

# Vector-borne Surveillance Report

## 2025 Season Summary

### Mosquito-borne Disease Activity

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2025 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 (apart from Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2025 numbers are preliminary and subject to change.

### West Nile Virus

#### Human Cases

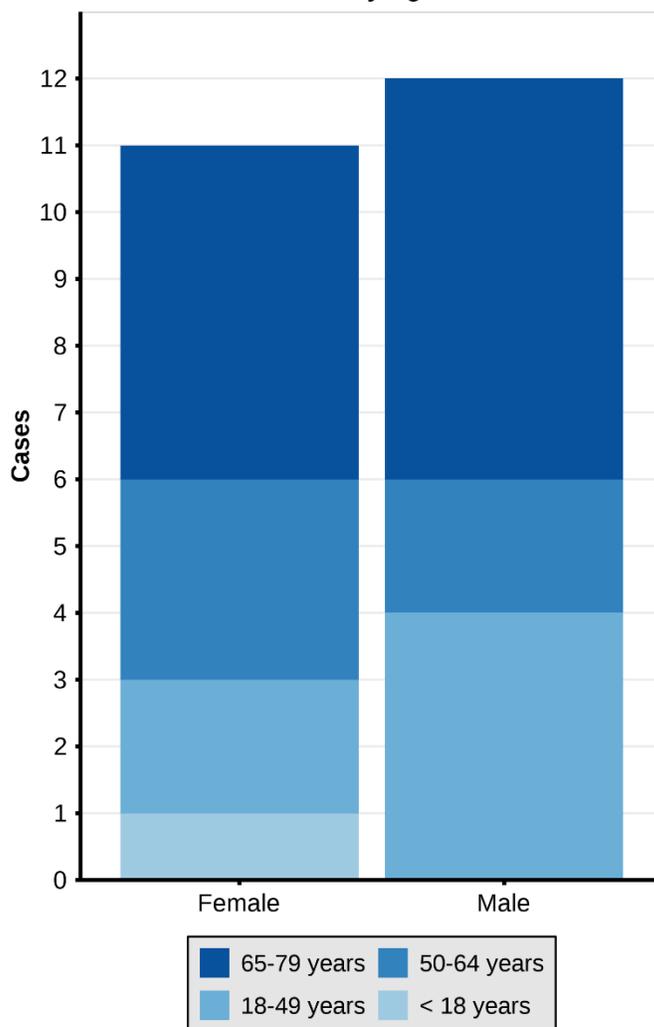
- There were 23 human West Nile Virus (WNV) cases reported in NJ in 2025 with one death and five positive viremic donors (PVD). Two cases also tested positive for Jamestown Canyon virus.
- 17 cases (74%) WNV cases were classified as having neuroinvasive disease, meaning they presented with meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction.
- 21 cases (91%) were hospitalized for an average length of stay of 15 days, with a range of 2 to 62 days; 9 hospitalized cases (43%) required additional medical care after hospitalization in a long-term care/rehabilitation facility.
- Cases ranged from 1 to 75 years with almost half in persons 65 years and older. Fifty-two percent of cases were male.
- The date of illness onset ranged from CDC week 30 (week ending 7/26/25) to CDC week 43 (week ending 10/25/25).

WNV Human Activity

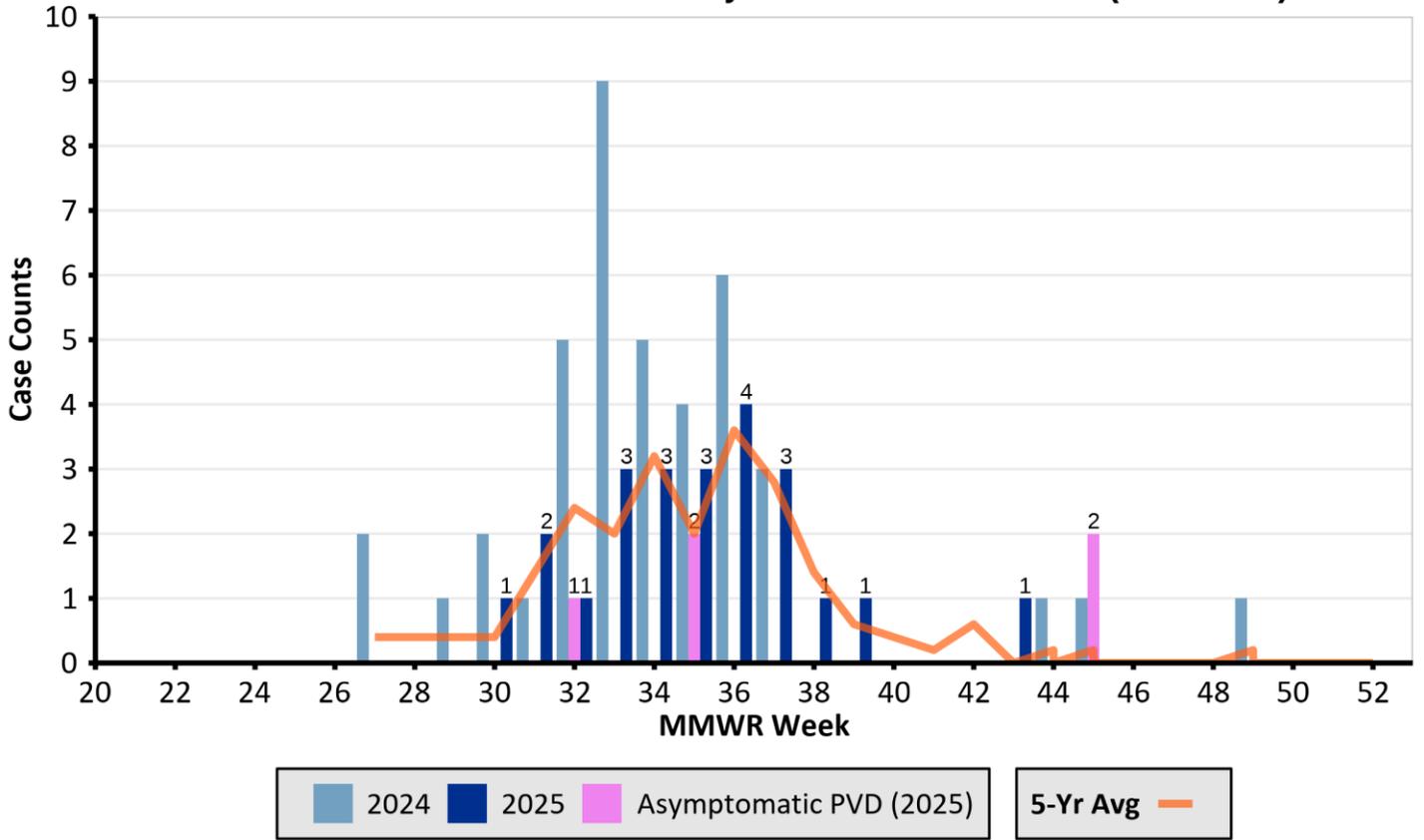
County	Human Cases		PVD	
	2025	2024	2025	2024
Middlesex	4	3	2	
Atlantic	2			
Bergen	2	6		1
Burlington	2	2	2	
Monmouth	2	4		
Morris	2			
Union	2	2		
Camden	1	5		2*
Essex	1	3		1
Gloucester	1			
Hudson	1	1		
Mercer	1	3		
Passaic	1	1		
Sussex	1		1	
Cape May		1		
Cumberland		2		
Hunterdon		1		
Ocean		3		
Salem		1		
Somerset		1		1
Warren		2		
<b>Total</b>	<b>23</b>	<b>41</b>	<b>5</b>	<b>6</b>

\*1 PVD was symptomatic and classified as a case.

