

Report Highlights:

- **Thirty-two mosquito pools tested positive for West Nile Virus (WNV) this week in nine counties (additional tests pending). The number of positive pools this week is higher than the 5-year average. There has been a total of 92 WNV positive pools in 2024.**
- **There have been no human or animal cases of WNV reported in New Jersey in 2024.**
- **One mosquito pool has tested positive for Eastern Equine Encephalitis (EEE) this year in Cape May County.**
- **Two mosquito pools have tested positive for Jamestown Canyon Virus (JCV) this year in Cumberland County.**
- **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 (50 cases) compared to the same timeframe in 2023 (13 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week decreased and is below the average number reported this week in the past two years.**
- **In week 28, the number of tick-related ED visits decreased and was 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	82	360
Dengue	50	98	Anaplasmosis	62	195
Eastern equine encephalitis	-	-	Babesiosis	49	407
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	5	18
Malaria	29	102	Ehrlichiosis	30	109
West Nile	-	14	Lyme disease*	3,387	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	5	24
			Tularemia	2	2

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

Mosquito-borne Disease Activity

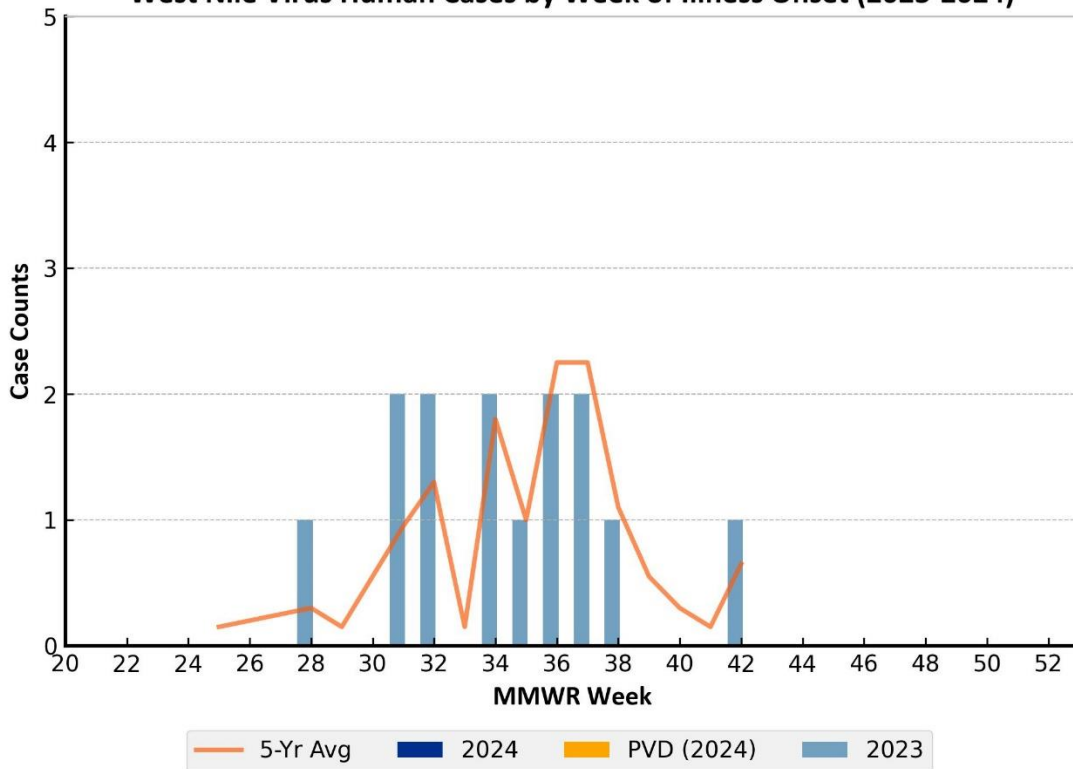
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

**Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on July 17, 2024.*

West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 4,325 mosquito pools submitted for testing, 92 mosquito pools have tested positive for WNV so far this year. 32 pools tested positive in Week 28 in nine counties. WNV has been detected in *Culex pipiens/restuans/salinarius* (81), *Aedes japonicus* (3), *Cx. pipiens* (3), *Cx. restuans* (2), *Aedes albopictus* (1), *Aedes triseriatus* (1), and *Culiseta melanura* (1) mosquito pools.
- 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 28 from Bergen County.

