

Report Highlights:

- *Two mosquito pools tested positive for West Nile Virus (WNV) this week in Cape May and Hunterdon counties (additional tests pending). There has been a total of 6 WNV positive pools in 2024.*
- *There have been no human or animal cases of WNV reported in New Jersey in 2024.*
- *The number of travel-associated dengue cases is considerably higher in 2024 (39 cases) compared to the same timeframe in 2023 (9 cases), associated with outbreaks in several Latin American countries.*
- *The number of Lyme disease cases this week is similar to the average number reported this week in the past two years.*
- *In week 23, 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	-	13	Alpha-gal syndrome	54	360
Dengue	39	98	Anaplasmosis	30	195
Eastern equine encephalitis	-	-	Babesiosis	14	407
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	18
Malaria	25	102	Ehrlichiosis	3	109
West Nile	-	14	Lyme disease*	2,395	7,225
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	1	24
			Tularemia	-	2

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

Mosquito-borne Disease Activity

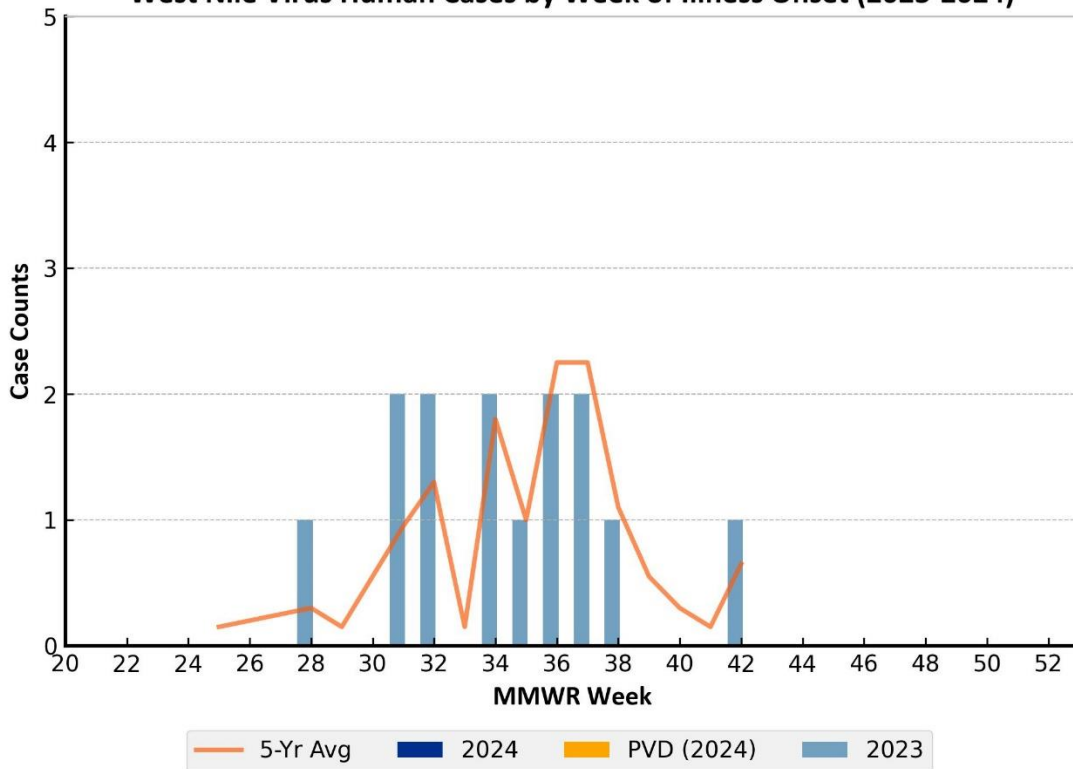
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

**Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on June 12, 2024.*

West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 1,545 mosquito pools collected from 19 counties, 6 mosquito pools have tested positive for WNV so far this year. 2 pools tested positive in week 23 in Cape May and Hunterdon counties. The positive pools were found in: *Culex pipiens/restuans/salinarius* (5), 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.