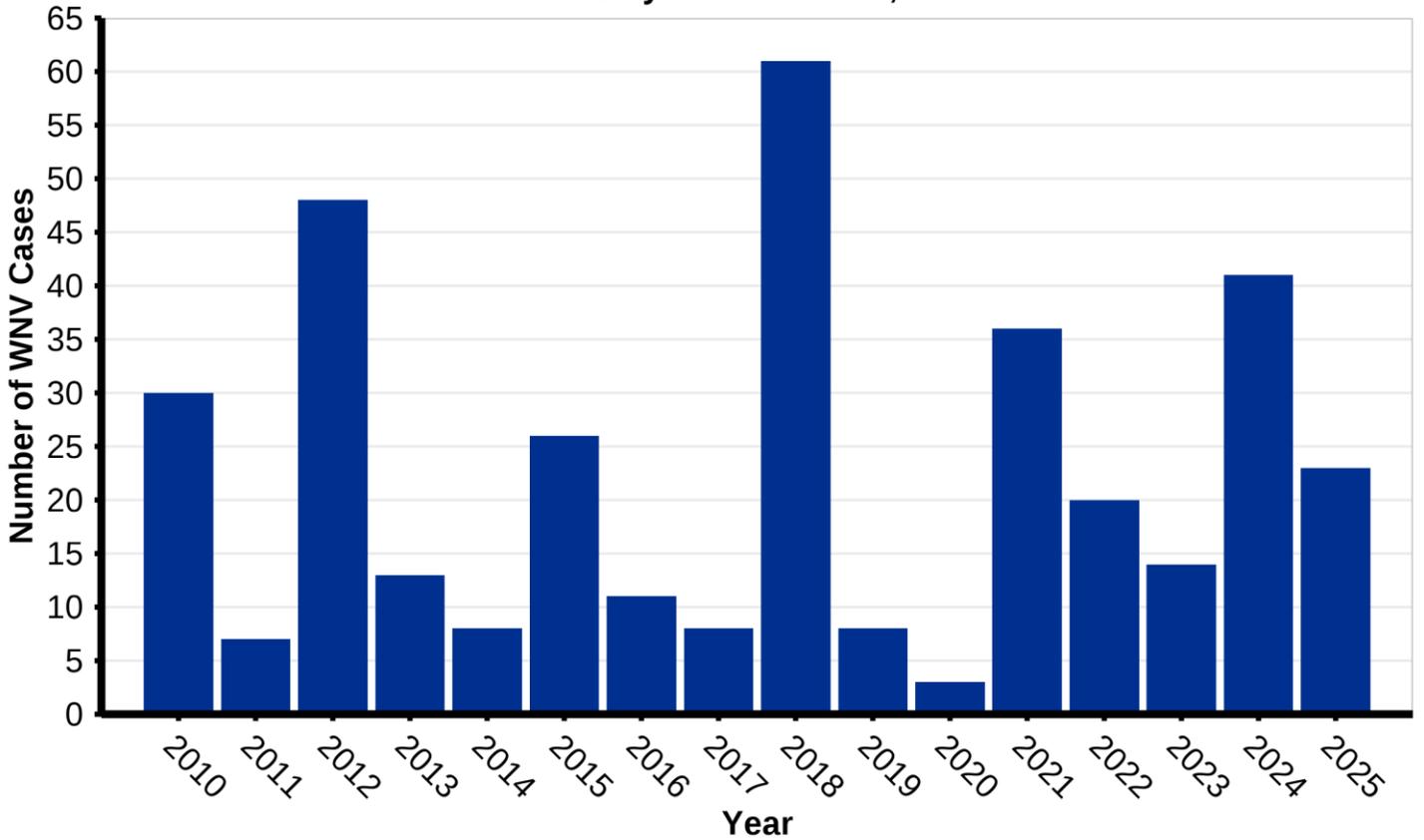
WNV Cases by Age and Sex



**West Nile Virus Human Cases by Week of Illness Onset (2024-2025)**



**WNV Cases by Year of Onset; 2010 - 2025**



## Non-Human Activity

- In 2025, 11,003 mosquito pools (246,908 mosquitoes) were tested for WNV and 1,159 (10.5%) were positive for WNV. While the number of pools tested was lower than in 2024, there was a 34% increase in pool positivity.
- 1,028 out of 1,159 WNV positive mosquito pools (89%) were detected in *Culex pipiens* or other combinations of *Culex* species mosquitoes.
- The highest number of WNV positive pools was detected between weeks 30 to 35 (weeks ending July 25-August 30) with the highest numbers in Bergen, Middlesex, Hudson, and Hunterdon counties.
- 2025 was the second-most active season for WNV detections in mosquitoes after 2018 (1,331 positive pools).
- No animals or birds tested positive for WNV.

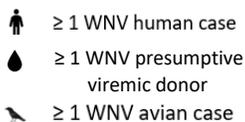
### WNV Mosquito Pool Testing

County	Cumulative Pos. Total		# Pools Tested
	2025	2024	
Bergen	214	129	467
Middlesex	108	95	391
Hudson	87	96	347
Hunterdon	81	61	347
Union	70	86	254
Gloucester	65	36	669
Mercer	65	40	448
Somerset	64	62	314
Morris	61	52	472
Essex	59	36	447
Sussex	58	33	476
Monmouth	54	48	421
Atlantic	43	25	511
Cape May	29	58	2,551
Passaic	21	51	257
Burlington	19	26	226
Camden	19	13	455
Warren	16	28	470
Ocean	14	11	482
Salem	8	7	604
Cumberland	4	2	394
<b>Total</b>	<b>1,159</b>	<b>995</b>	<b>11,003</b>

