Middlesex (14), and Essex (11) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Puerto Rico	14
Dominican Republic	12
Colombia	9
Guatemala	9
Mexico	9
Brazil	7
India	7
El Salvador	5
Honduras	4
Trinidad & Tobago	4
U.S. Virgin Islands	4
Ecuador	3
Aruba	2
Costa Rica	2
Grenada	2
Guyana	2
Martinique	2
Peru	2
Antigua and Barbuda	1
Cuba	1
Indonesia	1
Paraguay	1

### Dengue Cases



NJ Dengue Cases, 2023 - 2024

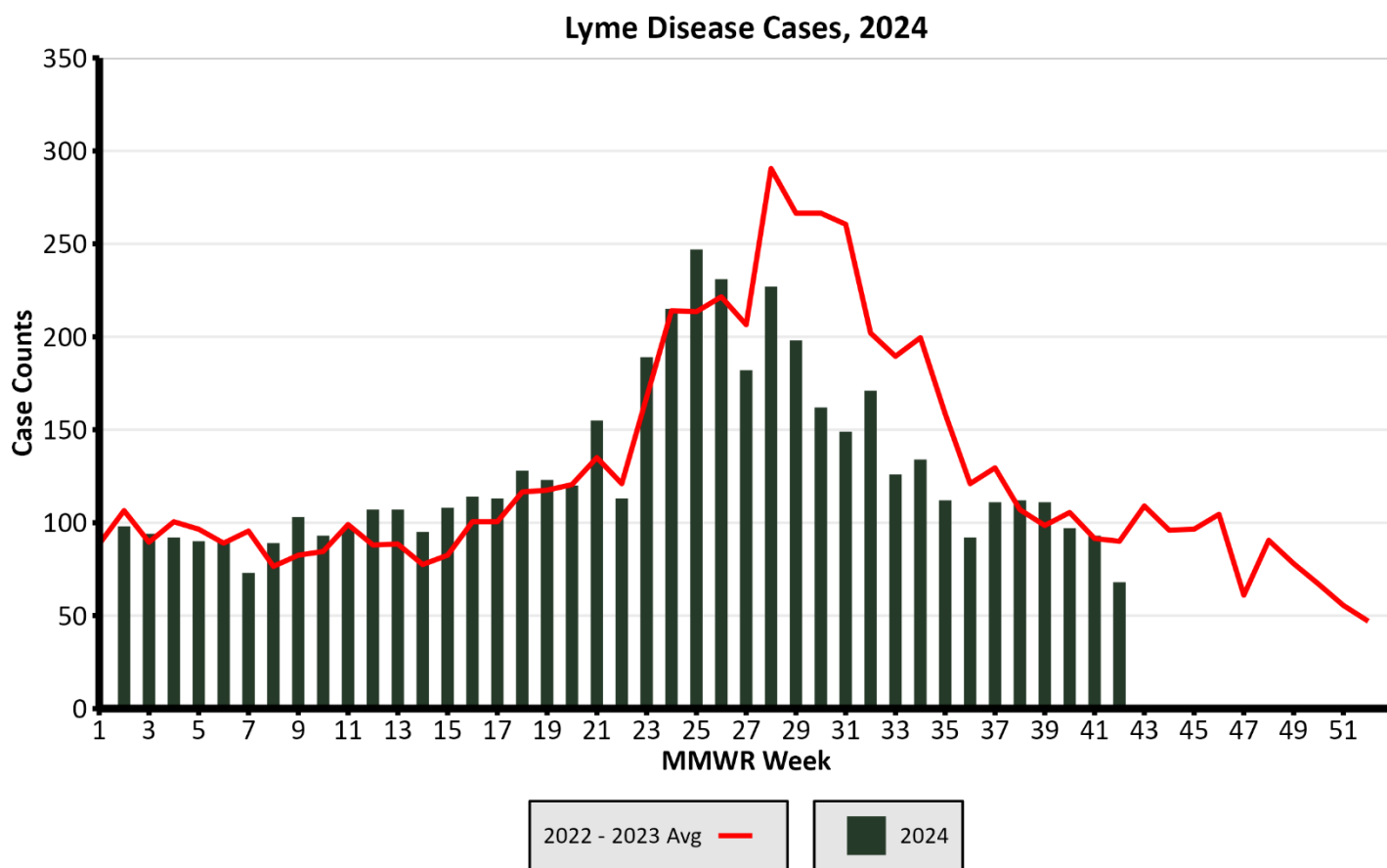




## Tickborne Disease Activity

### Lyme Disease

- There have been 5,327 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in Week 42 decreased and is below the average number of cases reported this week.

