

Report Highlights:

- **Two mosquito pools tested positive for West Nile Virus (WNV) this week in Somerset and Union counties (additional tests pending). There has been a total of 8 WNV positive pools in 2024.**
- **There have been no human or animal cases of WNV reported in New Jersey in 2024.**
- **New Jersey is reporting one case of Powassan virus from week 19 in Sussex County. This is the first Powassan case in NJ since 2022, when 2 cases were reported in Sussex County.**
- **The number of travel-associated dengue cases is considerably higher in 2024 (40 cases) compared to the same timeframe in 2023 (10 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week is slightly below the average number reported this week in the past two years.**
- **In week 24, the number of tick-related ED visits was lower than the previous week and 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	1	13	Alpha-gal syndrome	62	360
Dengue	40	98	Anaplasmosis	30	195
Eastern equine encephalitis	-	-	Babesiosis	16	407
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	18
Malaria	27	102	Ehrlichiosis	3	109
West Nile	-	14	Lyme disease*	2,607	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	1	24
			Tularemia	-	2

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

Mosquito-borne Disease Activity

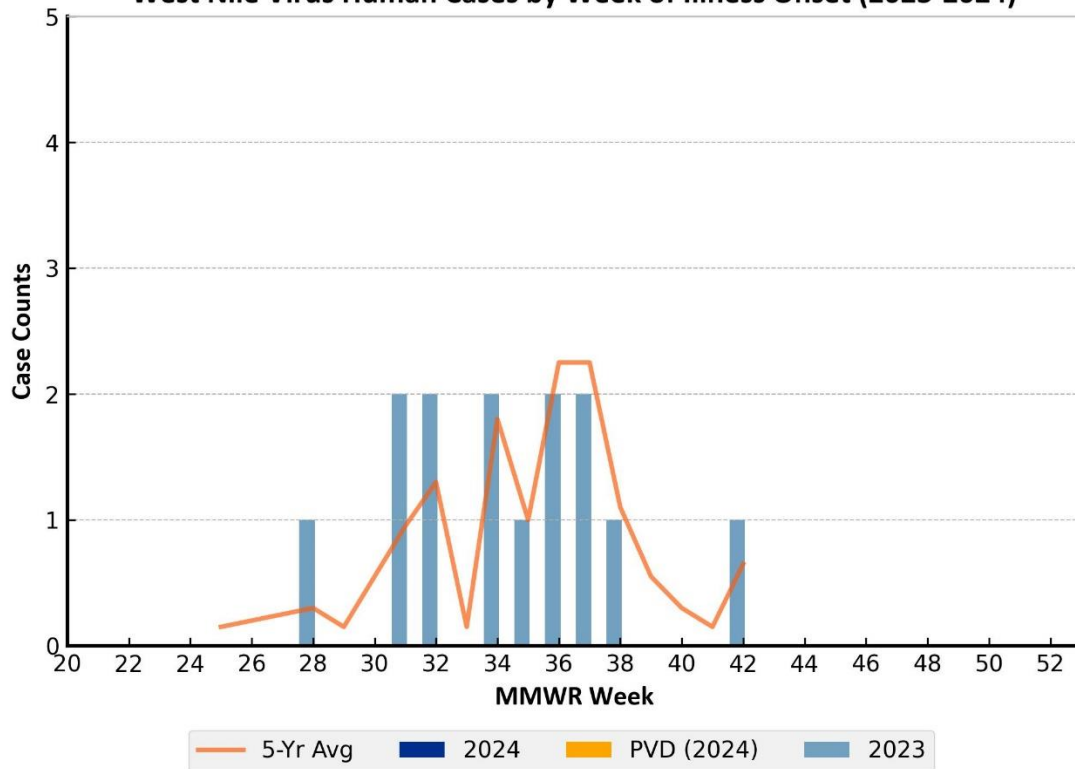
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

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

West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 2,157 mosquito pools submitted for testing, 8 mosquito pools have tested positive for WNV so far this year. 2 pools tested positive in Week 24 in Somerset and Union counties. The positive pools were found in *Culex pipiens/restuans/salinarius* (7), and *Cx. restuans* (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 24 from Bergen County.

