

## Report Highlights:

- **NJDOH is reporting four new human cases of West Nile virus (WNV) from Essex, Mercer, and Monmouth (2) counties. To date, there have been 20 human WNV cases, including 3 deaths and four presumptive viremic donors (PVDs). Ninety percent of WNV cases were hospitalized. An additional 69 mosquito pools tested positive for WNV since last report, including 44 this week (additional tests pending) for a total of 925 WNV positive pools in 2024. One emu tested positive for WNV in week 36 from Monmouth County.**
- **To date, there has been one human case from Atlantic County and two horses from Atlantic and Salem counties that tested positive for Eastern Equine encephalitis (EEE). One additional mosquito pool tested positive for EEE since last report from Monmouth County, for a total of 14 EEE positive 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.**
- **Three new travel-associated dengue cases are reported this week, for a total of 88 cases in 2024 compared to 55 cases during the same timeframe in 2023. Cases are associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week increased but remains below average. Several other tickborne disease cases are lower this year than in 2023 and the number of tick-related ED visits this week is also lower than the 5-year 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	4	13	Alpha-gal syndrome	169	360
Dengue	88	98	Anaplasmosis	107	195
Eastern equine encephalitis	1	-	Babesiosis	200	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	12	18
Malaria	52	102	Ehrlichiosis	65	109
West Nile	20	14	Lyme disease*	4,825	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	10	24
			Tularemia	2	2

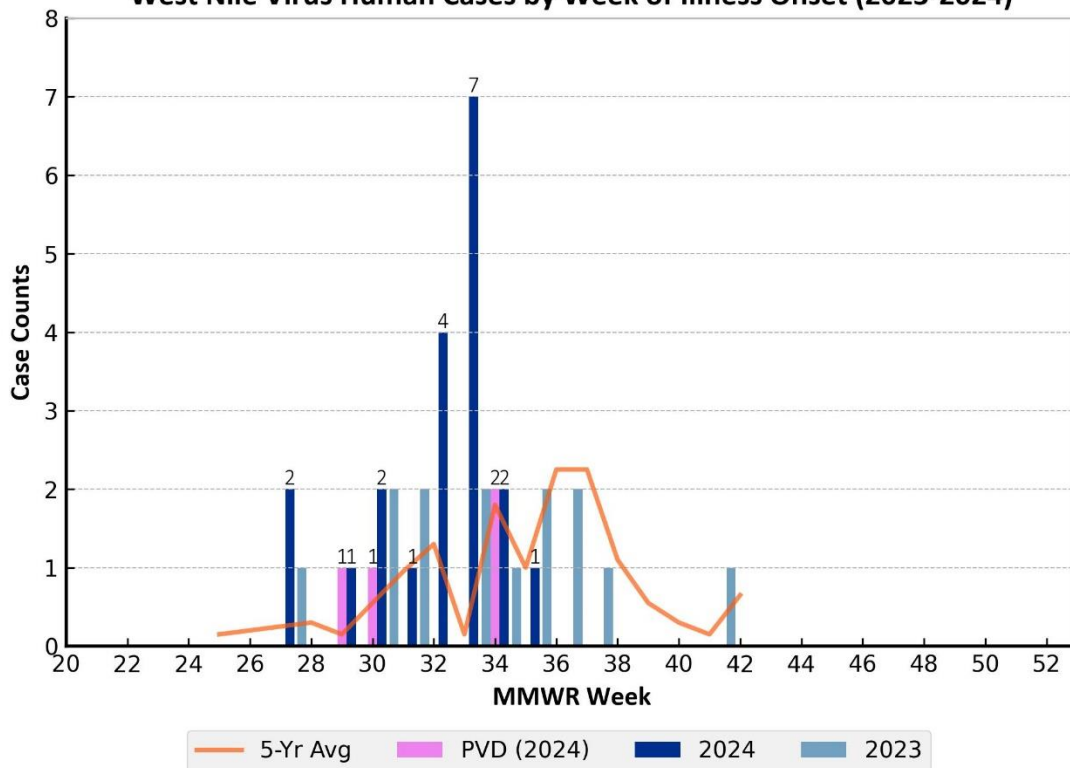
## Mosquito-borne Disease Activity\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on September 19, 2024.

### West Nile Virus

- Twenty human cases of WNV have been reported in 2024 from Bergen (3), Burlington, Camden, Cumberland (2), Essex, Hudson, Mercer (2), Middlesex (3), Monmouth (2), Ocean, Union (2), and Warren counties. There were three deaths in Cumberland, Mercer, and Middlesex counties. There have been four PVDs in Bergen, Essex, Passaic, and Somerset counties.
- 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 10,026 mosquito pools submitted for testing, 925 mosquito pools have tested positive for WNV this year with 44 pools positive in week 37 (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (781), *Aedes japonicus* (14), *Cx. pipiens* (59), *Cx. restuans* (10), *Ae. albopictus* (40), *Ae. triseriatus* (3), *Ae. vexans* (3), *Anopheles punctipennis*(1), *Coquillettidia perturbans* (1), *Cx. erraticus* (2), *Cx. salinarius* (2), and *Culiseta melanura* (8) 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.