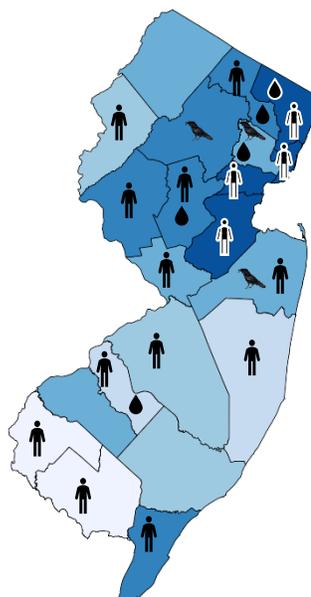
### WNV Positive Mosquito Species

Species	Positive pools
<i>Culex pipiens/restuans/salinarius</i>	985
<i>Aedes albopictus</i>	52
<i>Culex pipiens</i>	43
<i>Aedes japonicus</i>	37
<i>Culiseta melanura</i>	9
<i>Aedes triseriatus</i>	5
<i>Culex erraticus</i>	4
<i>Anopheles punctipennis</i>	4
<i>Culex salinarius</i>	3
<i>Anopheles quadrimaculatus s.l.</i>	2
<i>Anopheles bradleyi</i>	2
<i>Aedes vexans</i>	2
<i>Aedes taeniorhynchus</i>	2
<i>Aedes cantator</i>	1
<b>Total</b>	<b>1,159</b>