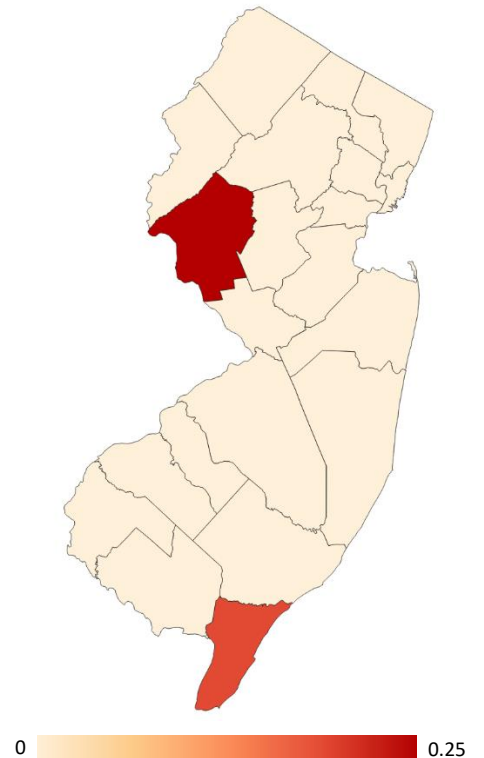
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 23 Positive Pools		Cumulative Pos. Total* (WEEK 23)		# Pools Tested*	WEEK 43 Vector Index	
	2024	2023	2024	2023		2024 ^t	
Gloucester			2		80	0.00	(-)
Cape May	1		1		671	0.01	(↑)
Hunterdon	1		1		69	0.25	(↑)
Morris			1		78	0.00	(-)
Warren			1		60	0.00	(-)
Atlantic					53	0.00	(-)
Bergen					20	0.00	(-)
Burlington					5	0.00	(-)
Camden					29	0.00	(-)
Cumberland					80	0.00	(-)
Essex					31	0.00	(-)
Hudson					12	0.00	(-)
Mercer					79	0.00	(-)
Middlesex					40	0.00	(-)
Monmouth					45	0.00	(-)
Ocean					46	0.00	(-)
Passaic						0.00	(-)
Salem					57	0.00	(-)
Somerset					30	0.00	(-)
Sussex					60	0.00	(-)
Union						0.00	(-)
Total	2	0	6	0	1,545	-	