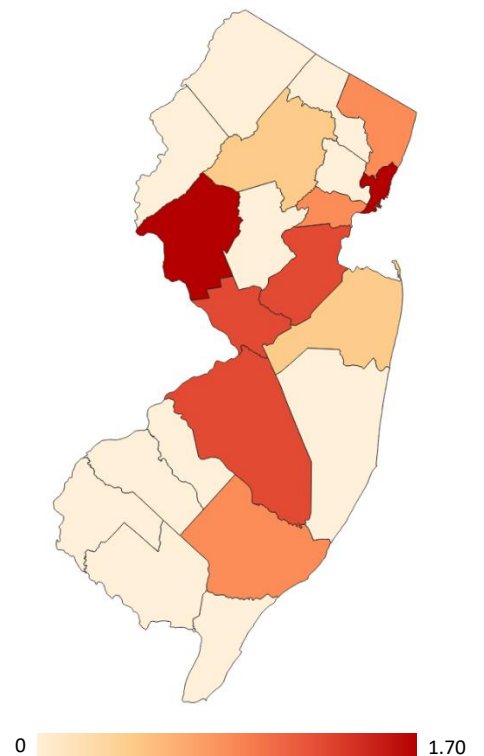
### West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



### WNV Mosquito Pool Testing

County	WEEK 37 Positive Pools		Cumulative Pos. Total* (WEEK 37)		# Pools Tested*	WEEK 37 Vector Index	2024 <sup>†</sup>
	2024	2023	2024	2023			
Bergen	5	5	141	105	364	0.31	(↓)
Hudson	10	1	88	72	264	1.67	(↑)
Middlesex	6	6	87	62	313	0.50	(↑)
Union	2	2	85	50	272	0.32	(↑)
Cape May	3	3	55	23	3428	0.02	(↓)
Somerset		6	52	48	241	0.00	(↓)
Hunterdon	8	4	50	44	318	1.70	(↑)
Morris	1	1	47	34	354	0.11	(↓)
Passaic		5	47	24	225	0.00	(-)
Monmouth	1	3	45	31	390	0.08	(↓)
Mercer	2	4	36	47	357	0.43	(↑)
Essex			32	4	342	0.00	(-)
Gloucester		7	30	39	541	0.00	(↓)
Warren		1	28	29	349	0.00	(-)
Burlington	5	3	26	24	238	0.59	(↑)
Sussex		4	25	25	340	0.00	(↓)
Atlantic	1	1	22	22	361	0.39	(↑)
Ocean			11	20	328	0.00	(-)
Camden		2	10	11	210	0.00	(-)
Salem			6	6	431	0.00	(↓)
Cumberland		1	2	1	360	0.00	(-)
<b>Total</b>	<b>44</b>	<b>59</b>	<b>925</b>	<b>721</b>	<b>10,026</b>	-	

### WNV Vector Index, WEEK 37<sup>†</sup>



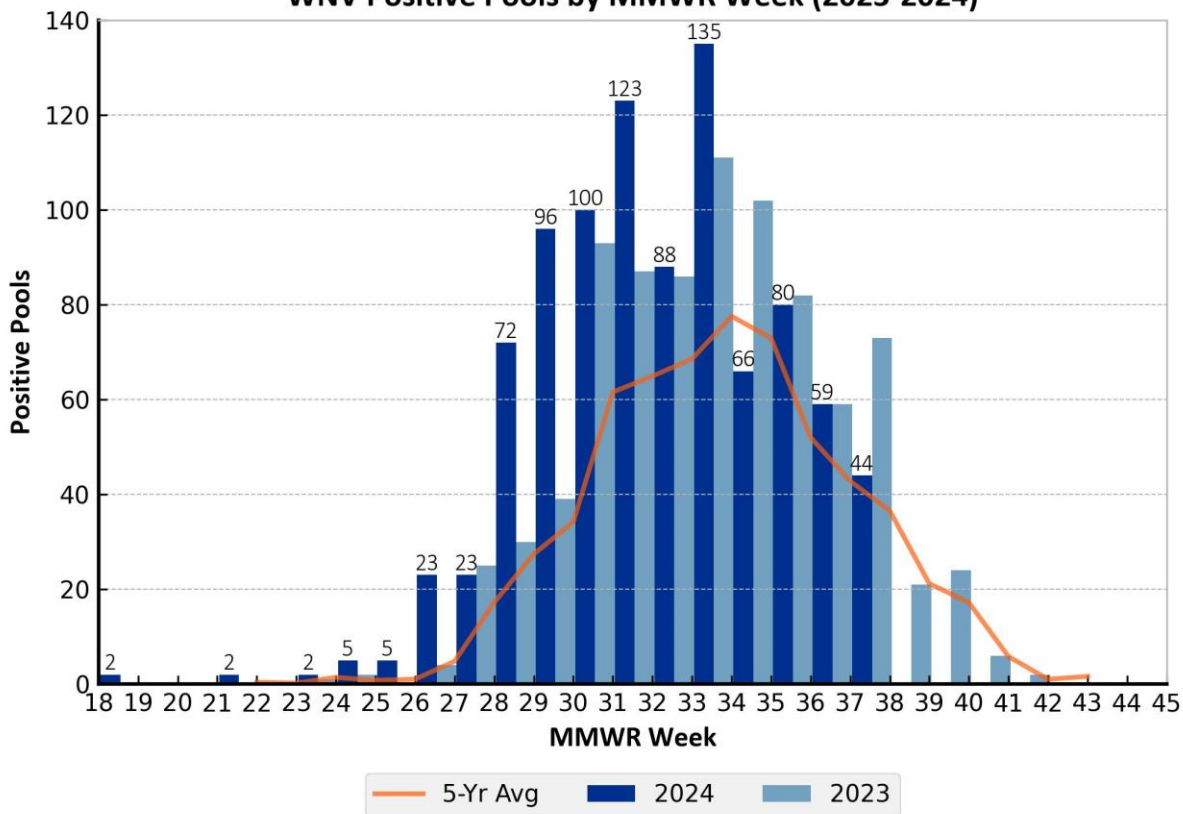
WEEK 37: Sep 10 - 16, 2023; Sep 8 - 14, 2024.