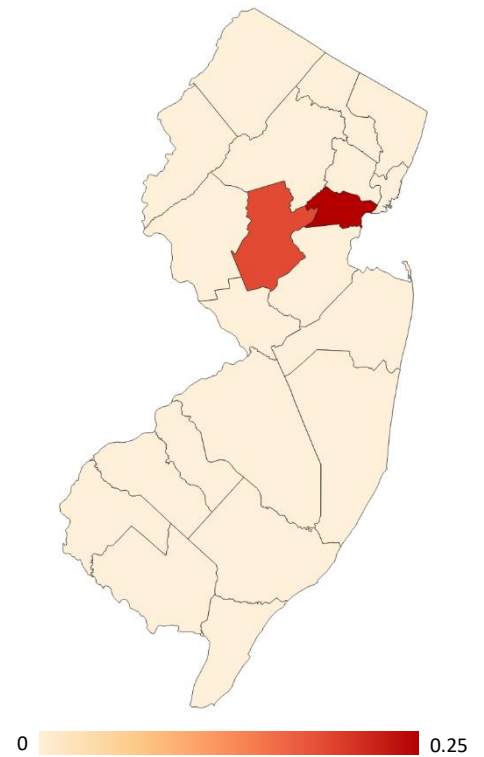
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 24 Positive Pools		Cumulative Pos. Total* (WEEK 24)		# Pools Tested*	WEEK 24 Vector Index	
	2024	2023	2024	2023		2024 ^t	
Gloucester			2		132	0.00	(-)
Cape May			1		815	0.00	(↓)
Hunterdon			1		87	0.00	(↓)
Morris			1		98	0.00	(-)
Somerset	1		1		60	0.17	(↑)
Union	1		1		28	0.25	(↑)
Warren			1		81	0.00	(-)
Atlantic					74	0.00	(-)
Bergen		1		1	71	0.00	(-)
Burlington					5	0.00	(-)
Camden					29	0.00	(-)
Cumberland					100	0.00	(-)
Essex					51	0.00	(-)
Hudson					29	0.00	(-)
Mercer					99	0.00	(-)
Middlesex					60	0.00	(-)
Monmouth					91	0.00	(-)
Ocean					66	0.00	(-)
Passaic					40	0.00	(-)
Salem					61	0.00	(-)
Sussex					80	0.00	(-)
Total	2	1	8	1	2,157	-	

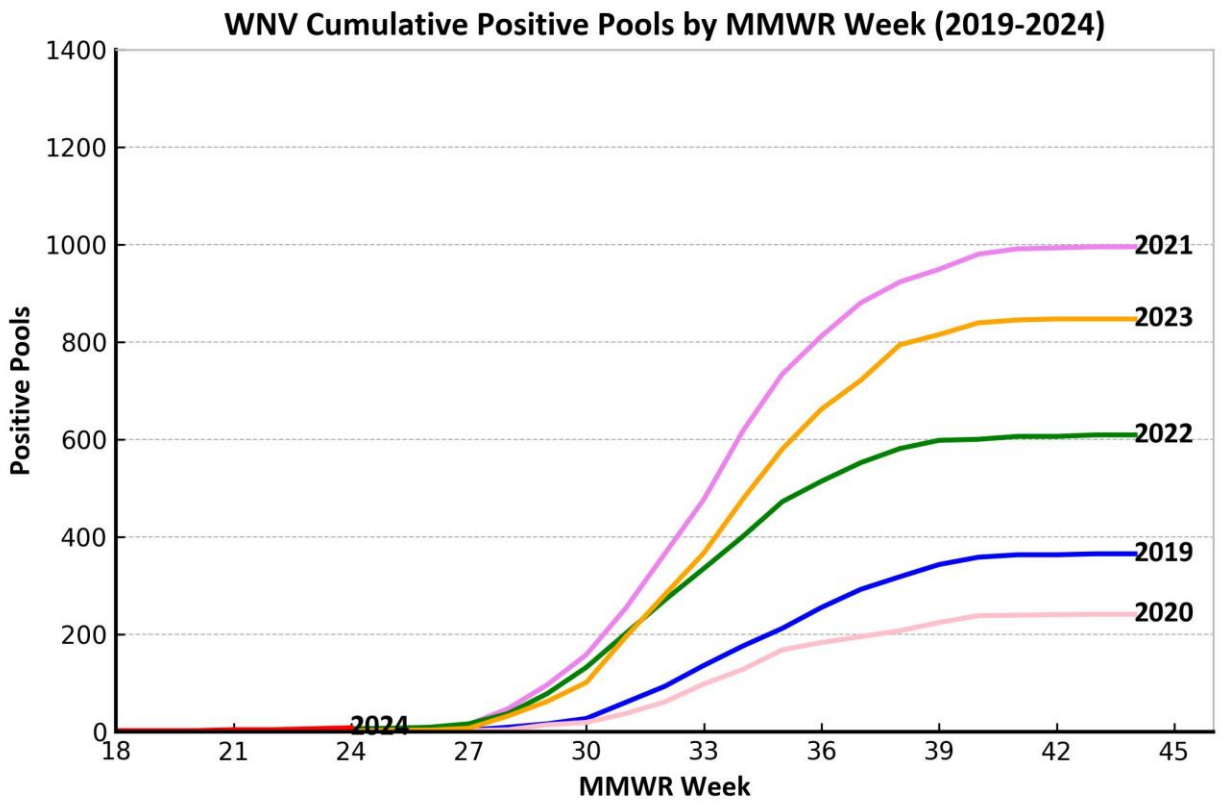
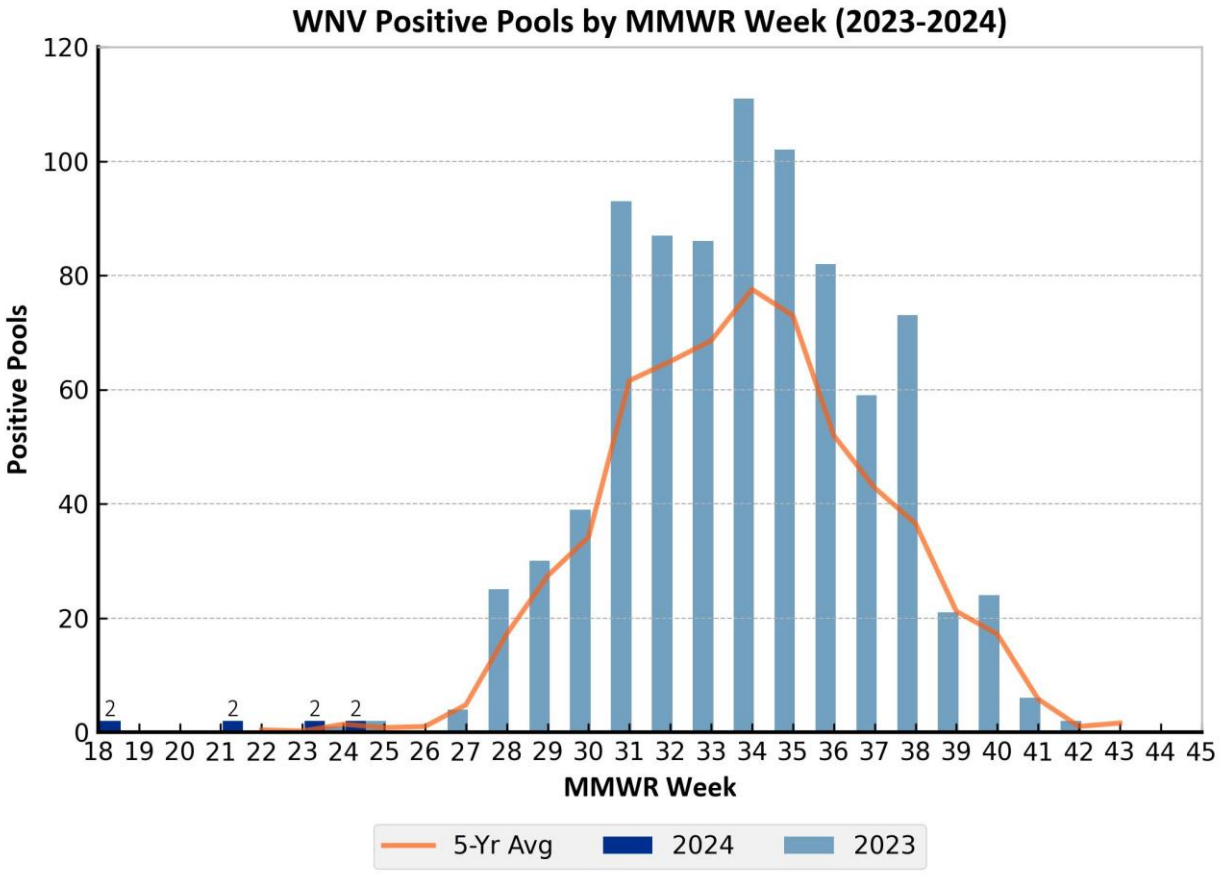
WNV Vector Index, WEEK 24^t