WNV Vector Index, WEEK 23^t

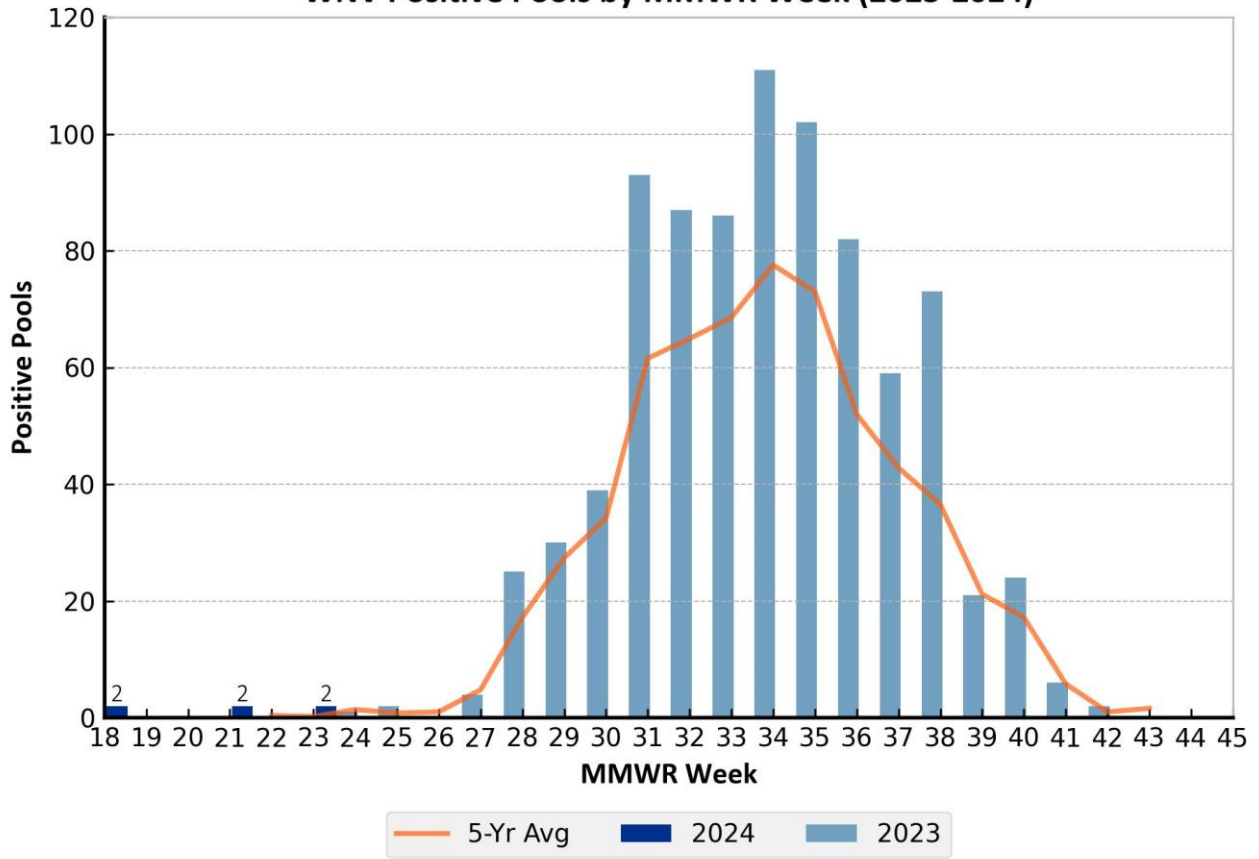


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

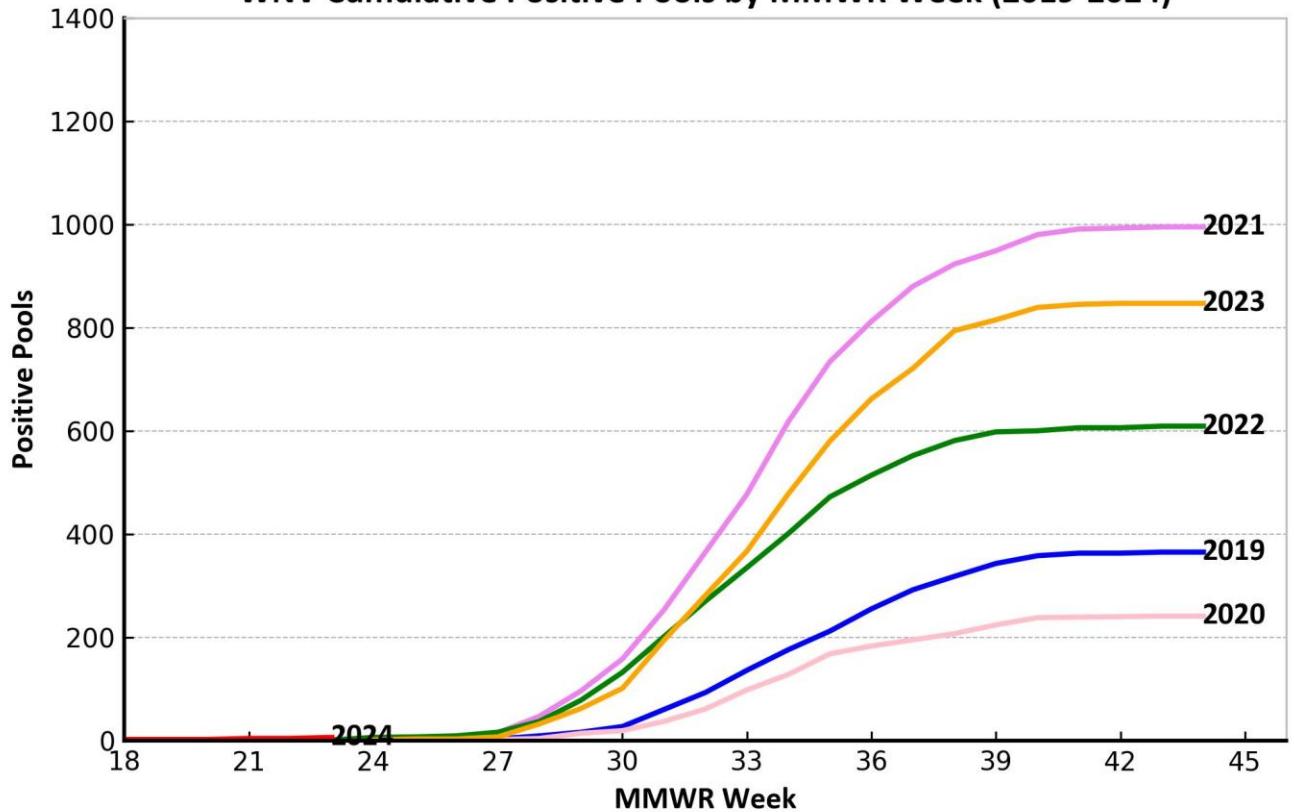
WEEK 23: June 4 - 10, 2023; June 2 - 8, 2024.

*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)

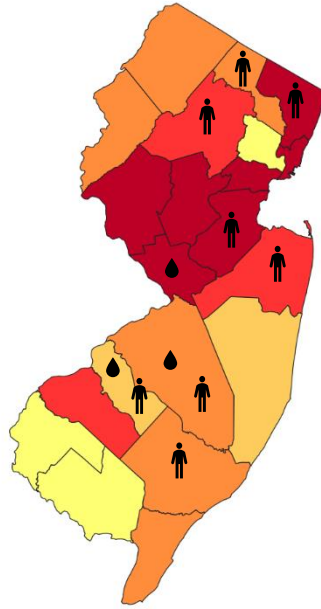
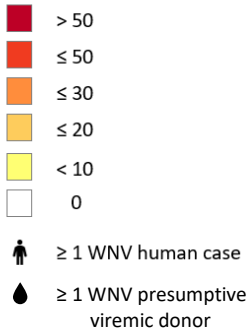


WNV Cumulative Positive Pools by MMWR Week (2019-2024)