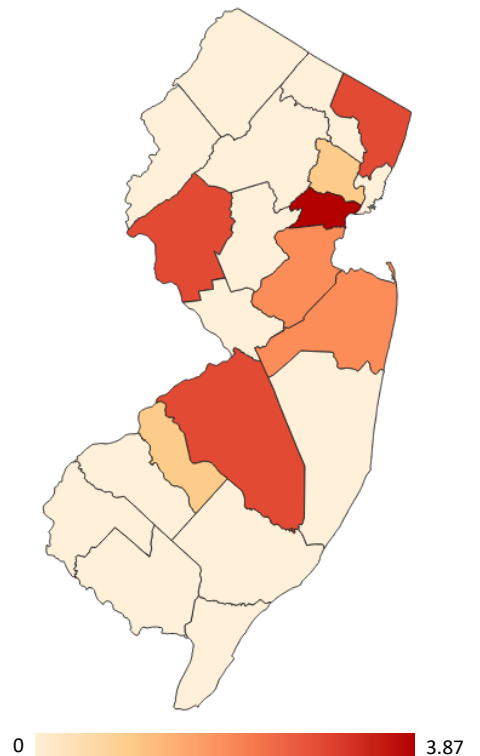
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 28 Positive Pools		Cumulative Pos. Total* (WEEK 28)		# Pools Tested*	WEEK 28 Vector Index	
	2024	2023	2024	2023		2024 ^t	
Union	13	5	22	6	104	3.87	(↑)
Middlesex	3		11		140	0.24	(↓)
Hunterdon	4	1	7	2	162	0.35	(↑)
Hudson			6		85	0.00	(↓)
Somerset			6	1	105	0.00	(↓)
Bergen	2	11	5	13	131	0.64	(↑)
Cape May		2	5	3	1519	0.00	(-)
Burlington	3		4		66	0.34	(↑)
Essex	2		4		130	0.20	(↑)
Mercer	1	1	4	1	175	0.00	(↓)
Monmouth	3		4		181	0.29	(↑)
Morris		1	3	1	158	0.00	(-)
Ocean			3		126	0.00	(↓)
Warren			3		162	0.00	(↓)
Gloucester			2		257	0.00	(-)
Atlantic		2	1	2	132	0.00	(-)
Camden	1	2	1	3	94	0.18	(↑)
Sussex			1		160	0.00	(-)
Cumberland					180	0.00	(-)
Passaic					95	0.00	(-)
Salem					163	0.00	(-)
Total	32	25	92	32	4,325	-	