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

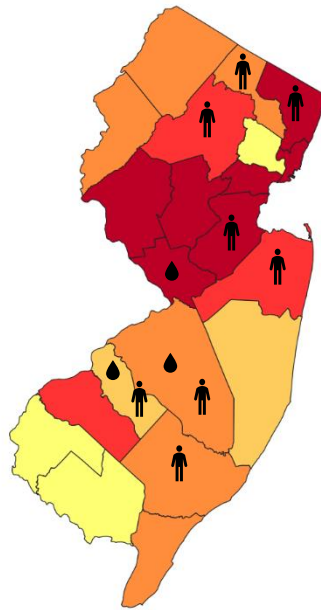
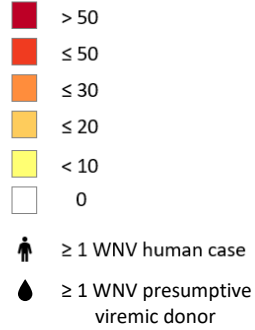
WEEK 24: June 11 - 17, 2023; June 9 - 15, 2024.

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

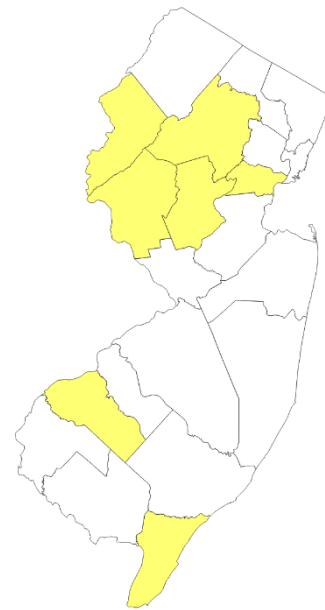


2023 WNV Activity

WNV Positive Pools



Cumulative WNV Activity, 2024



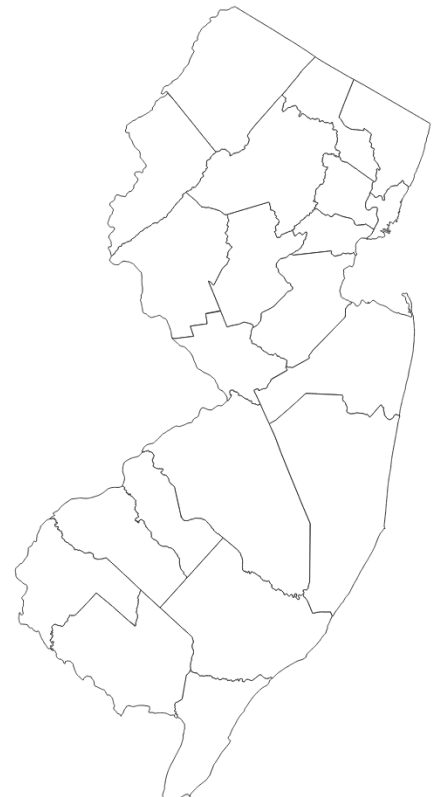
Eastern Equine Encephalitis (EEE)