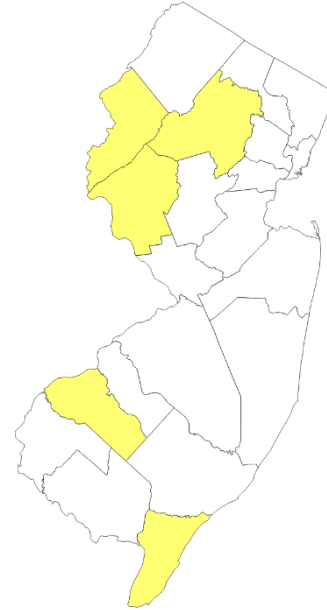


2023 WNV Activity

WNV Positive Pools



Cumulative WNV Activity, 2024



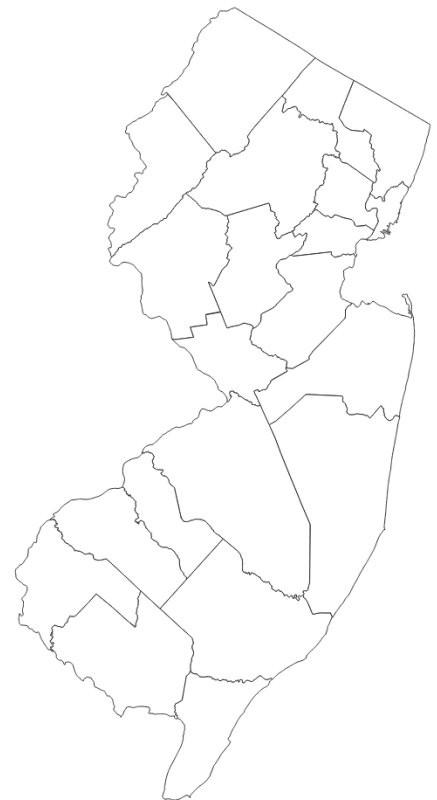
Eastern Equine Encephalitis (EEE)

- 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 1,542 mosquito pools from 19 counties 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

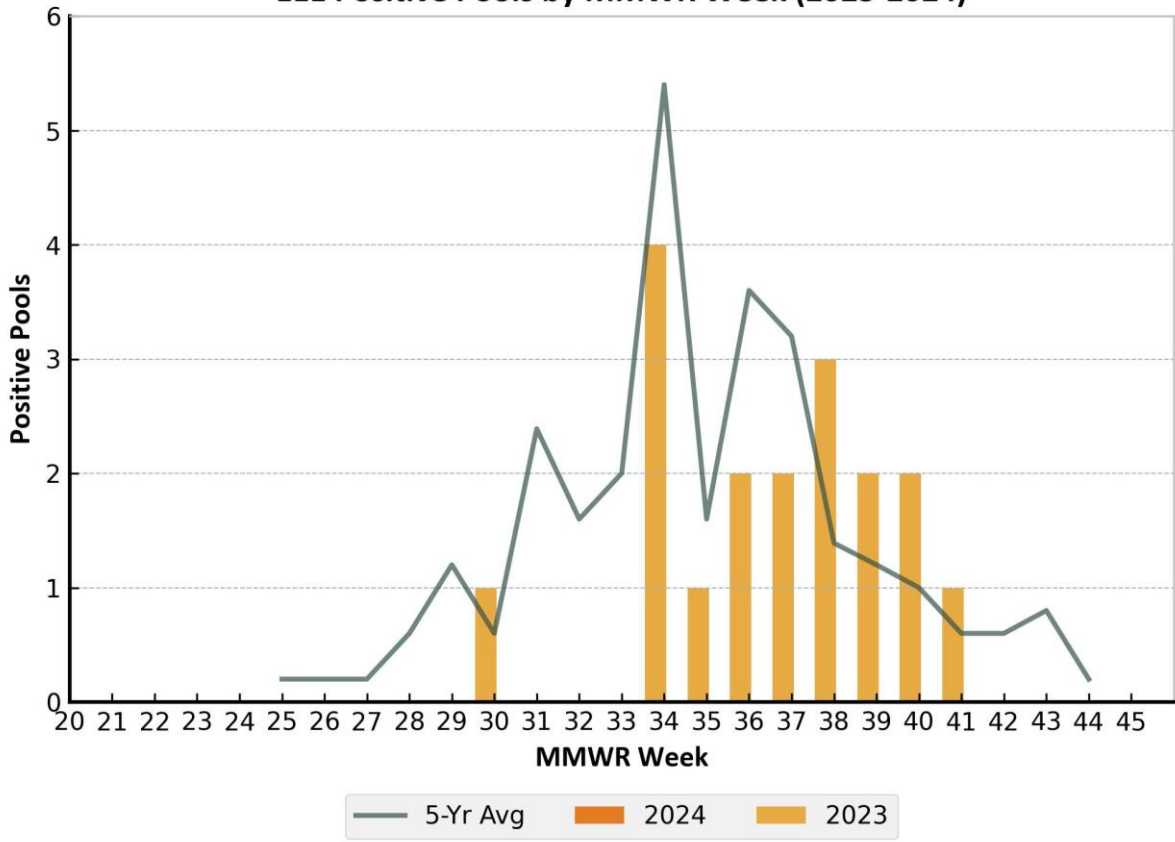
County	WEEK 23 Positive Pools		Cumulative Pos. Total* (WEEK 23)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					53	
Bergen					20	
Burlington					5	
Camden					29	
Cape May					671	
Cumberland					80	
Essex					31	
Gloucester					80	
Hudson					12	
Hunterdon					69	
Mercer					77	
Middlesex					40	
Monmouth					45	
Morris					78	
Ocean					46	
Passaic						
Salem					57	
Somerset					30	
Sussex					59	
Union						
Warren					60	
Total	0	0	0	0	1,542	-

Cumulative EEE MFIR, 2024



WEEK 23: June 4 - 10, 2023; June 2 - 8, 2024

EEE Positive Pools by MMWR Week (2023-2024)