WNV Vector Index, WEEK 28^t

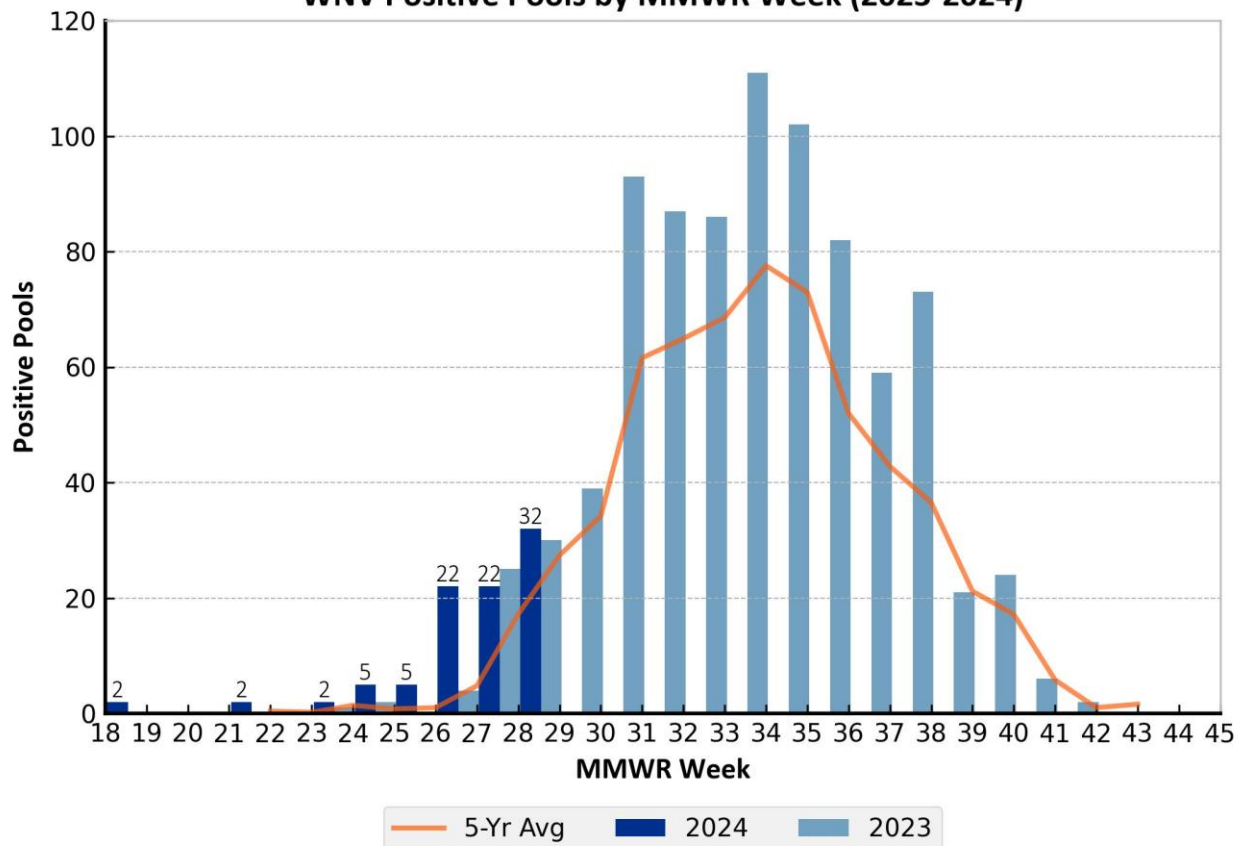


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

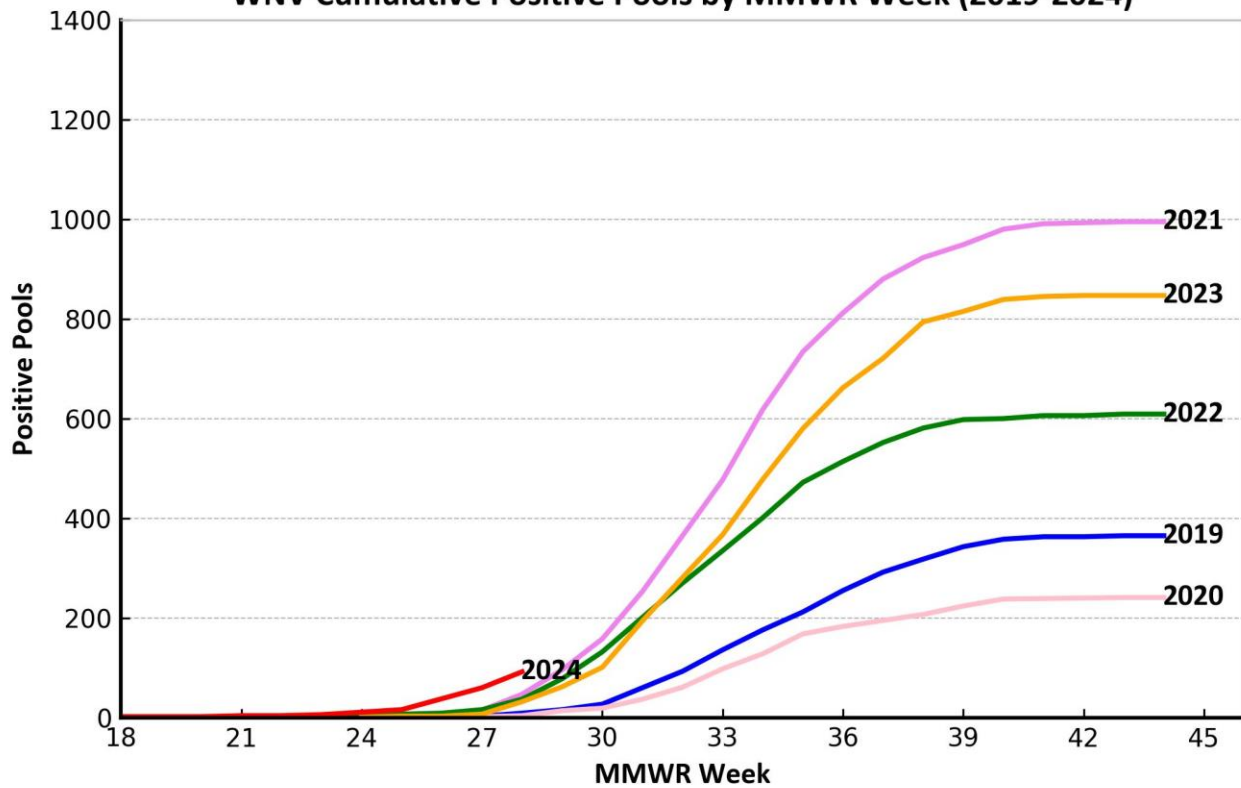
WEEK 28: July 9 - 15, 2023; July 7 - 13, 2024.