- 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 2,151 mosquito pools 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

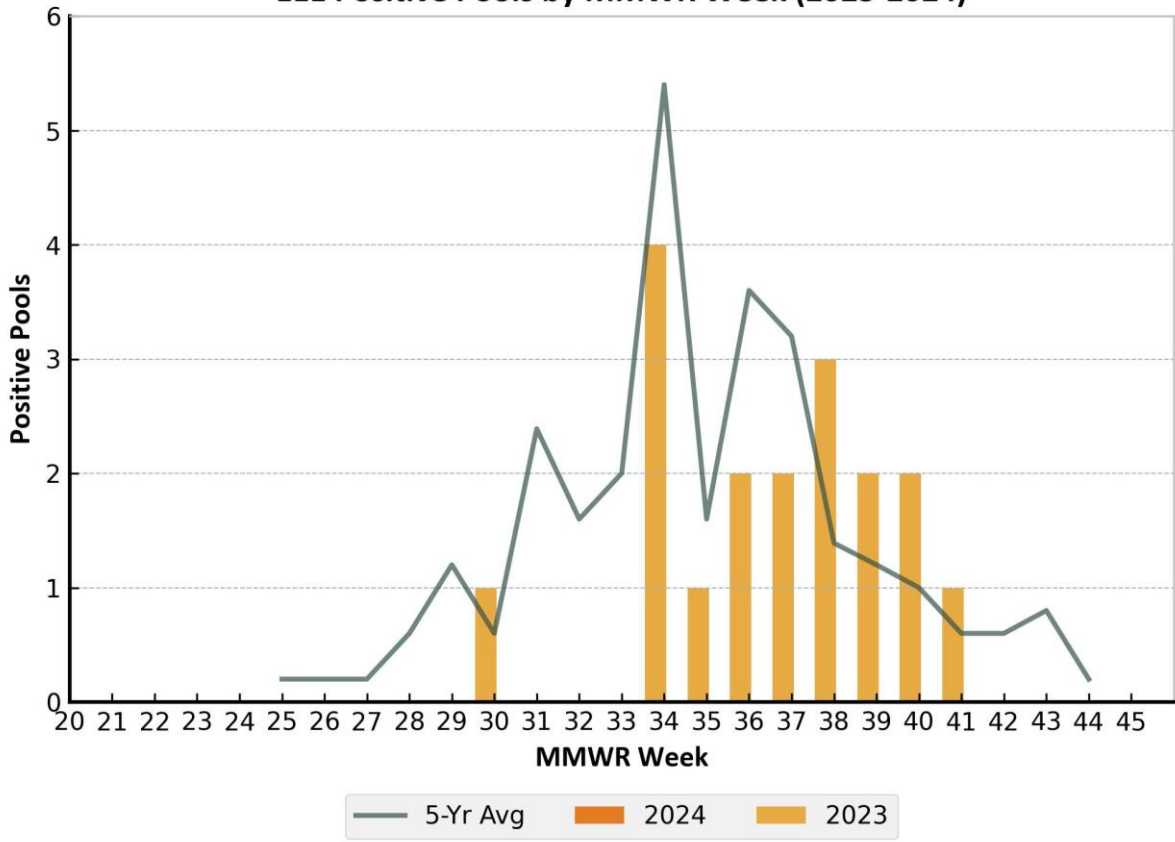
County	WEEK 24 Positive Pools		Cumulative Pos. Total* (WEEK 24)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					74	
Bergen					71	
Burlington					5	
Camden					29	
Cape May					815	
Cumberland					100	
Essex					51	
Gloucester					132	
Hudson					29	
Hunterdon					87	
Mercer					97	
Middlesex					60	
Monmouth					91	
Morris					98	
Ocean					65	
Passaic					40	
Salem					61	
Somerset					60	
Sussex					78	
Union					28	
Warren					80	
Total	0	0	0	0	2,151	-

Cumulative EEE MFIR, 2024



WEEK 24: June 11 - 17, 2023; June 9 - 15, 2024

EEE Positive Pools by MMWR Week (2023-2024)