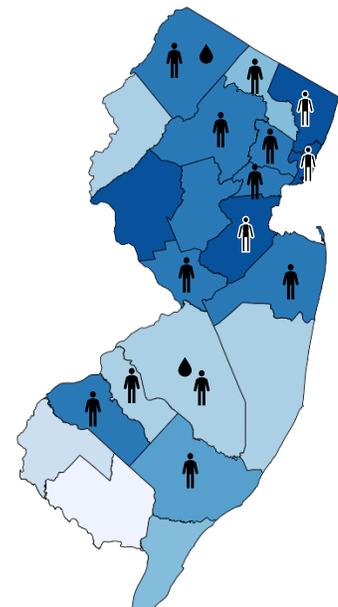
#### WNV Positive Pools



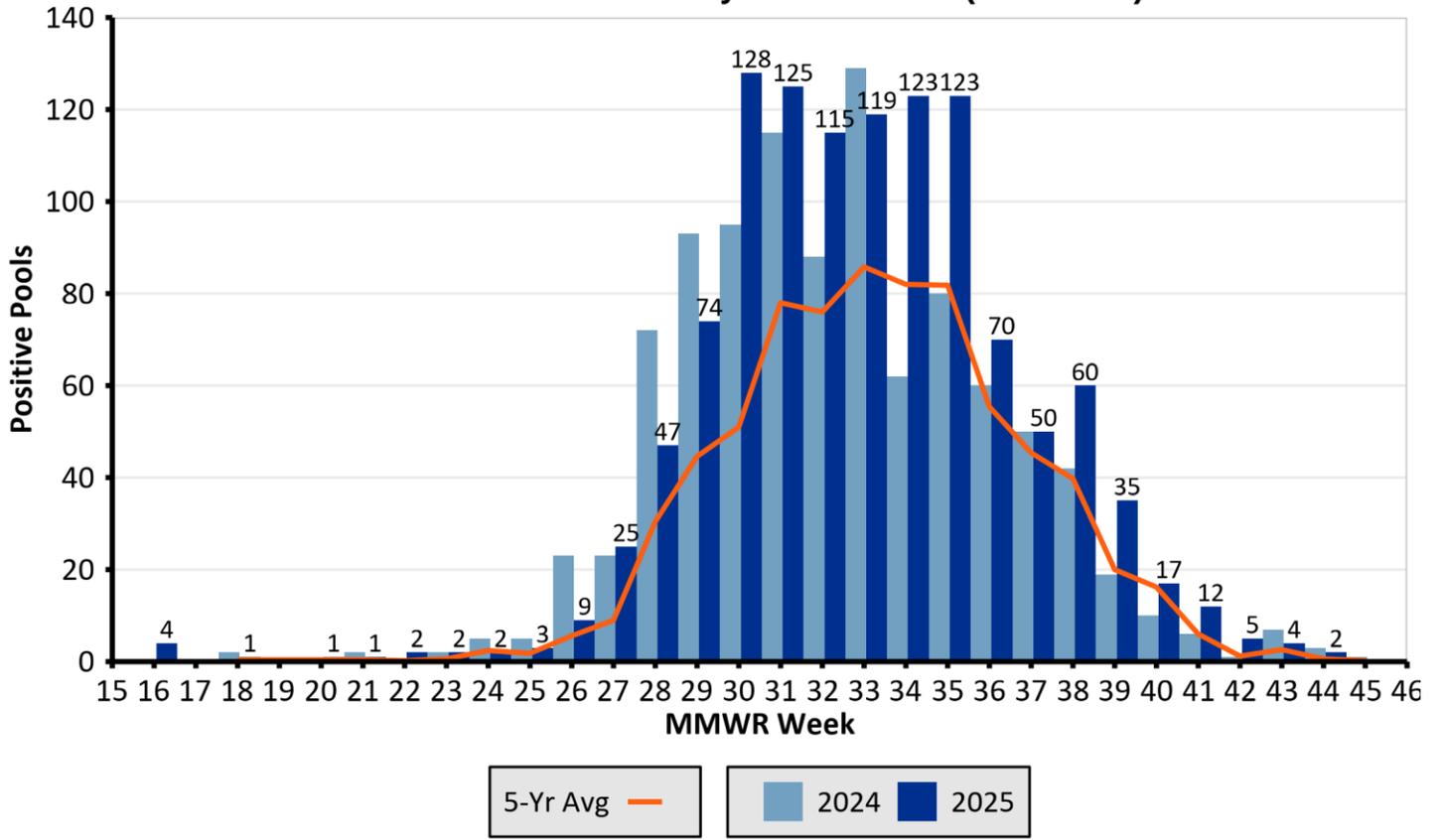
#### 2024 WNV Activity



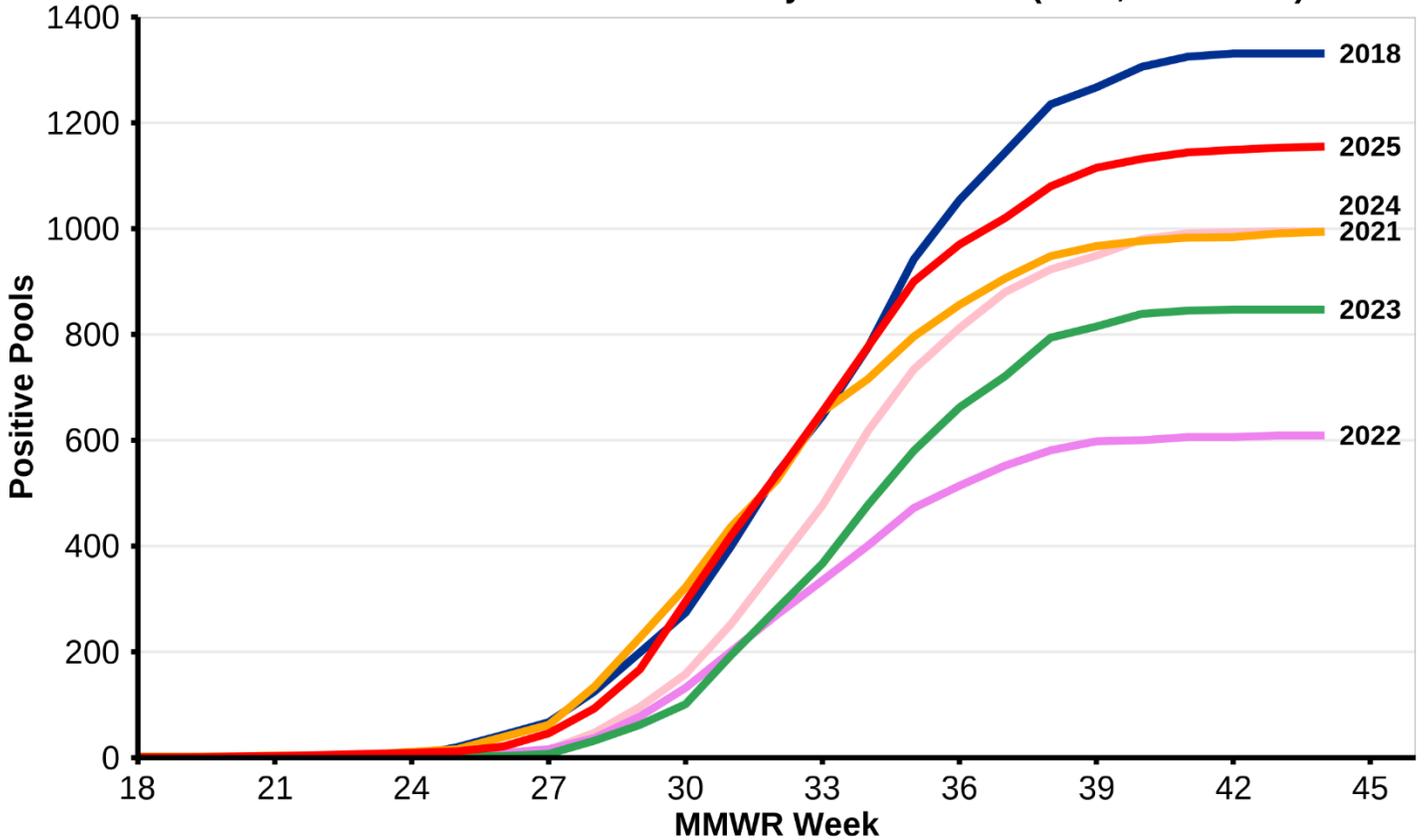
#### 2025 WNV Activity



**WNV Positive Pools by MMWR Week (2024-2025)**



**WNV Cumulative Positive Pools by MMWR Week (2018, 2021-2025)**



## Eastern Equine Encephalitis

- There were no human cases of Eastern Equine Encephalitis (EEE) reported in NJ in 2025. EEE human cases were last reported in 2024 (two cases).
- One equine case of EEE was reported in an unvaccinated horse from Burlington County in week 42.
- In 2025, 10,788 mosquito pools were tested for EEE and 20 pools (<1%) were positive with 12 detections in Atlantic County and three in Morris County. Activity was elevated later in the season, starting the week ending September 20.
- The number of positive pools in 2025 was slightly higher than the median (17.5) number of pools for the past 10 years.
- EEE activity is detected each year in southern New Jersey; northern detections have historically been rare but have been increasing in frequency. EEE-positive pools were found in *Aedes*, *Anopheles*, *Culiseta*, and *Culex* mosquitoes.

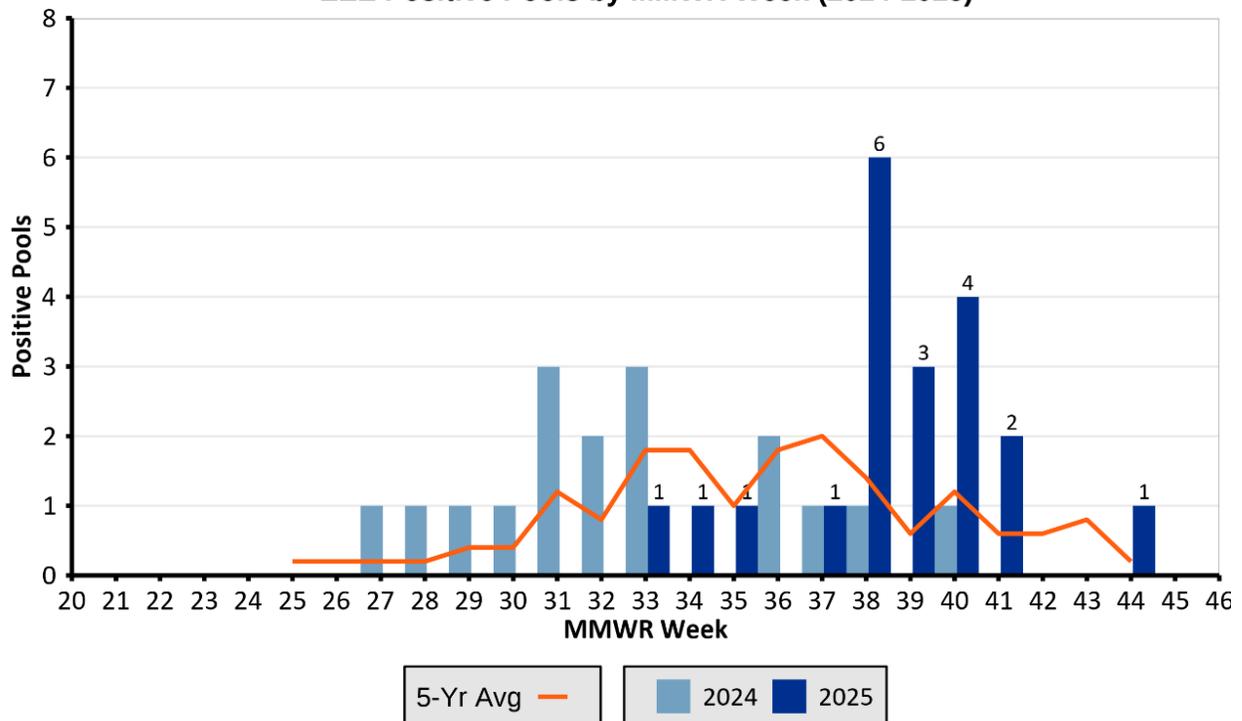
### EEE Mosquito Pool Testing

County	Cumulative Pos. Total		# Pools Tested
	2025	2024	2025
Atlantic	12		511
Morris	3	4	314
Camden	2	1	453
Cape May	2	2	2,551
Burlington	1		206
Bergen		1	467
Cumberland			394
Essex			447
Gloucester		2	646
Hudson			347
Hunterdon		1	335
Mercer			443
Middlesex			378
Monmouth		2	421
Ocean			470
Passaic			257
Salem		1	590
Somerset		1	314
Sussex			411
Union		2	254
Warren			421
<b>Total</b>	<b>20</b>	<b>17</b>	<b>10,788</b>