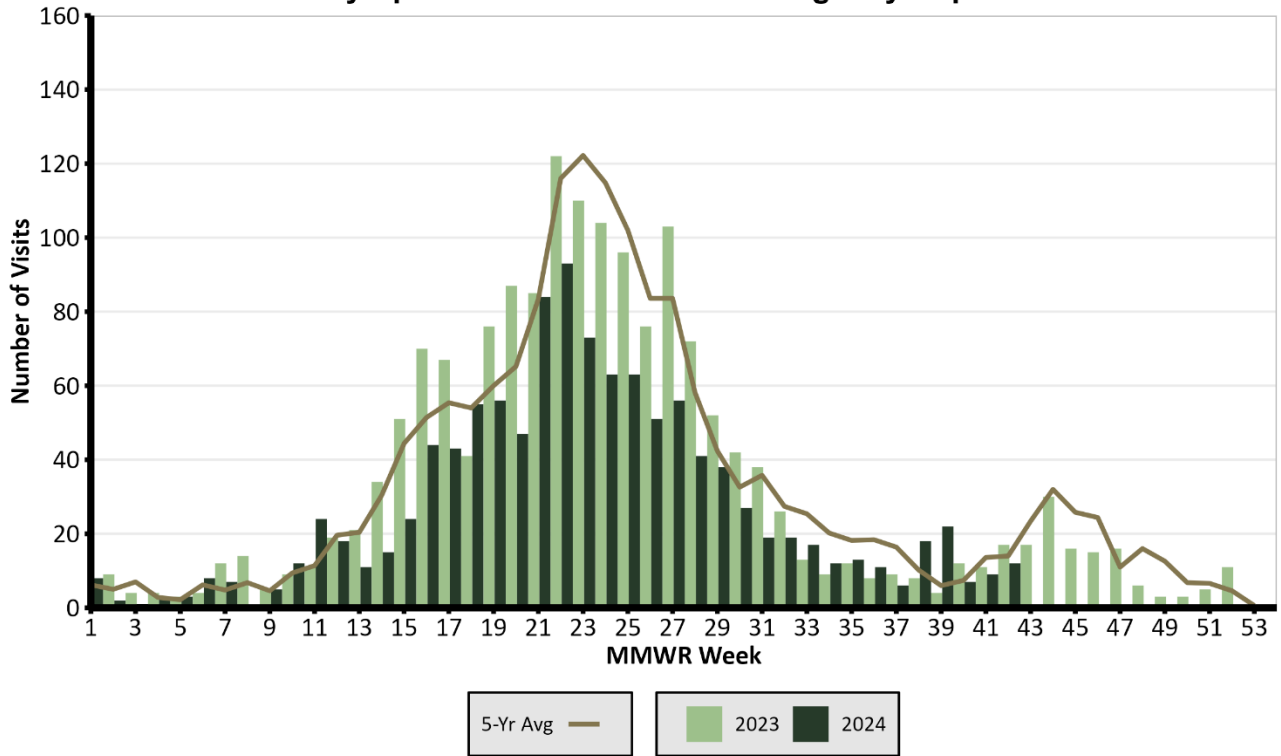


### Tick-related Emergency Department Visits

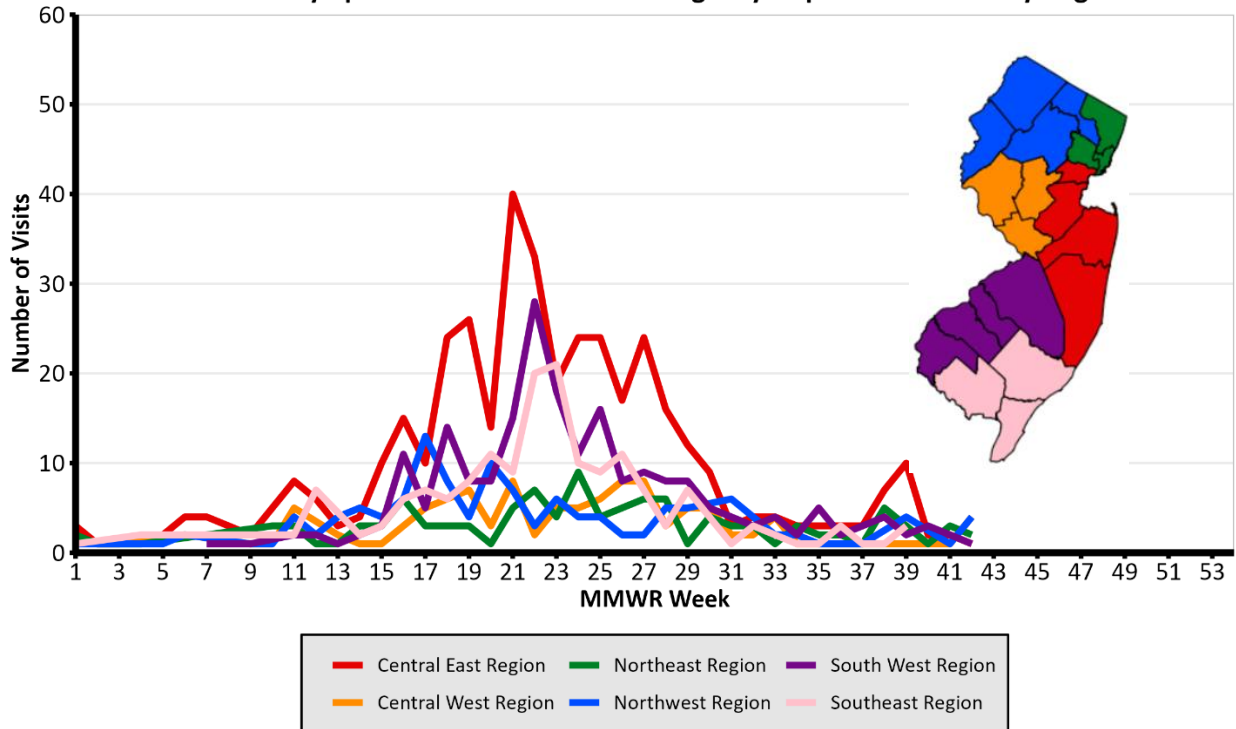
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 42, the number of tick-related ED visits increased slightly but remains below the 5-year average.

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



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



### 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/>