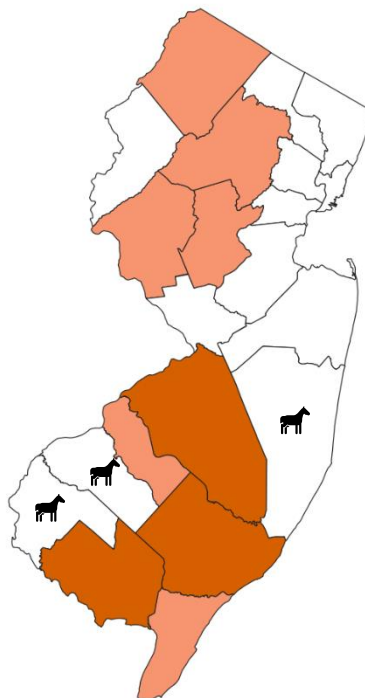
2023 EEE Activity

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 1,542 mosquito pools from 19 counties 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

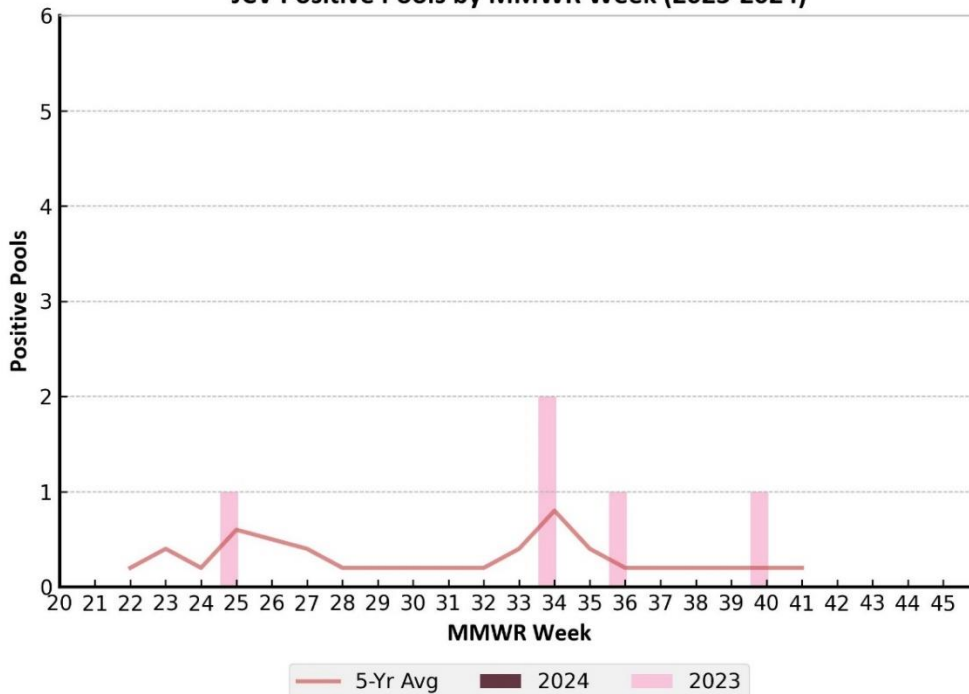
County	WEEK 23 Positive Pools		Cumulative Pos. Total* (WEEK 23)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					53	
Bergen					20	
Burlington					5	
Camden					29	
Cape May					671	
Cumberland					80	
Essex					31	
Gloucester					80	
Hudson					12	
Hunterdon					69	
Mercer					77	
Middlesex					40	
Monmouth					45	
Morris					78	
Ocean					46	
Passaic						
Salem					57	
Somerset					30	
Sussex					59	
Union						
Warren					60	
Total	0	0	0	0	1,542	-

Cumulative JCV MFIR, 2024



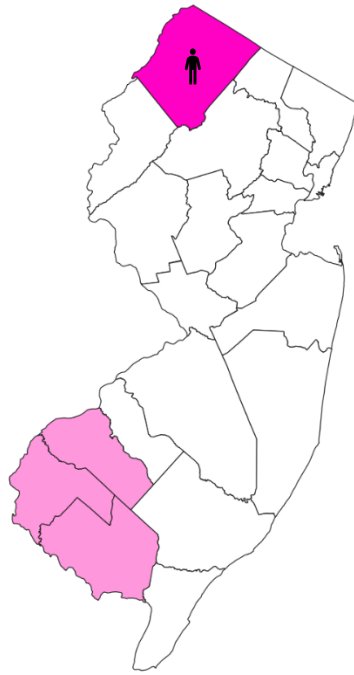
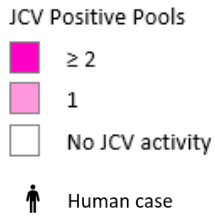
WEEK 23: June 4 - 10, 2023; June 2 - 8, 2024

JCV Positive Pools by MMWR Week (2023-2024)