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

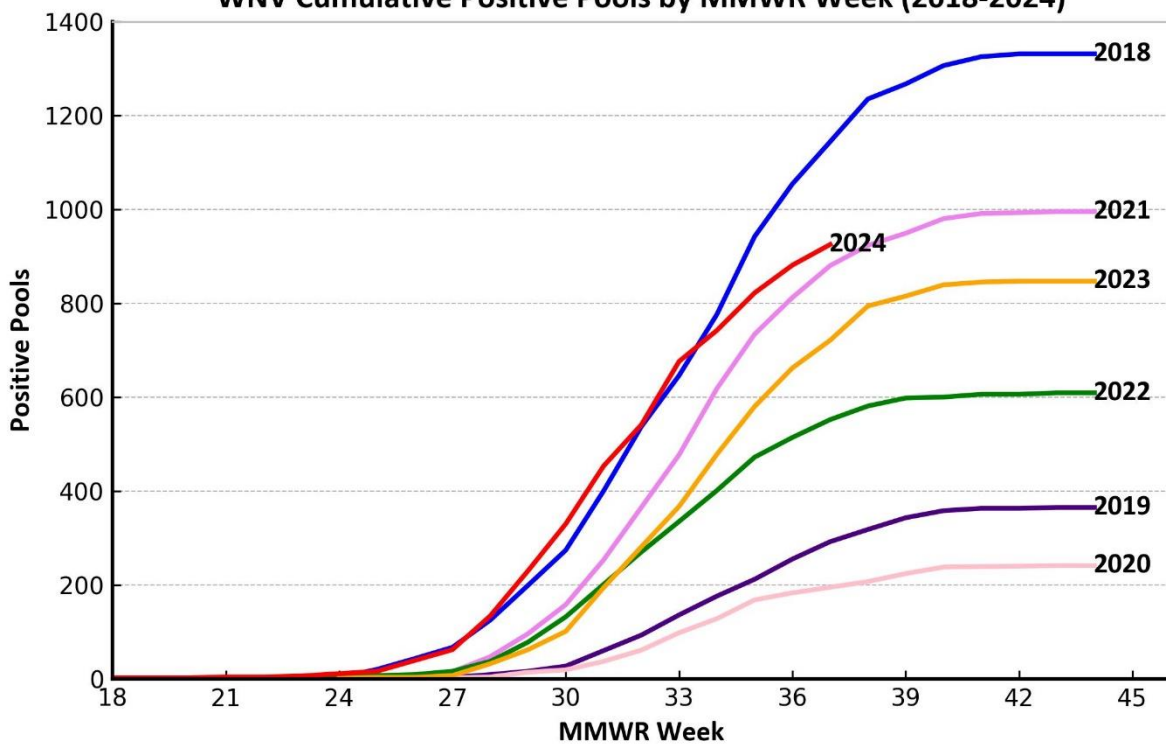
\*Vector Index cannot be calculated because all tested pools were positive. In these situations, the county is shown on the map with red stripes to indicate elevated activity.

<sup>†</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 (2018-2024)**

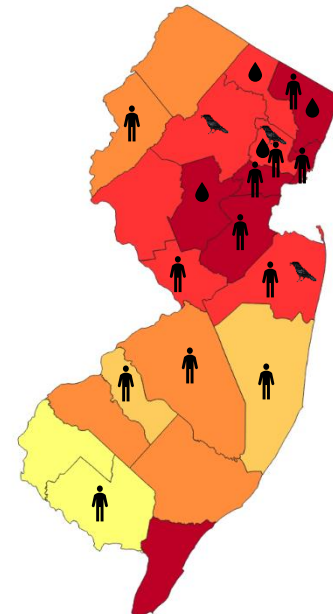
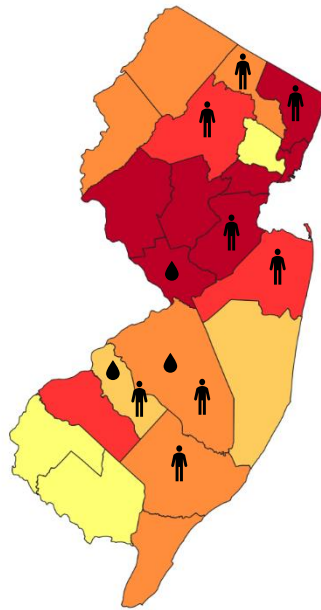


### 2023 WNV Activity

### 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



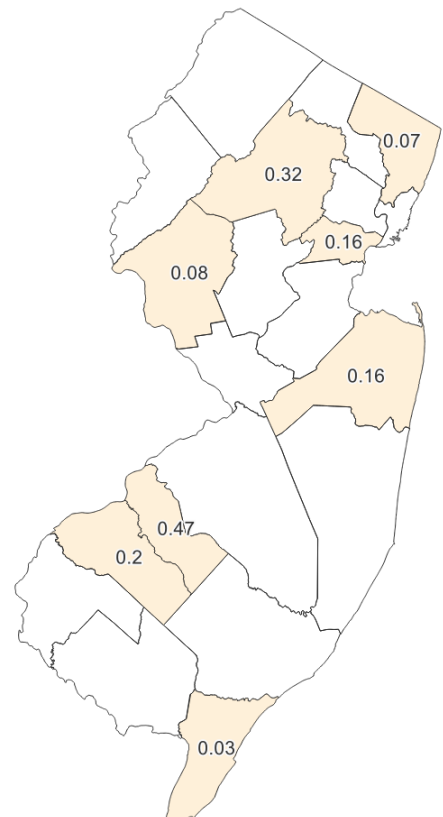
### Eastern Equine Encephalitis (EEE)