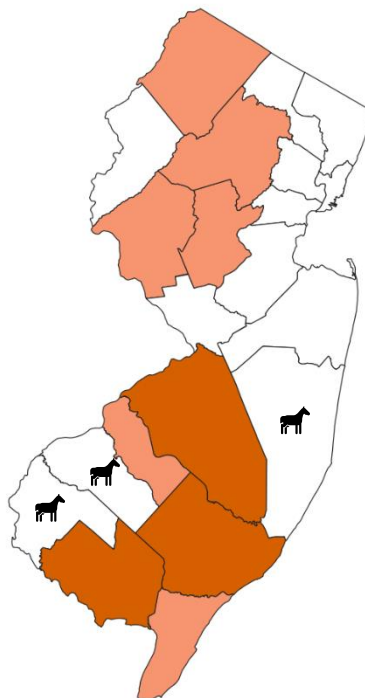
2023 EEE Activity

Cumulative EEE Activity, 2024

EEE Positive Pools

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

Equine case



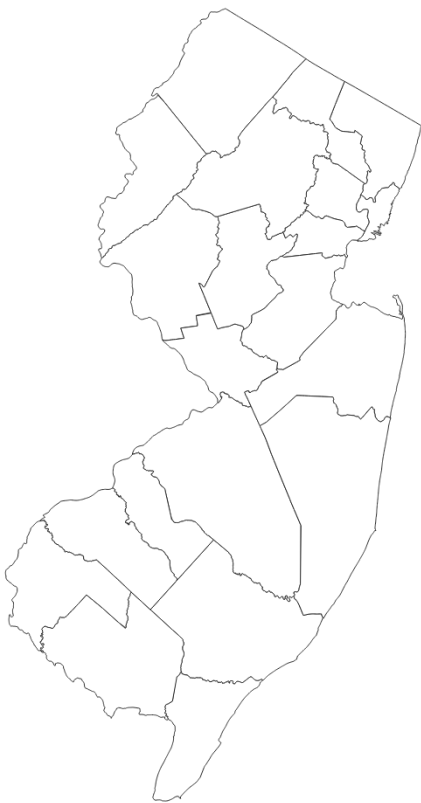
Jamestown Canyon Virus (JCV)

- 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 2,151 mosquito pools 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

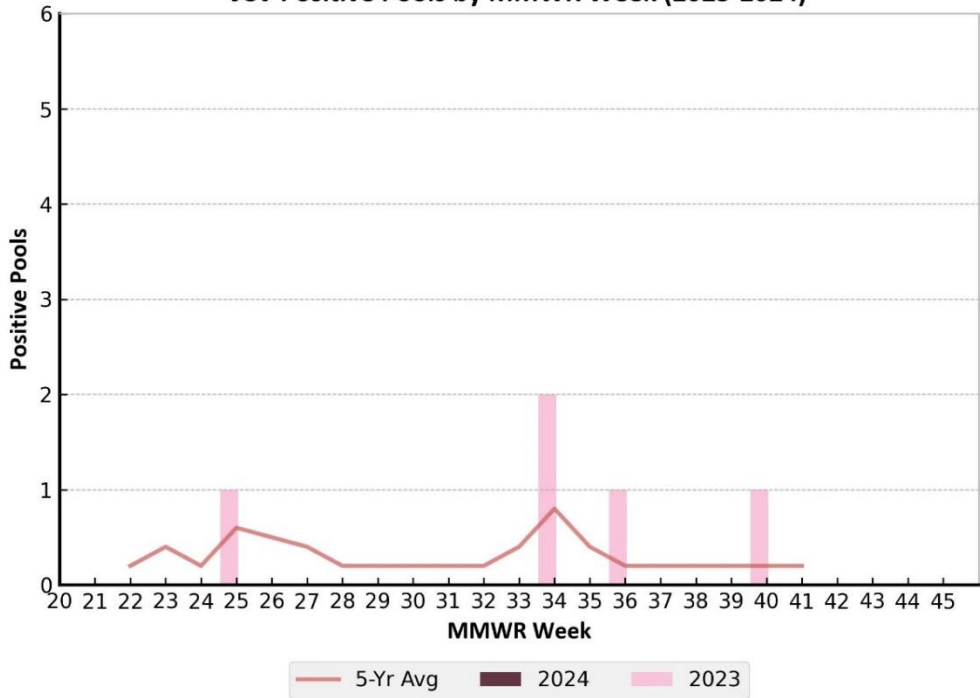
County	WEEK 24 Positive Pools		Cumulative Pos. Total* (WEEK 24)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					74	
Bergen					71	
Burlington					5	
Camden					29	
Cape May					815	
Cumberland					100	
Essex					51	
Gloucester					132	
Hudson					29	
Hunterdon					87	
Mercer					97	
Middlesex					60	
Monmouth					91	
Morris					98	
Ocean					65	
Passaic					40	
Salem					61	
Somerset					60	
Sussex					78	
Union					28	
Warren					80	
Total	0	0	0	0	2,151	-

Cumulative JCV MFIR, 2024



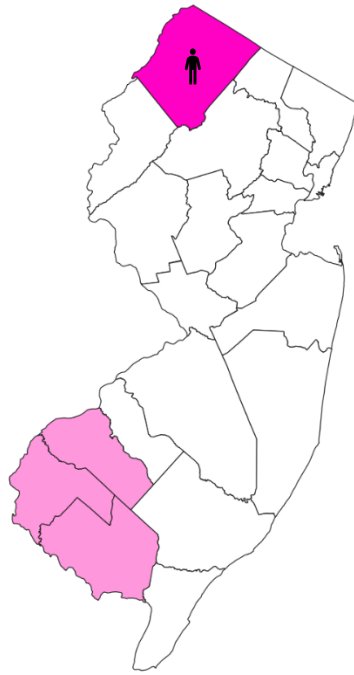
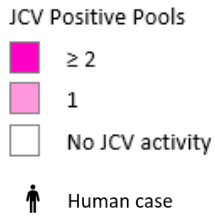
WEEK 24: June 11 - 17, 2023; June 9 - 15, 2024

JCV Positive Pools by MMWR Week (2023-2024)



2023 JCV Activity

Cumulative JCV Activity, 2024



Other Mosquito-borne Viruses

- Mosquito pools in all 21 counties have been tested for other arboviruses with no positive results.