### EEE Positive Mosquito Species

Species	Positive pools
<i>Culiseta melanura</i>	10
<i>Anopheles bradleyi</i>	2
<i>Culex pipiens/restuans/salinarius</i>	2
<i>Aedes canadensis</i>	1
<i>Aedes japonicus</i>	1
<i>Anopheles punctipennis</i>	1
<i>Culex erraticus</i>	1
<i>Culex pipiens</i>	1
<i>Culex restuans</i>	1
<b>Total</b>	<b>20</b>

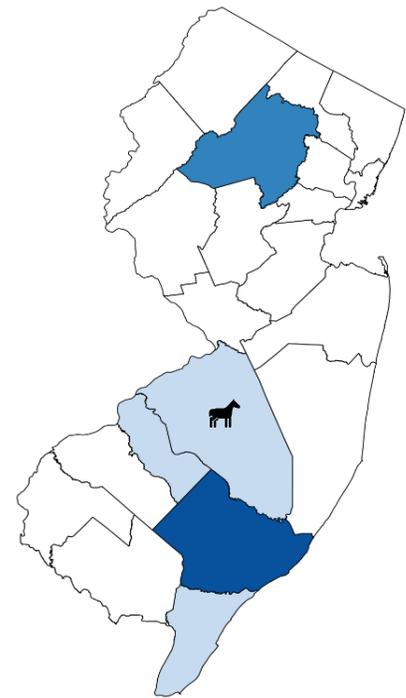
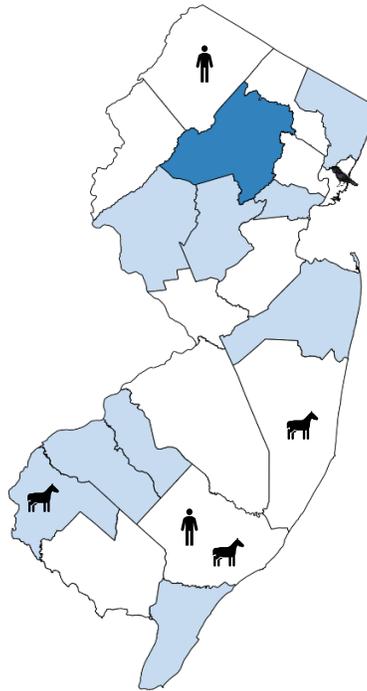
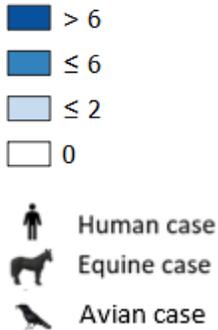
### EEE Positive Pools by MMWR Week (2024-2025)



### 2024 EEE Activity

### 2025 EEE Activity

#### EEE Positive Pools



### Jamestown Canyon Virus

- There were two human cases of Jamestown Canyon Virus (JCV) reported in 2025 in Burlington and Middlesex counties. Both cases also tested positive for WNV.
- 10,788 mosquito pools were tested for JCV and five pools were positive in Morris (2), Atlantic, Mercer, and Sussex counties. The first positive JCV pool was identified in Sussex County in week 29.
- The number of positive pools in 2025 was consistent with the median number of pools in the past 5 years.
- JCV was detected in *Coquillettidia perturbans*, *Aedes albopictus*, *Aedes sollicitans*, and *Anopheles punctipennis* mosquitoes and were detected between CDC weeks 29-40.

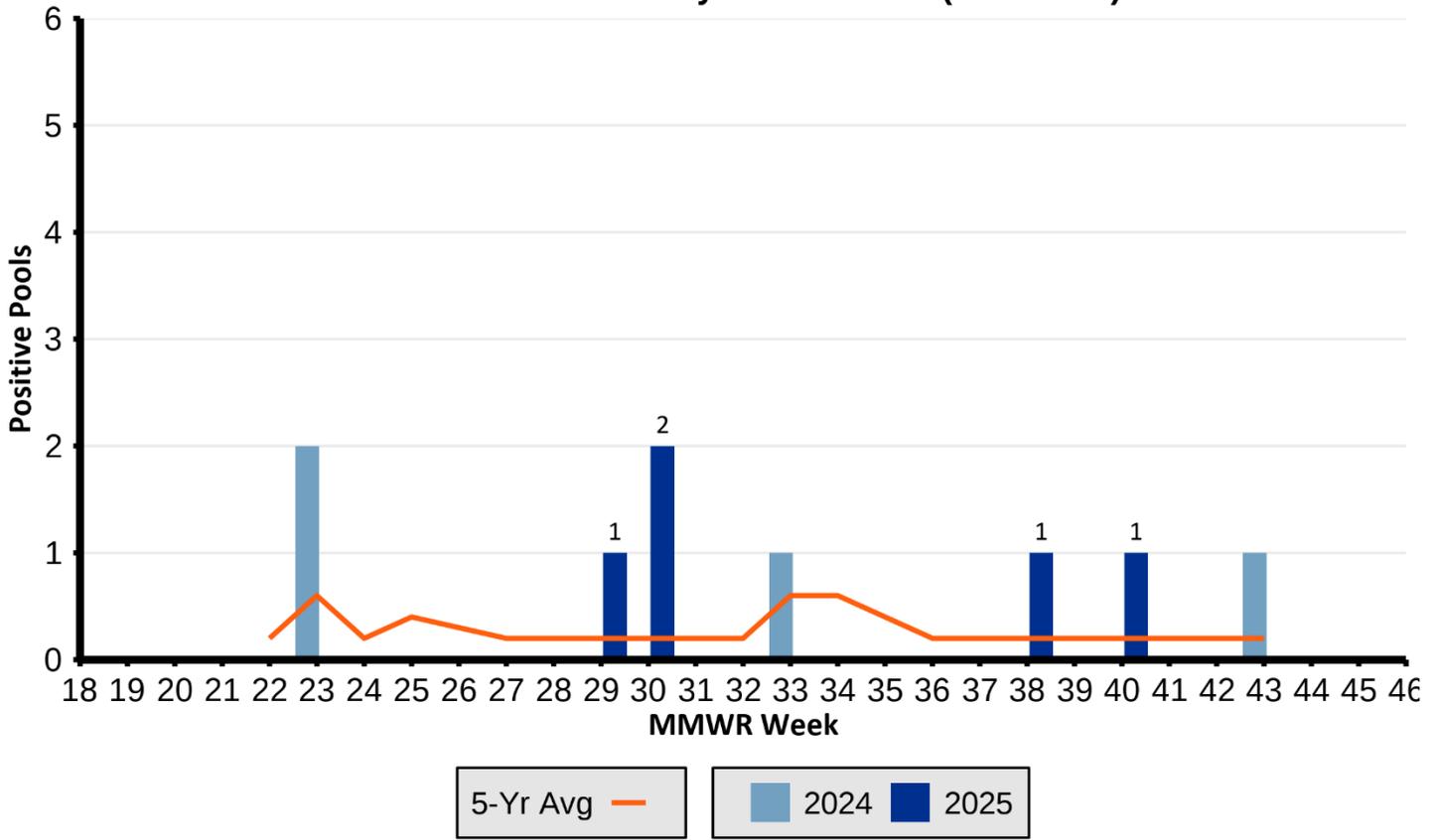
#### JCV Mosquito Pool Testing

County	Cumulative Pos. Total		# Pools Tested
	2025	2024	
Morris	2		472
Atlantic	1		511
Mercer	1		443
Sussex	1		411
Bergen			467
Burlington			206
Camden			453
Cape May			2,551
Cumberland		2	394
Essex			447
Gloucester			646
Hudson			347
Hunterdon			335
Middlesex			378
Monmouth		2	421
Ocean			470
Passaic			257
Salem			590
Somerset			314
Union			254
Warren			421
<b>Total</b>	<b>5</b>	<b>4</b>	<b>10,788</b>