- One human case of EEE was reported in week 27 in Atlantic County. EEE human cases were last reported in 2019 (4 cases).
- Two horses tested positive for EEE in week 31 in Atlantic County and in week 36 in Salem County. Neither horse was vaccinated.
- Out of 9,899 mosquito pools tested for EEE, 14 pools have tested positive in 2024 with 1 positive pool in week 37. The positive pools were found in *Coquilleltidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (7), *Culiseta morsitans* (1), and *Cx. pipiens/restuans/salinarius* (4) 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

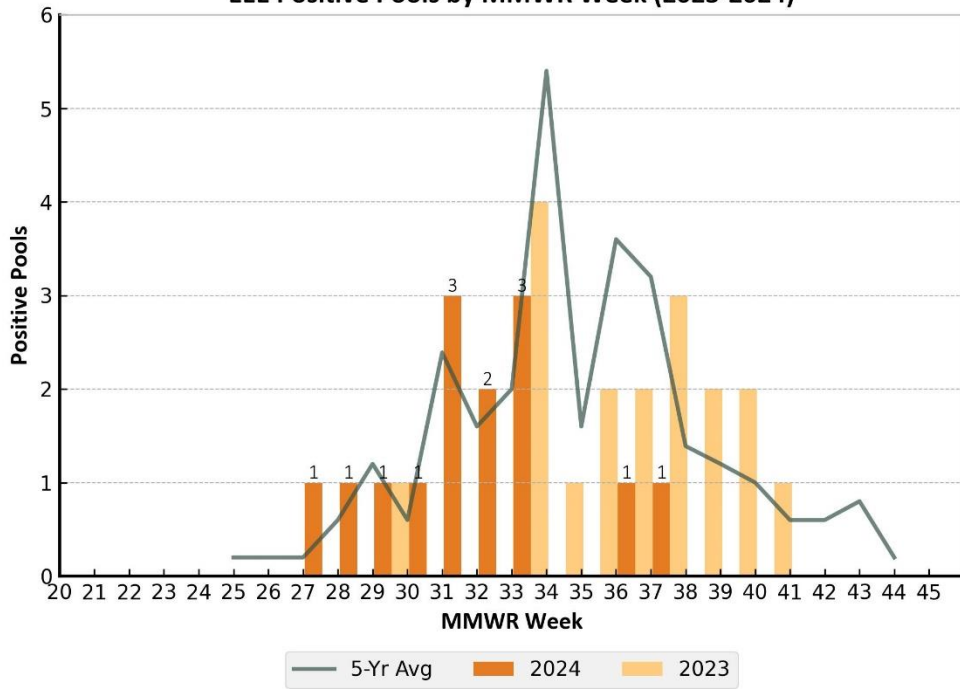
County	WEEK 37 Positive Pools		Cumulative Pos. Total* (WEEK 37)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Morris			4		354	0.32
Gloucester			2		541	0.20
Monmouth	1		2		390	0.16
Union			2		272	0.16
Bergen			1		312	0.07
Camden			1	2	201	0.47
Cape May			1	1	3,428	0.03
Hunterdon			1		315	0.08
Atlantic				3	361	
Burlington		1		2	237	
Cumberland				1	360	
Essex					342	
Hudson					264	
Mercer					355	
Middlesex					307	
Ocean					326	
Passaic					225	
Salem					431	
Somerset		1		1	241	
Sussex					308	
Warren					329	
<b>Total</b>	<b>1</b>	<b>2</b>	<b>14</b>	<b>10</b>	<b>9,899</b>	<b>-</b>

#### Cumulative EEE MFIR, 2024



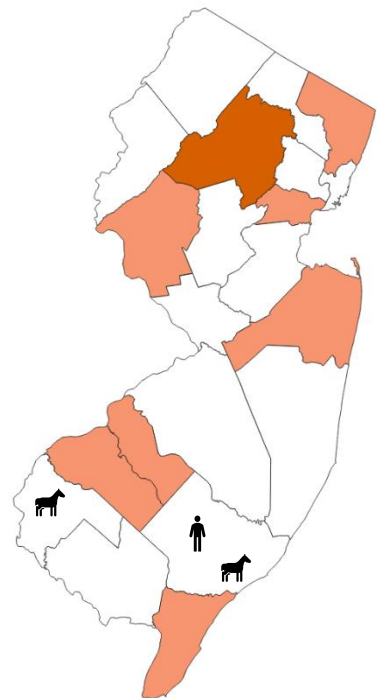
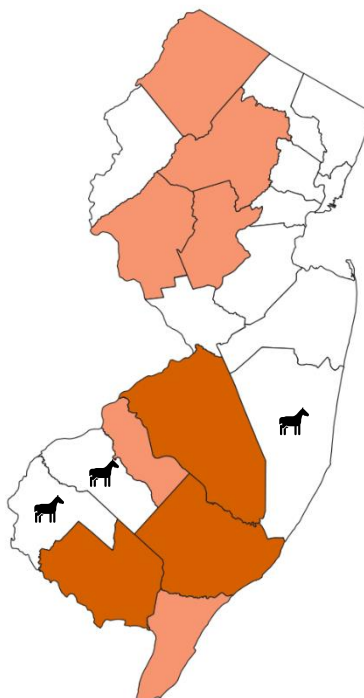
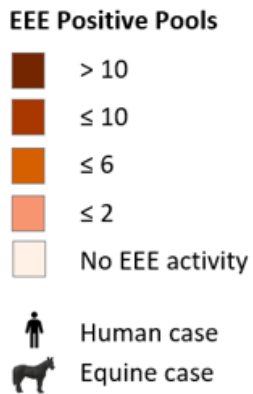
WEEK 37: Sep 10 - 16, 2023; Sep 8 - 14, 2024