2023 JCV Activity

Cumulative JCV Activity, 2024



Other Mosquito-borne Viruses

- Mosquito pools in 19 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	53									
Bergen	20									
Burlington	5									
Camden	29				1		1		1	
Cape May	671									
Cumberland	80									
Essex	31									
Gloucester	80									
Hudson	12									
Hunterdon	69									
Mercer	77		2							
Middlesex	40									
Monmouth	45									
Morris	78				2		2		2	
Ocean	46									
Passaic										
Salem	57									
Somerset	30									
Sussex	59		1							
Union										
Warren	60									
Total	1,542	-	3	-	3	-	3	-	3	-

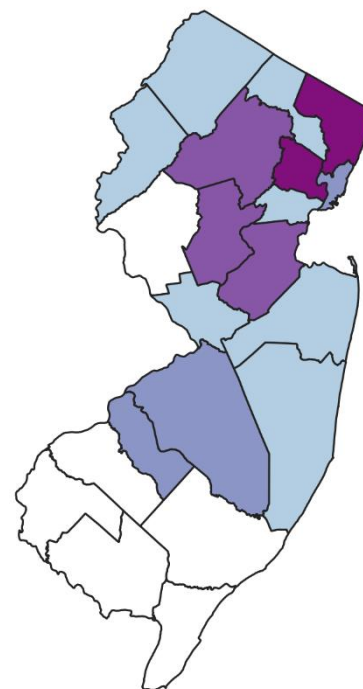
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

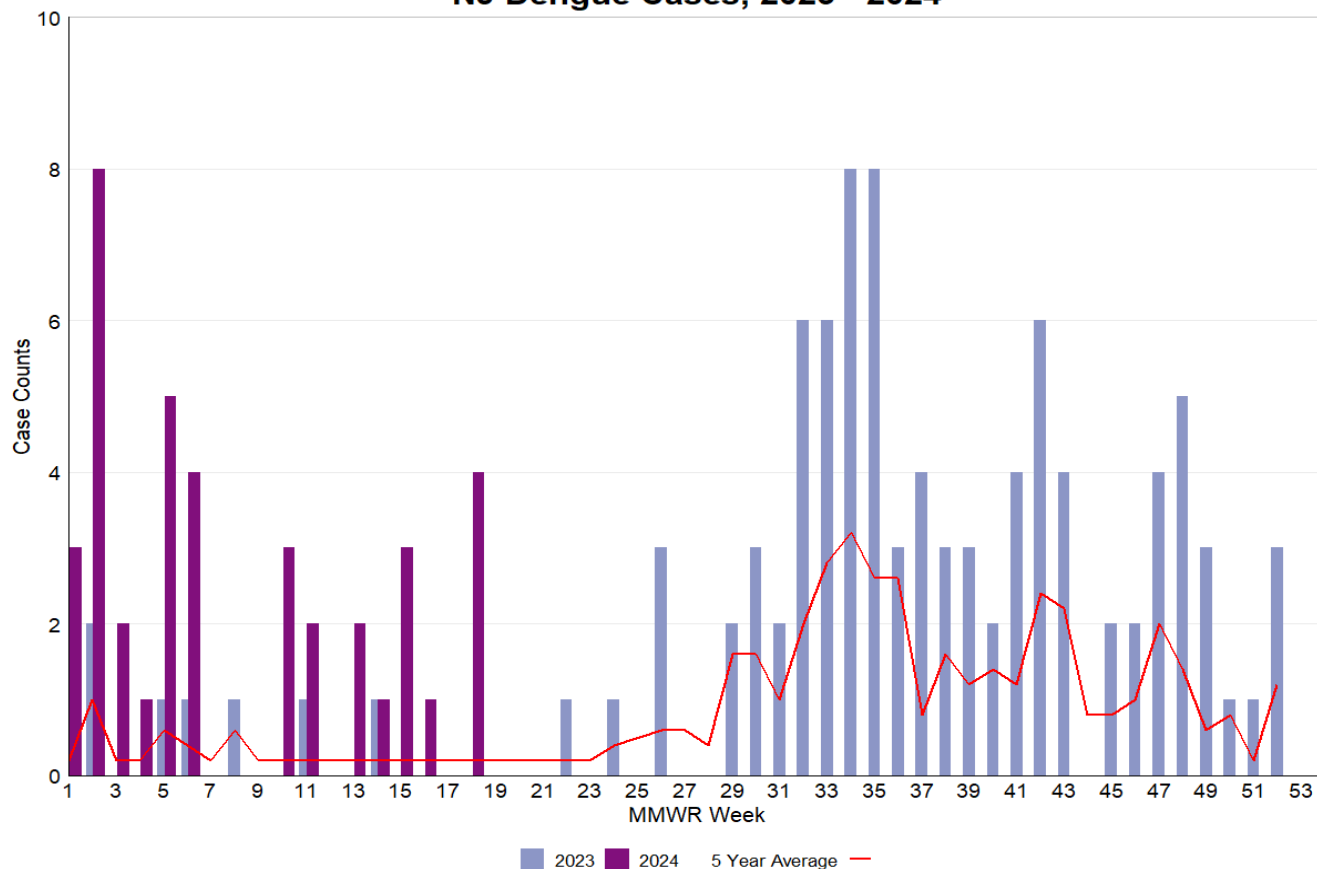
- There have been 39 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (9).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (38) cases have reported 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), and Middlesex (5) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	8
Puerto Rico	4
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