Cumulative 2024 Mosquito Pool Testing (Other Viruses^a)

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	74									
Bergen	71									
Burlington	5									
Camden	29				1		1		1	
Cape May	815				12		12		12	
Cumberland	100									
Essex	51									
Gloucester	132									
Hudson	29									
Hunterdon	87									
Mercer	97		2							
Middlesex	60									
Monmouth	91									
Morris	98				2		2		2	
Ocean	65		1							
Passaic	40									
Salem	61		1							
Somerset	60									
Sussex	78		2							
Union	28									
Warren	80		1							
Total	2,151	-	7	-	15	-	15	-	15	-

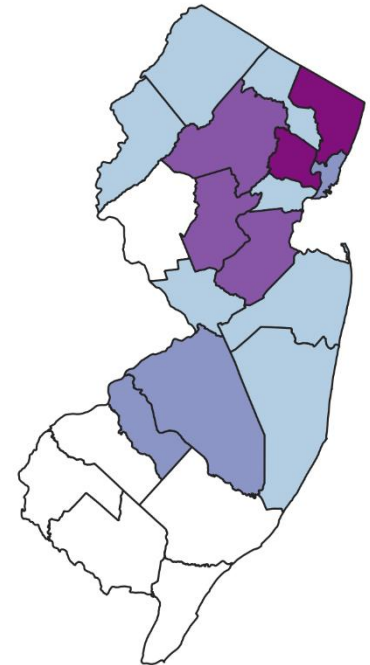
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

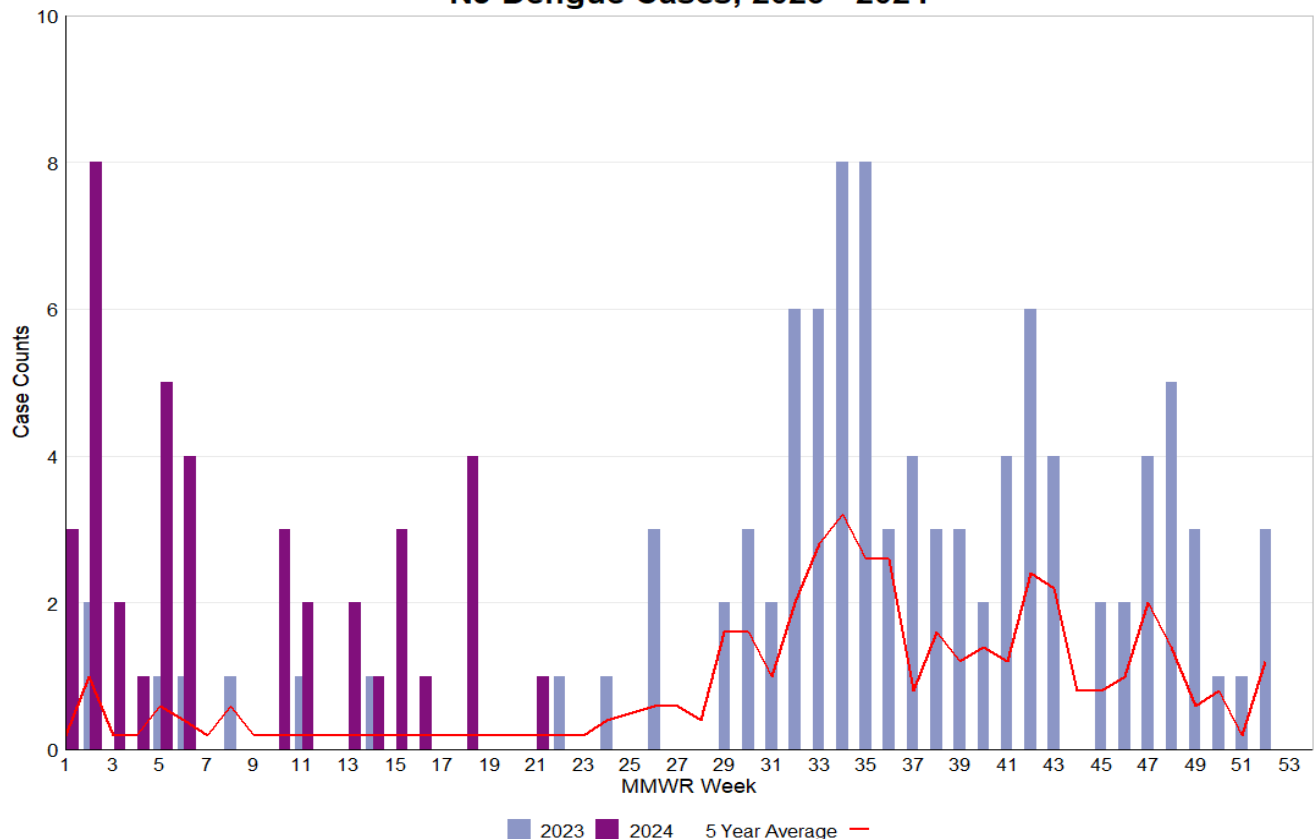
- There have been 40 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (10).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (39) cases have 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 (8), Essex (6), Middlesex (5), and Somerset (5) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	8
Puerto Rico	5
Brazil	4
Colombia	3
Ecuador	3
Aruba	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