EEE Positive Pools by MMWR Week (2023-2024)



2023 EEE Activity

Cumulative EEE Activity, 2024



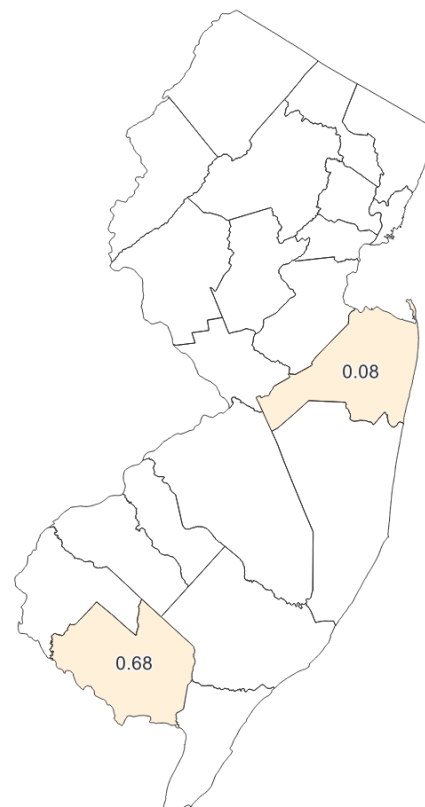
## Jamestown Canyon Virus (JCV)

- 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 9,899 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**

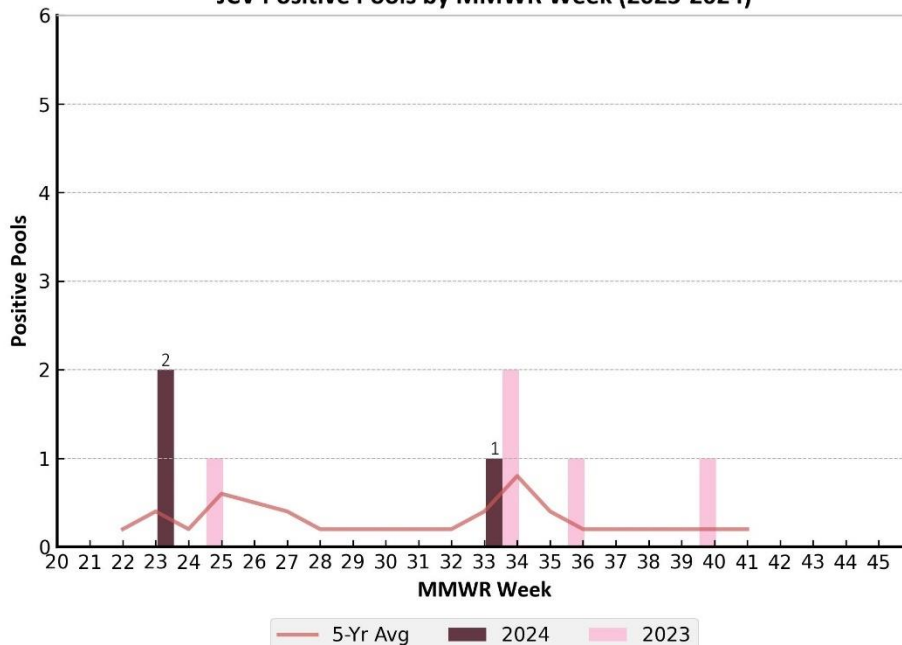
County	WEEK 37 Positive Pools		Cumulative Pos. Total* (WEEK 37)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	360	0.68
Monmouth			1		390	0.08
Atlantic					361	
Bergen					312	
Burlington					237	
Camden					201	
Cape May					3428	
Essex					342	
Gloucester				1	541	
Hudson					264	
Hunterdon					315	
Mercer					355	
Middlesex					307	
Morris					354	
Ocean					326	
Passaic					225	
Salem				1	431	
Somerset					241	
Sussex				1	308	
Union					272	
Warren					329	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>9,899</b>	<b>-</b>