#### JCV Positive Mosquito Species

Species	Positive pools
<i>Coquillettidia perturbans</i>	2
<i>Aedes albopictus</i>	1
<i>Aedes sollicitans</i>	1
<i>Anopheles punctipennis</i>	1
<b>Total</b>	<b>5</b>

### JCV Positive Pools by MMWR Week (2024-2025)

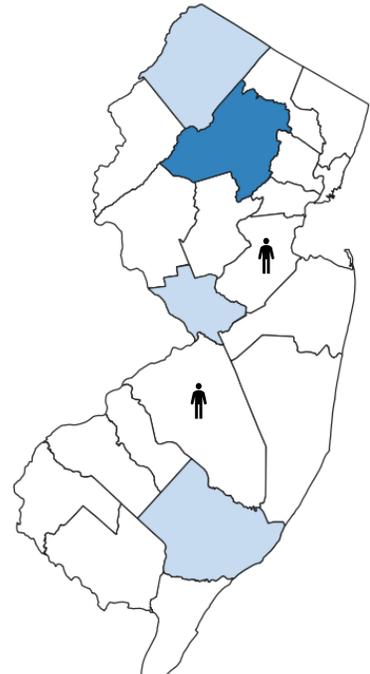
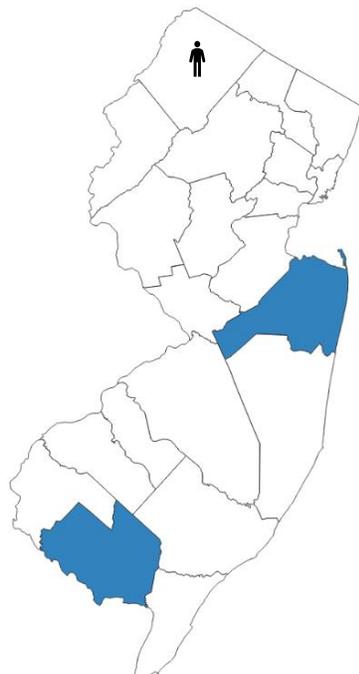


2024 JCV Activity

2025 JCV Activity

**JCV Positive Pools**

- ≥ 2
- 1
- 0
- ♀ Human case



## Other Mosquito-borne Disease

- Two mosquito pools tested positive for La Crosse encephalitis virus in Sussex County in *Ae. triseriatus* mosquitoes.

### Cumulative 2025 Mosquito Pool Testing (Other Viruses<sup>a</sup>)

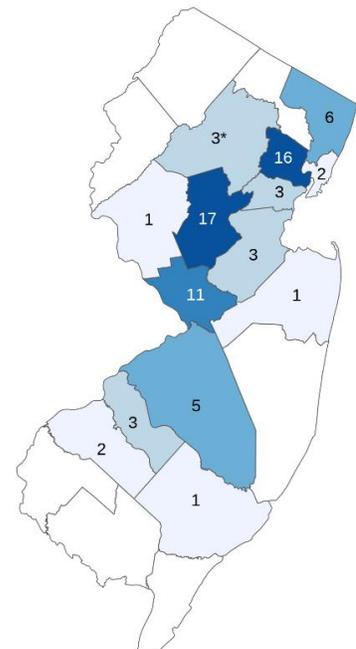
County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	511									
Bergen	467									
Burlington	206		20		2		2		2	
Camden	453		4		2		2		2	
Cape May	2,551		50		50		50		50	
Cumberland	394									
Essex	447									
Gloucester	646		23							
Hudson	347				5		5		5	
Hunterdon	335		12							
Mercer	443		8							
Middlesex	378		13		8		8		8	
Monmouth	421									
Morris	472				3		3		3	
Ocean	470		12							
Passaic	257		6							
Salem	590		36							
Somerset	314									
Sussex	411		65	2						
Union	254									
Warren	421		49							
<b>Total</b>	<b>10,778</b>	<b>-</b>	<b>298</b>	<b>2</b>	<b>70</b>	<b>-</b>	<b>70</b>	<b>-</b>	<b>70</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 in 2025  
 Number in blue shaded columns represent positive pools in 2025

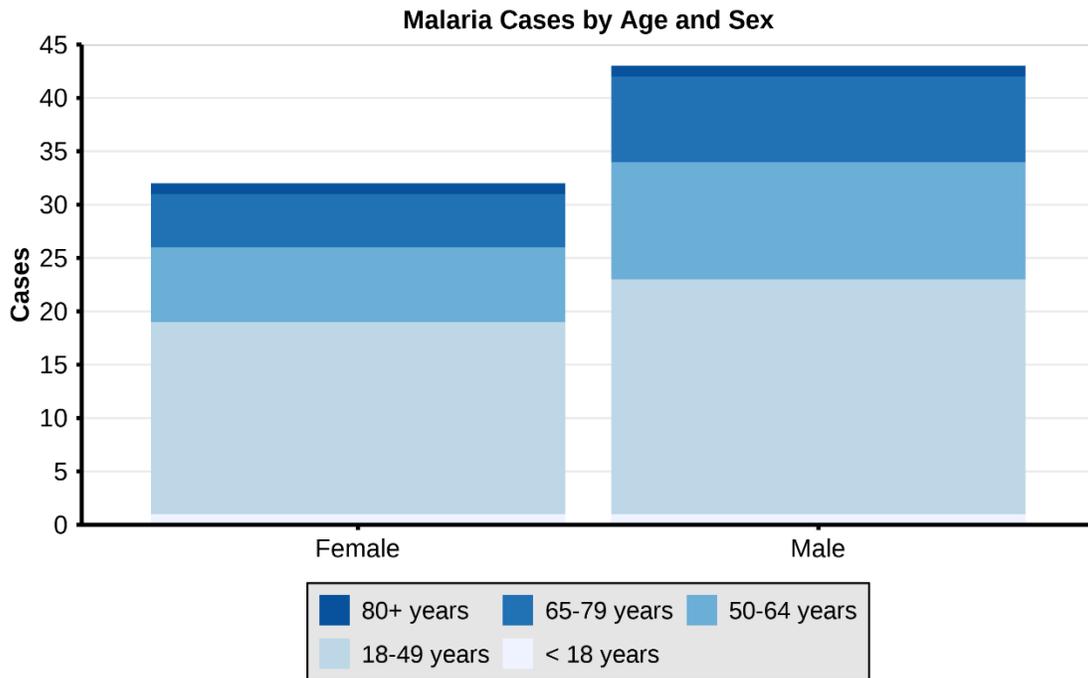
## Malaria

- In 2025, 74 travel-associated malaria cases have been reported, with additional cases still under investigation. Most cases had recent travel to western Africa.
- Most cases occurred among adults, with 59% of cases aged 30-64 years. 57% of cases were male.
- One malaria case was reported in a Morris County resident with no history of international travel. After a thorough public health investigation, a definitive source could not be identified. This case was potentially acquired through local mosquito transmission.
  - Enhanced mosquito surveillance and control was conducted for 6 weeks following CDC recommendations.
  - 154 *Anopheles* mosquitoes (22 *An. quadrimaculatus*, 132 *An. punctipennis*) were collected and all tested negative for *Plasmodium* parasites.
  - No additional locally acquired cases were identified.