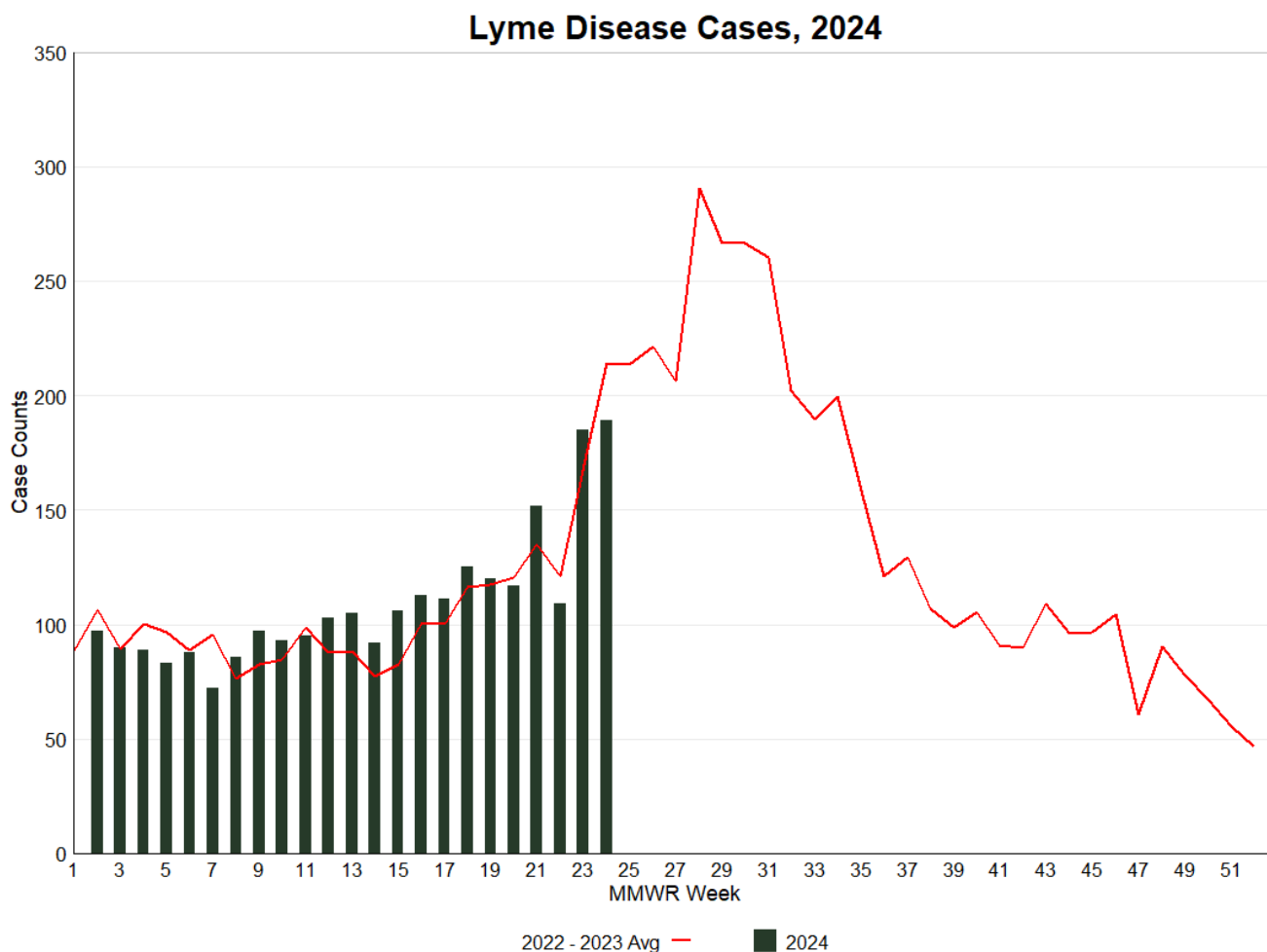
NJ Dengue Cases, 2023 - 2024



Tickborne Disease Activity

Lyme Disease

- There have been 2,607 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 24 slightly increased and is below the average number of cases reported this week.