**Cumulative JCV MFIR, 2024**



WEEK 37: Sep 10 - 16, 2023; Sep 8 - 14, 2024

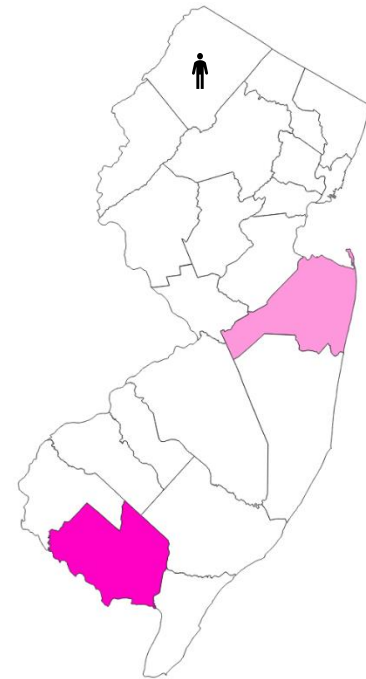
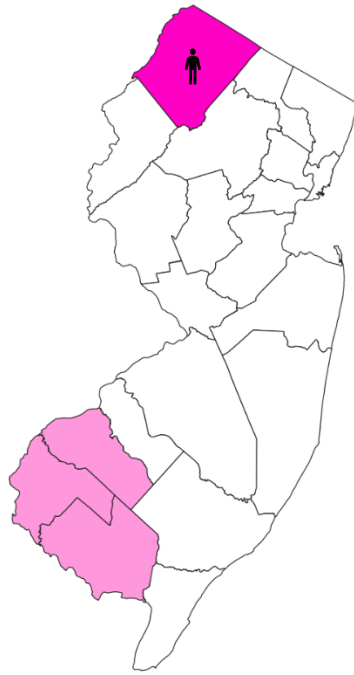
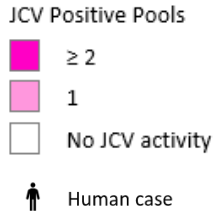
**JCV Positive Pools by MMWR Week (2023-2024)**





### 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	361									
Bergen	312		9		8		8		8	
Burlington	237		1							
Camden	201		9		1		1		1	
Cape May	3428		217		242		242		242	
Cumberland	360									
Essex	342				1		1		1	
Gloucester	541				7		7		7	
Hudson	264									
Hunterdon	315		3		3		3		3	
Mercer	355		2		2		2		2	
Middlesex	307		6		5		5		5	
Monmouth	390									
Morris	354				4		4		4	
Ocean	326		2							
Passaic	225		3							
Salem	431		17							
Somerset	241									
Sussex	308		32							
Union	272									
Warren	329		20		3		3		3	
<b>Total</b>	<b>9,899</b>	<b>-</b>	<b>321</b>	<b>-</b>	<b>276</b>	<b>-</b>	<b>276</b>	<b>-</b>	<b>276</b>	<b>-</b>

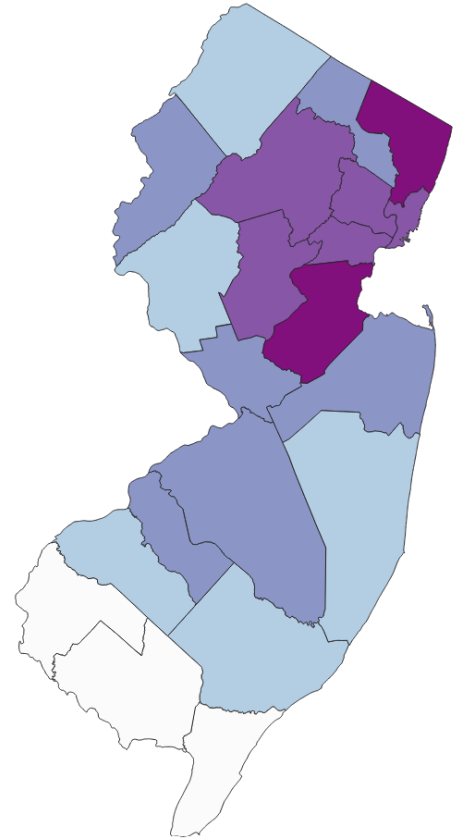
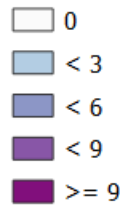
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2024  
 Number in green shaded columns represent positive pools in 2024

## Human Dengue Virus Cases

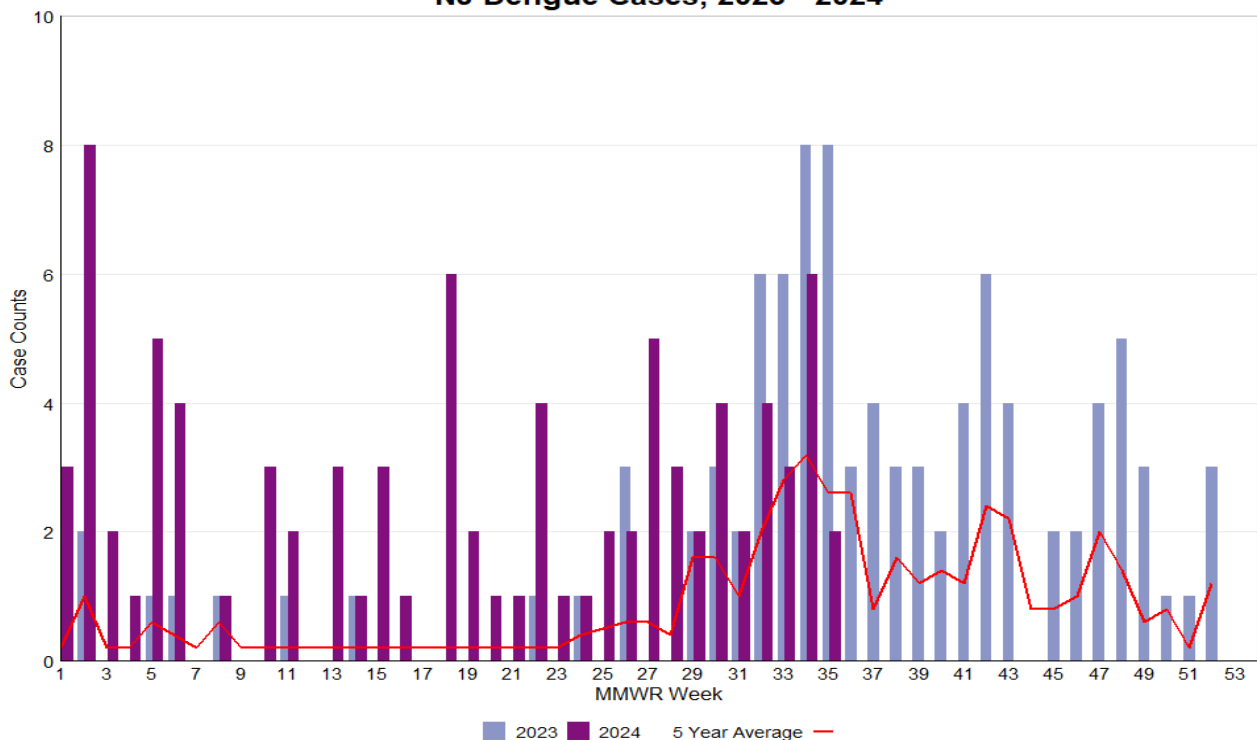
- There have been 88 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (55).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Most NJ cases reported travel 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 (13), Middlesex (12), and Essex (8) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Puerto Rico	12
Dominican Republic	11
Colombia	9
Brazil	6
Guatemala	6
India	6
Mexico	6
El Salvador	5
Ecuador	3
Trinidad & Tobago	3
U.S. Virgin Islands	3
Aruba	2
Costa Rica	2
Grenada	2
Guyana	2
Honduras	2
Martinique	2
Peru	2
Antigua and Barbuda	1
Cuba	1
Indonesia	1
Paraguay	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024