### Malaria Cases, 2025

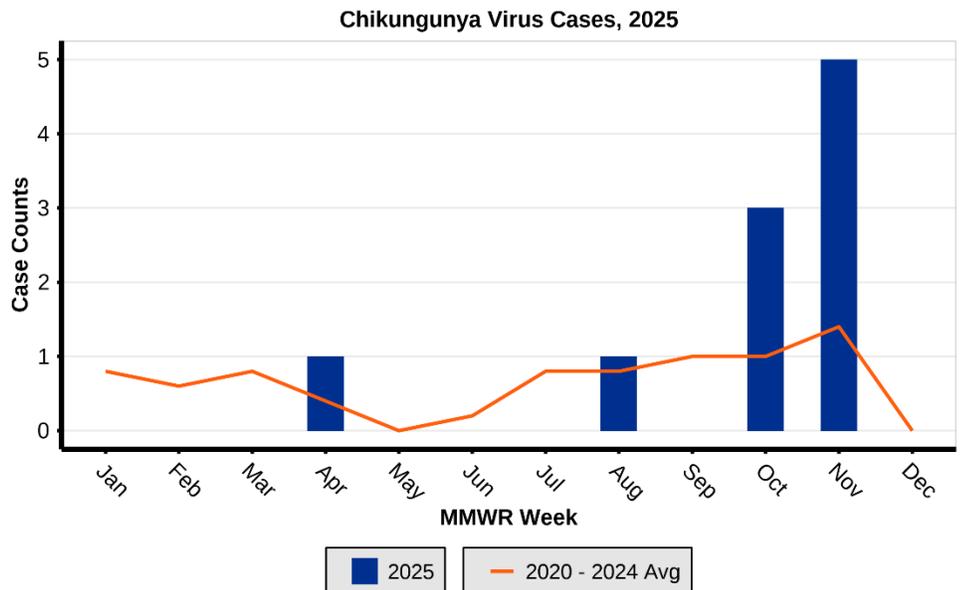


\*1 case in Morris County was not travel associated



## Chikungunya Virus

- New Jersey had an above-average number of chikungunya virus (CHIKV) cases in 2025 (10) driven by a late-season outbreak in Cuba.
- There were 8 cases of CHIKV in October and November, all with reported travel to Cuba.
- Of those, three were hospitalized (38%) and seven (88%) reported joint pain.
- Two cases reported in April and August traveled to Sri Lanka and India, respectively.

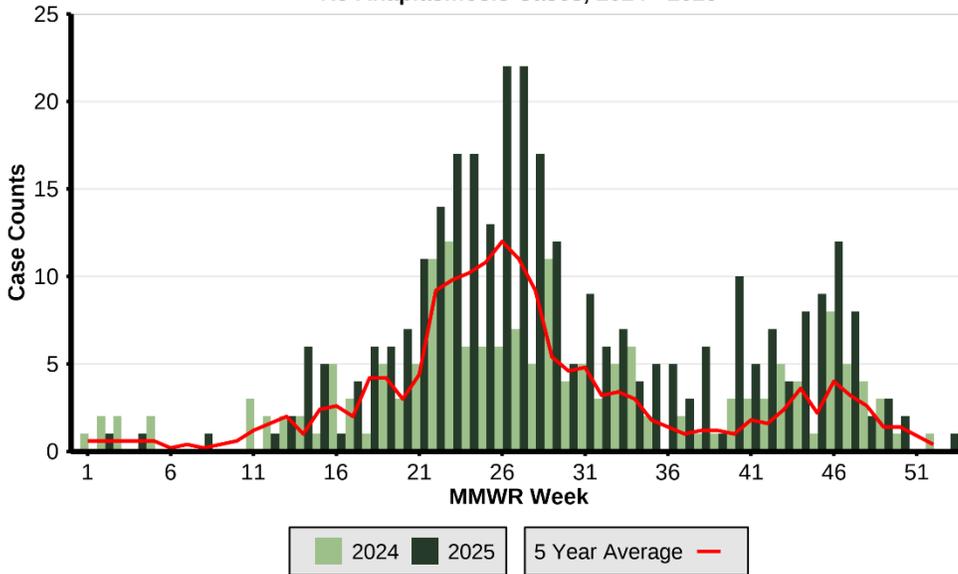


## Tickborne Diseases

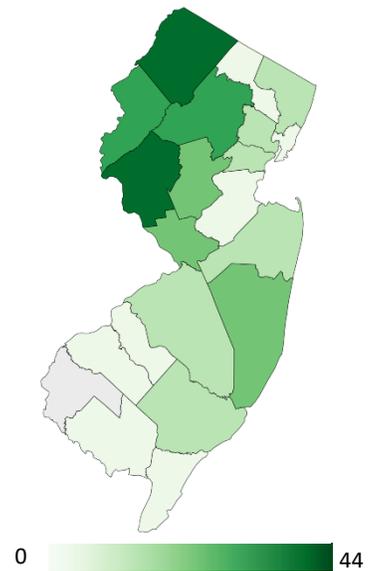
- The number of reported tickborne disease cases in NJ was higher in 2025 compared to 2024.
- After Lyme disease, which consistently is the most reported tickborne disease in New Jersey, Alpha-Gal syndrome had the highest number of cases.
- Two cases of Powassan were reported in Monmouth and Morris counties. This was the first reported case of Powassan in Monmouth County.
- One case of tularemia was reported with known tick exposure from Atlantic County.