*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)



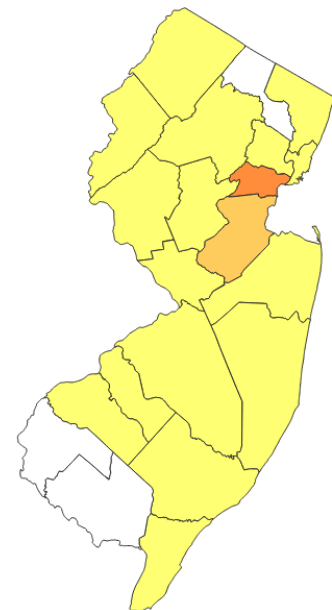
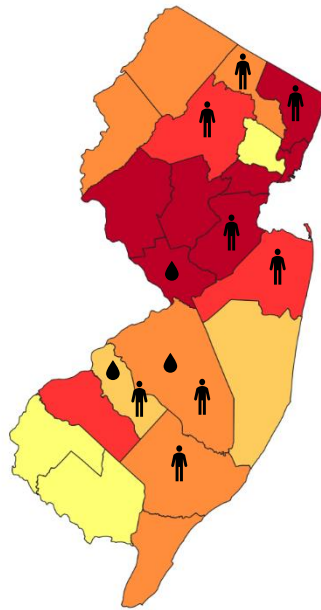
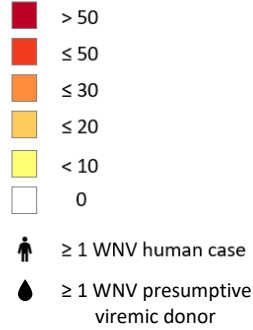
WNV Cumulative Positive Pools by MMWR Week (2019-2024)



2023 WNV Activity

Cumulative WNV Activity, 2024

WNV Positive Pools



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 4,287 mosquito pools tested for EEE, one pool tested positive in week 27 from Cape May County. The positive pool was found in *Cx. restuans* (1) mosquitoes.
- In 2023, the first EEE positive pool was detected in Week 30 from Cumberland County.