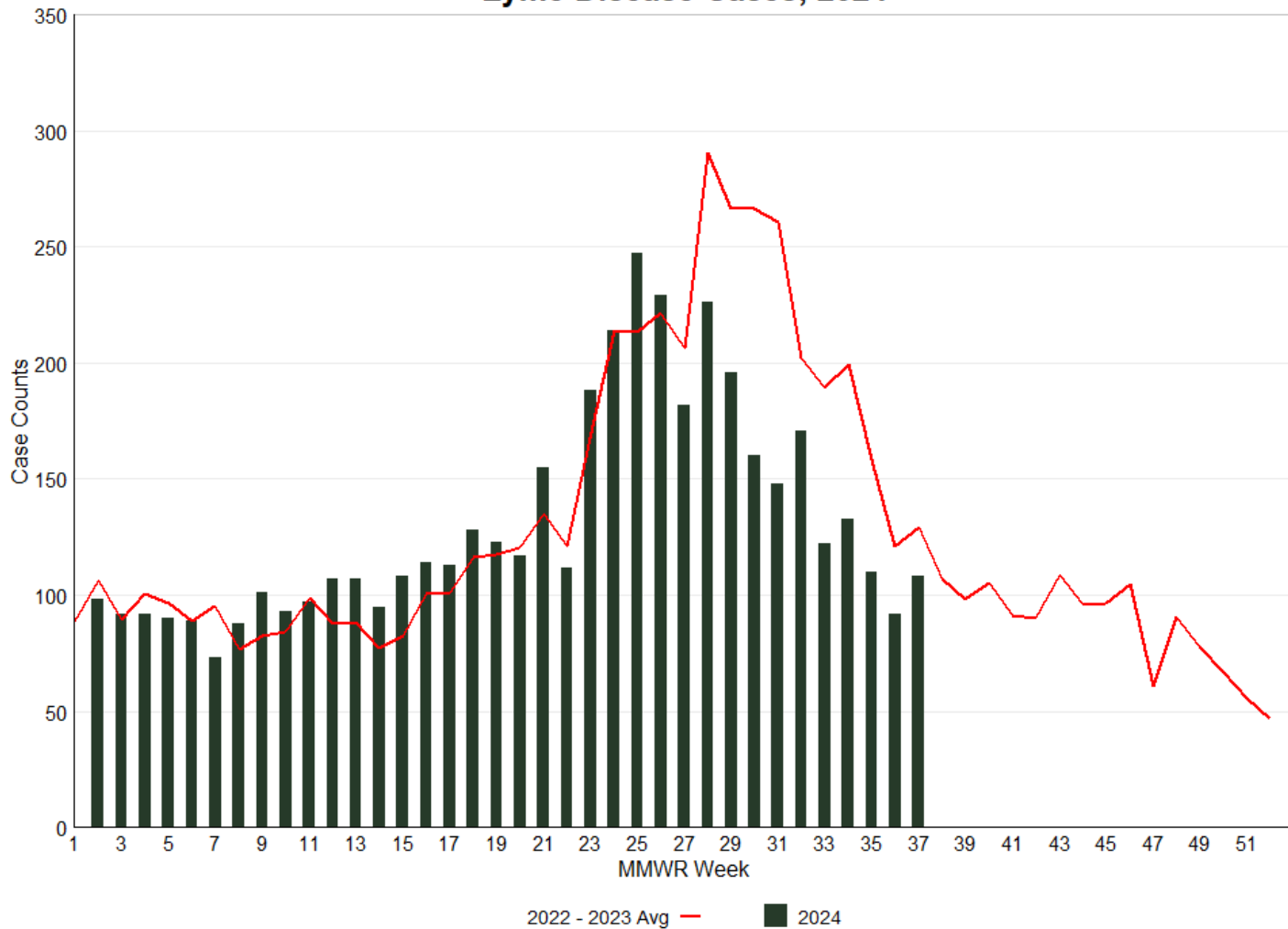


## Tickborne Disease Activity

### Lyme Disease

- There have been 4,825 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in Week 37 increased but remains below the average number of cases reported this week.