## Anaplasmosis

NJ Anaplasmosis Cases, 2024 - 2025



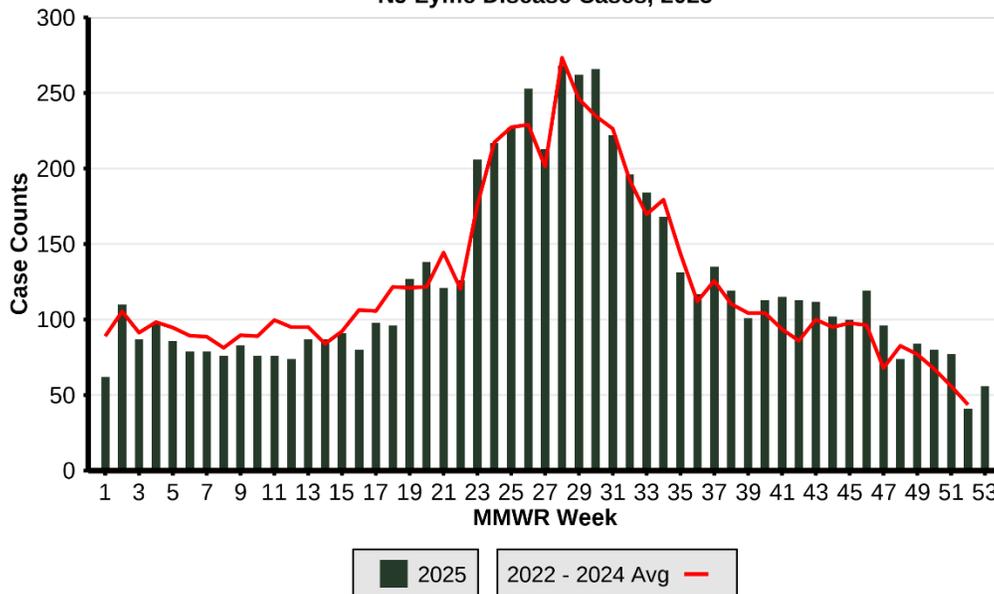
Anaplasmosis Cases, 2025



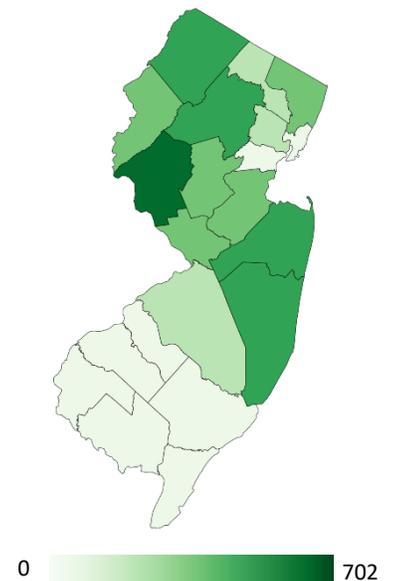
- Preliminary data show over 300 cases of anaplasmosis reported in 2025, the most ever reported (203 cases was the highest number reported in 2021).
- Cases were especially high during peak nymphal season beginning week 21 and were also elevated into the fall adult season beginning week 40.
- The largest number of cases was reported in the northwestern part of the state in Hunterdon, Sussex, Morris, and Warren counties.

## Lyme Disease

NJ Lyme Disease Cases, 2025



Lyme Disease Cases, 2025

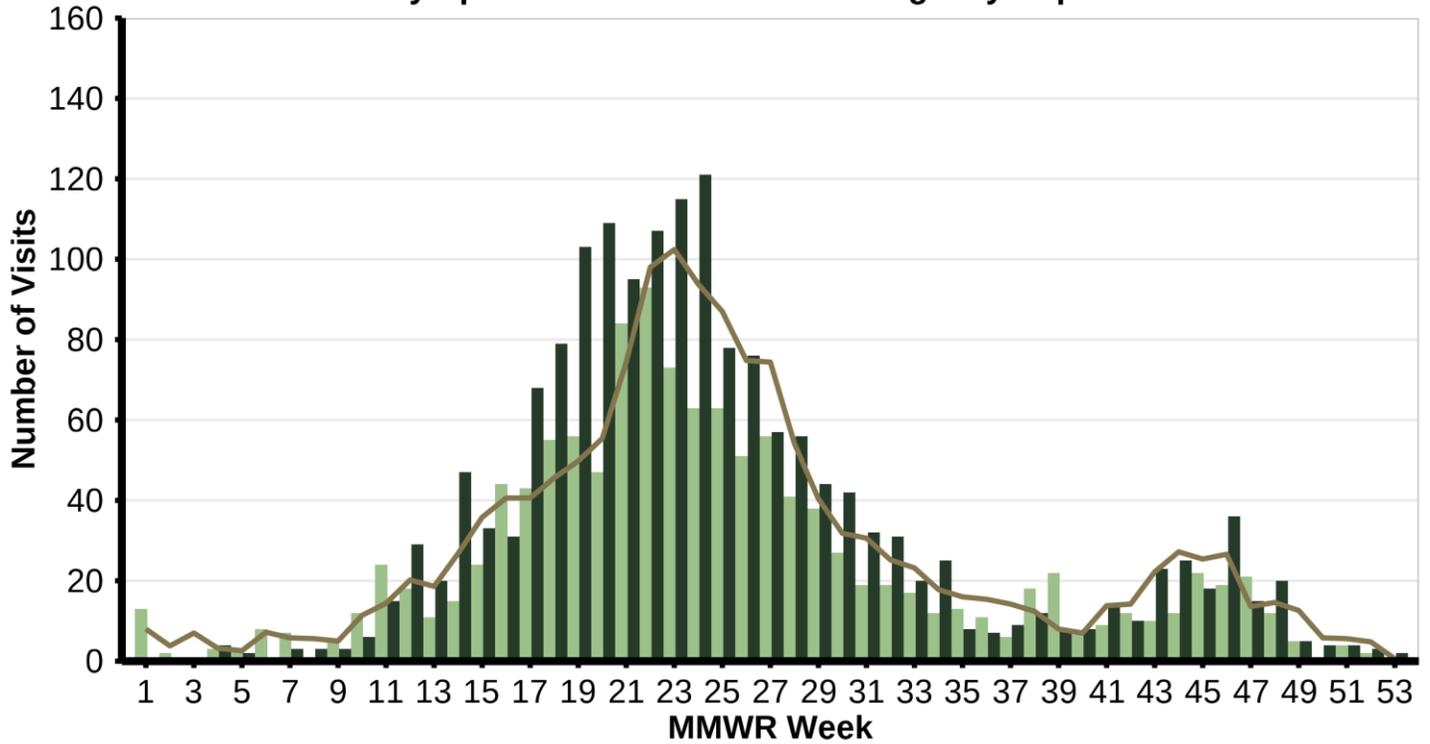


- Preliminary data show nearly 6,600 cases of Lyme disease reported in 2025, which was higher than 2024, but consistent with the three-year average.
- The largest number of Lyme disease cases were in Hunterdon and Morris counties in the northwestern part of the state, and in Monmouth and Ocean counties in the central east region.

## 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 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 in 2025 followed a similar trend compared to 2024 and to the 5-year average, although with a higher number of visits compared to previous years.

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



Data reflects ED visits downloaded from EpiCenter as of March 2025

### For more information

- NJDOH Communicable Disease Service: <https://www.nj.gov/health/cd/topics/vectorborne.shtml>
- New Jersey Vector-borne Disease Dashboard: [https://www.nj.gov/health/cd/topics/vector\\_borne\\_disease\\_data\\_dashboard.shtml](https://www.nj.gov/health/cd/topics/vector_borne_disease_data_dashboard.shtml)
- 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/>