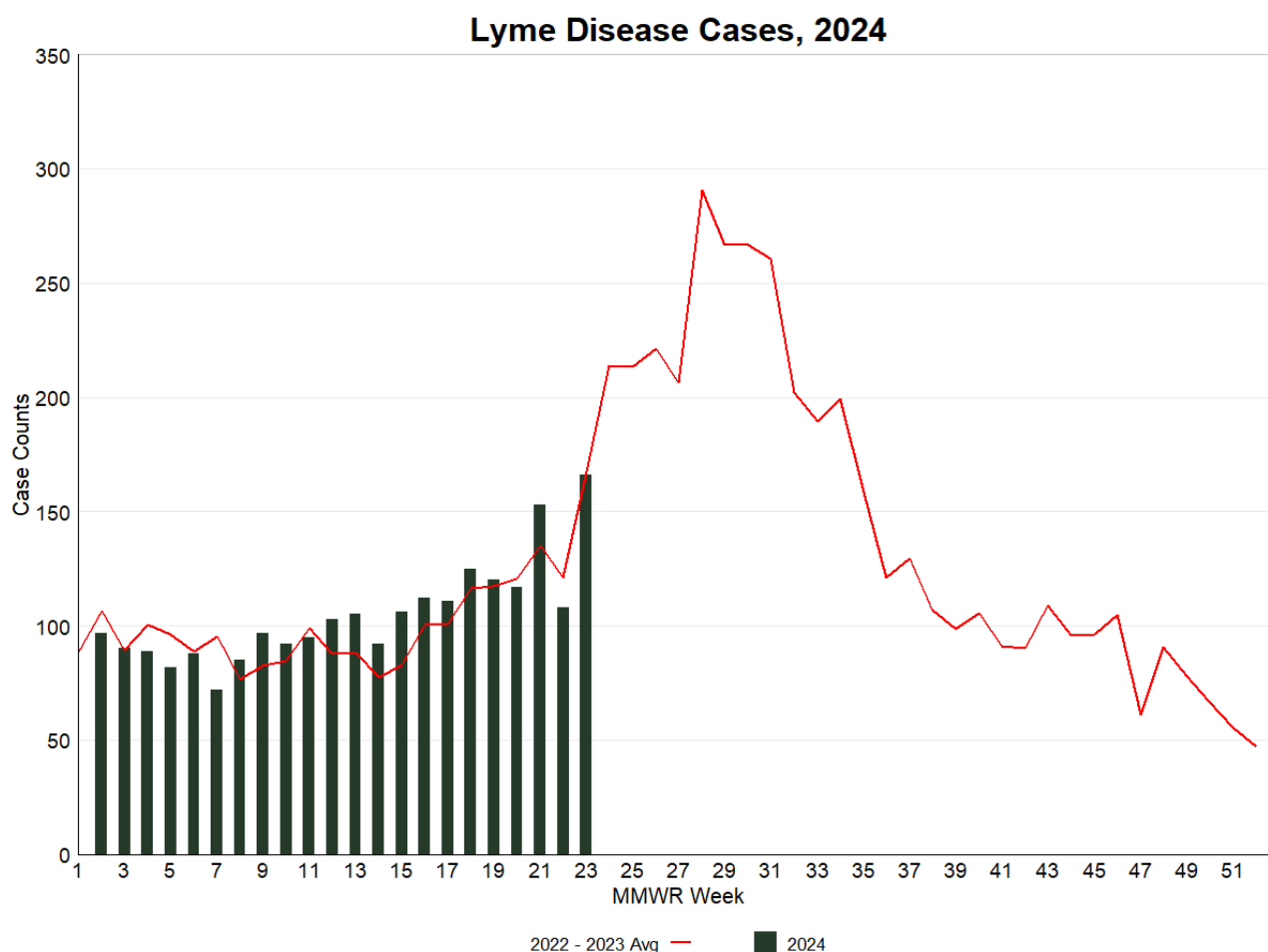
NJ Dengue Cases, 2023 - 2024



Tickborne Disease Activity

Lyme Disease

- There have been 2,395 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 23 increased and is similar to the average number of cases reported this week in the past two years.