### Lyme Disease Cases, 2024

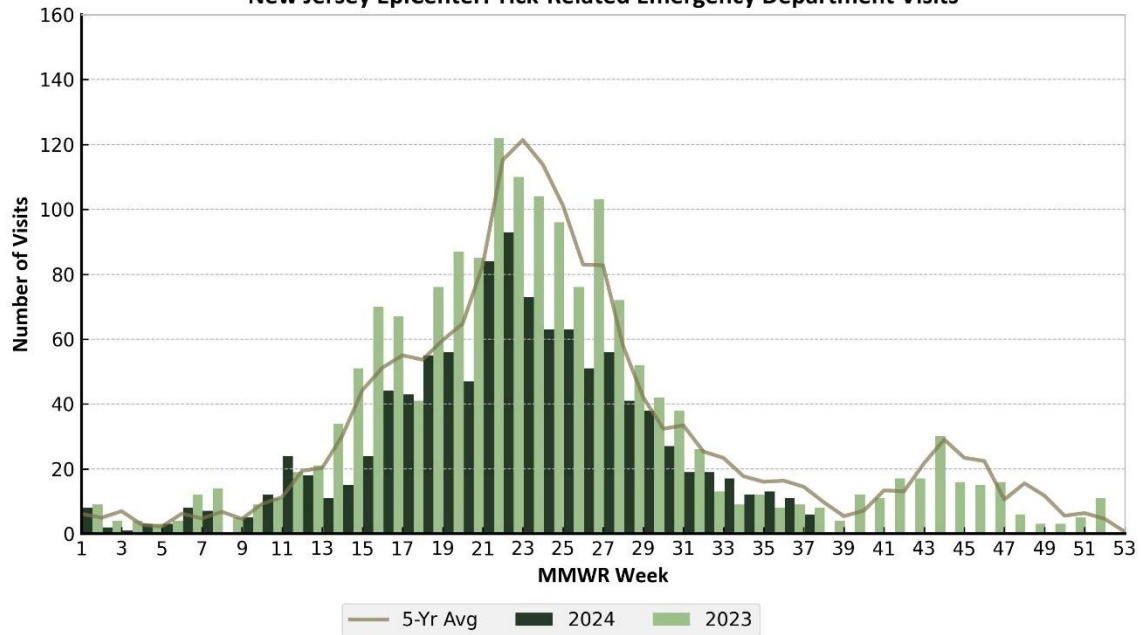


### Tick-related Emergency Department Visits

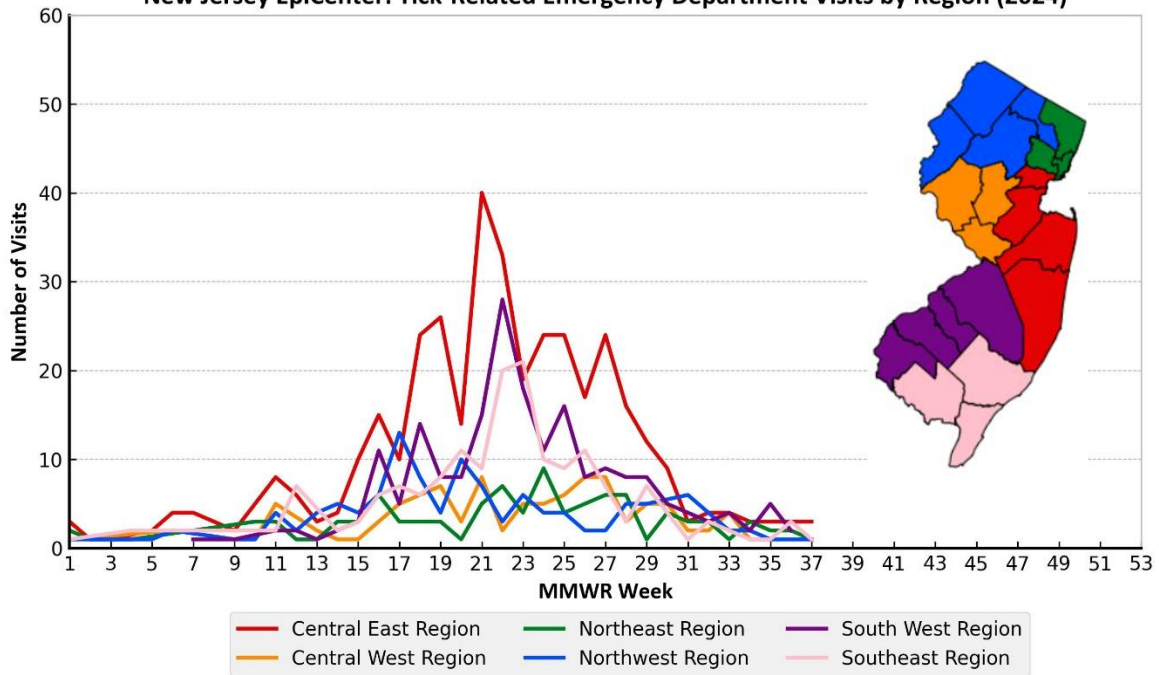
New Jersey’s syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing 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 37, the number of tick-related ED visits remains lower than 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/>