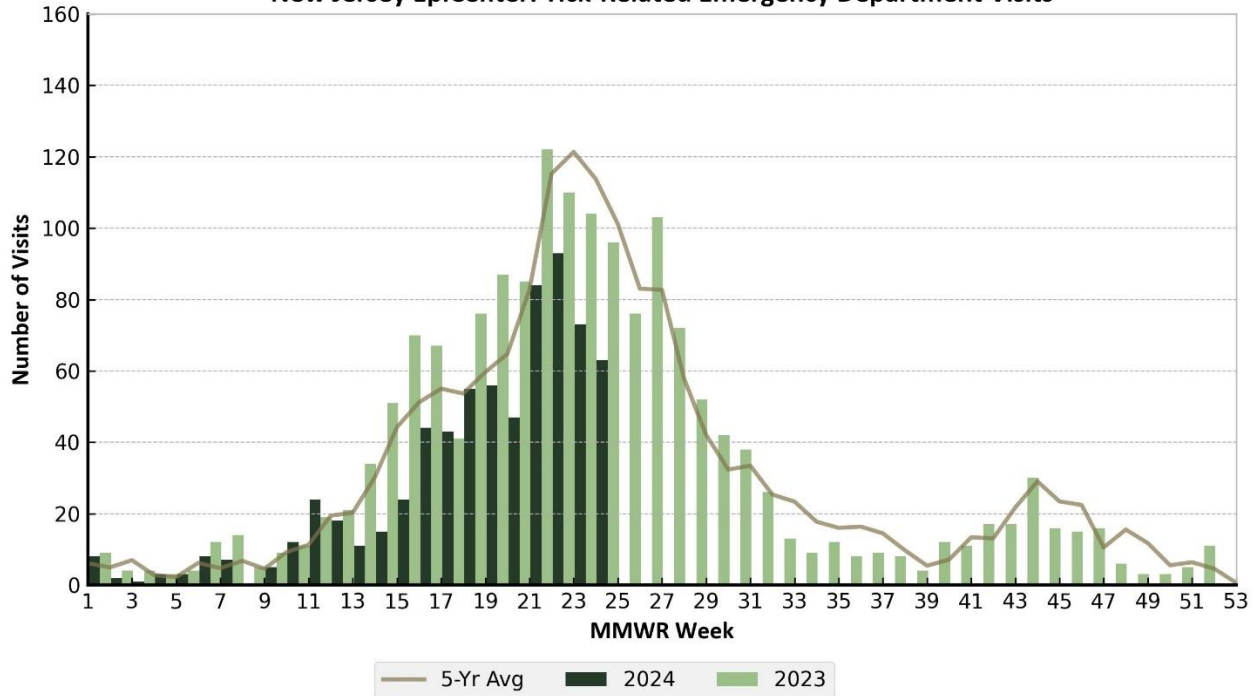


Tick-related Emergency Department Visits

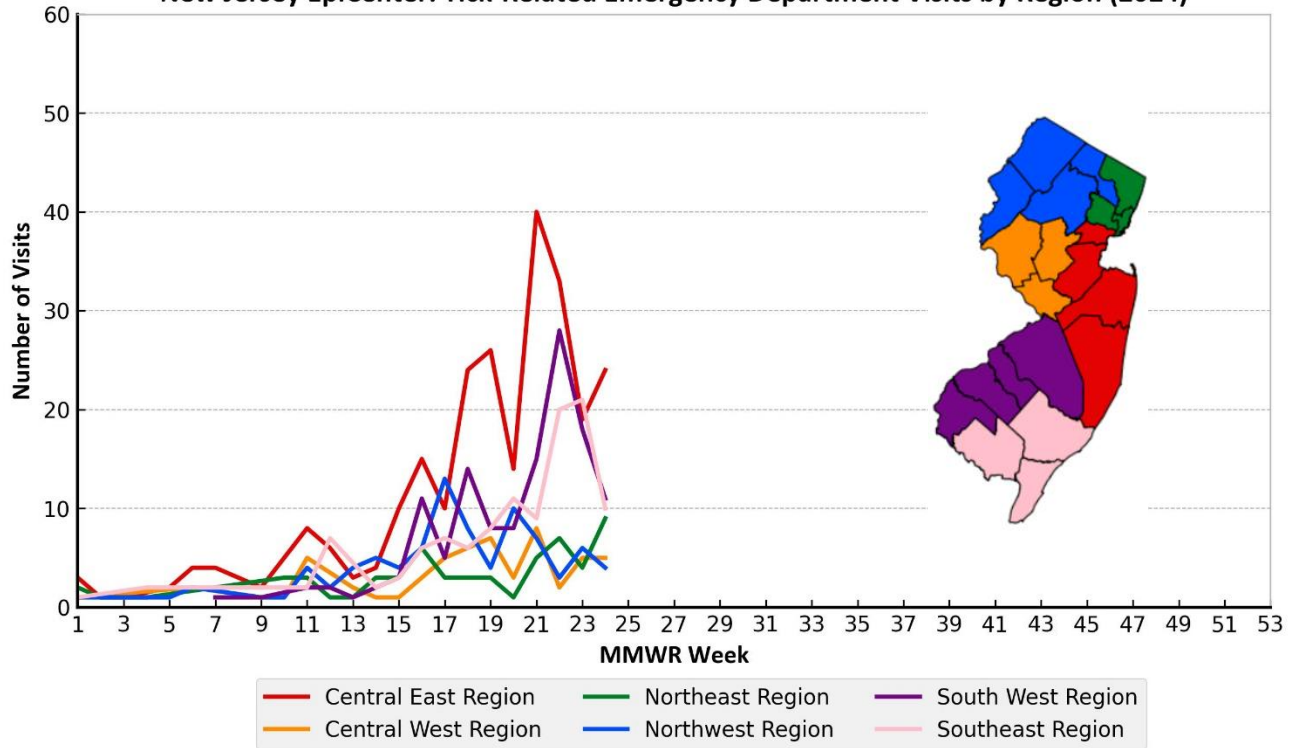
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 24, the number of tick-related ED visits decreased from the previous week and 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
- 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/>