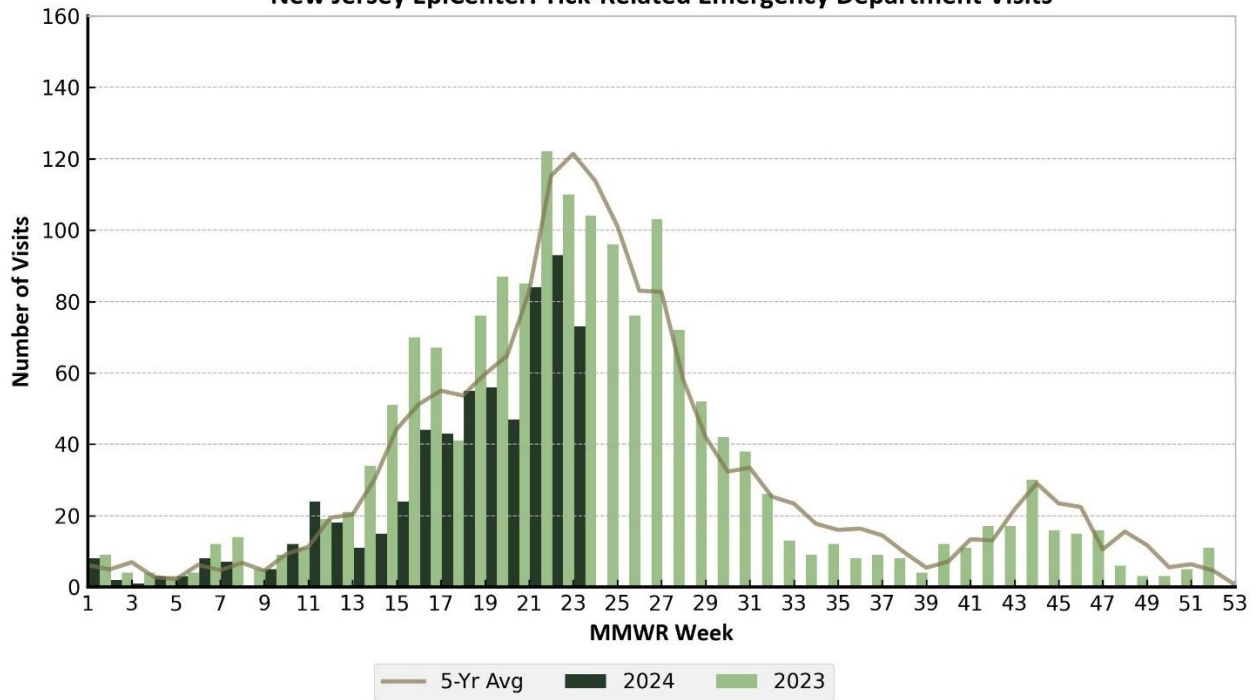


Tick-related Emergency Department Visits

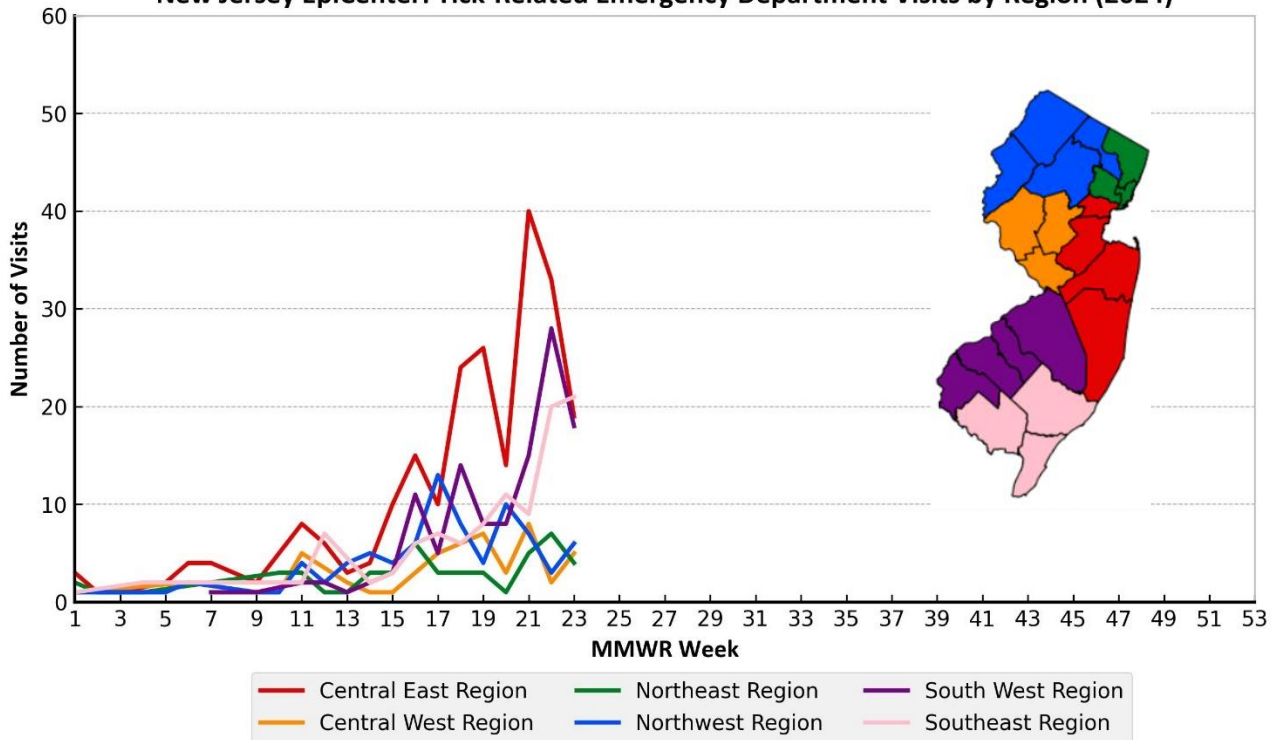
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 23, 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/>