EEE Mosquito Pool Testing

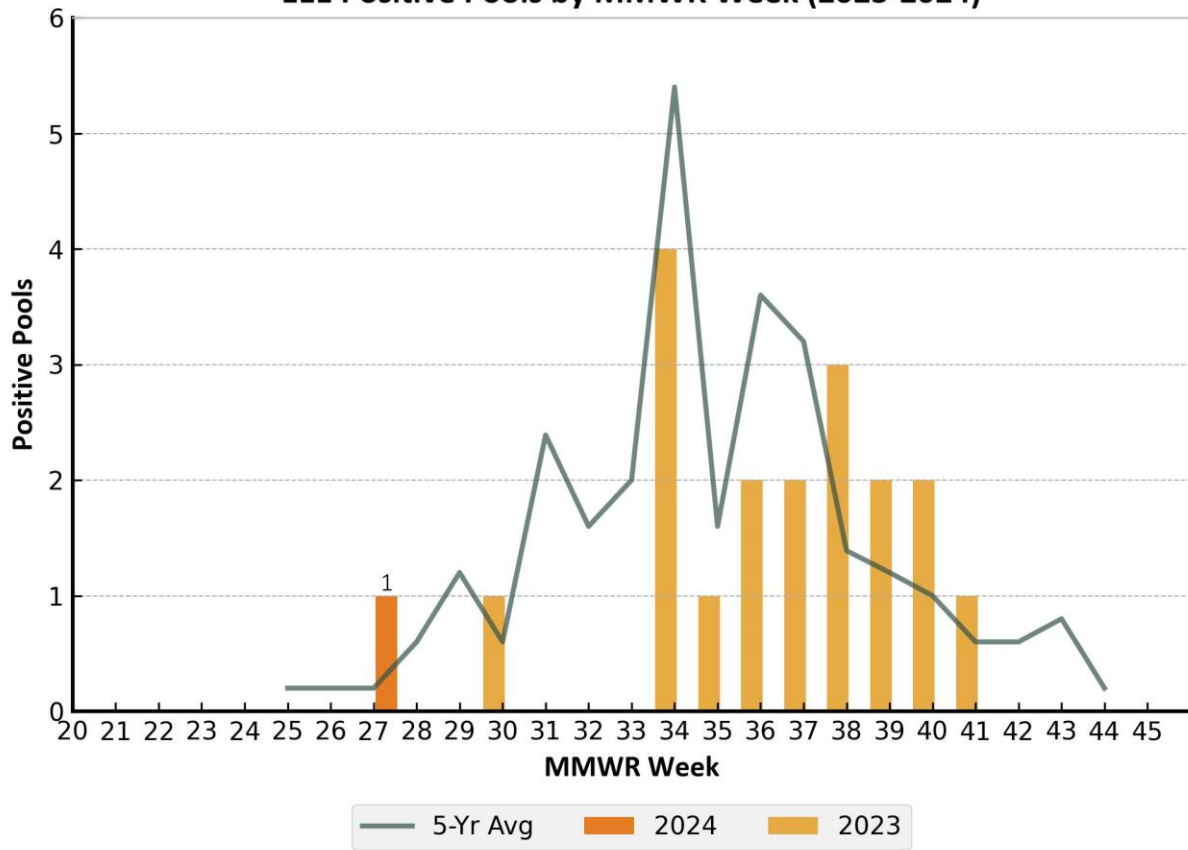
County	WEEK 28 Positive Pools		Cumulative Pos. Total* (WEEK 28)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cape May			1		1519	0.06
Atlantic					132	
Bergen					131	
Burlington					66	
Camden					89	
Cumberland					180	
Essex					130	
Gloucester					257	
Hudson					85	
Hunterdon					161	
Mercer					173	
Middlesex					134	
Monmouth					181	
Morris					158	
Ocean					124	
Passaic					95	
Salem					163	
Somerset					105	
Sussex					148	
Union					104	
Warren					152	
Total	0	0	1	0	4,287	-

Cumulative EEE MFIR, 2024



WEEK 28: July 9 - 15, 2023; July 7 - 13, 2024

EEE Positive Pools by MMWR Week (2023-2024)

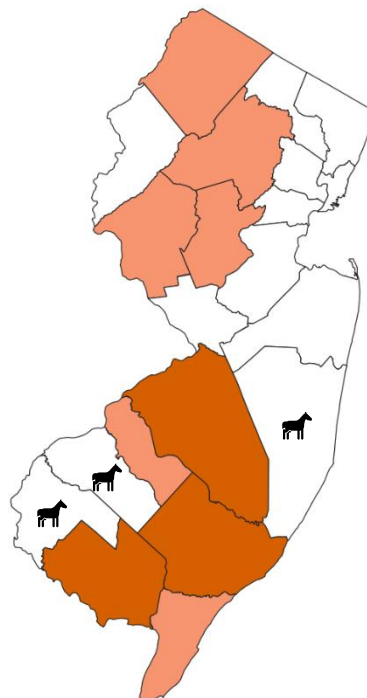


2023 EEE Activity

Cumulative EEE Activity, 2024

- EEE Positive Pools**
- > 10
 - ≤ 10
 - ≤ 6
 - ≤ 2
 - No EEE activity

Equine case



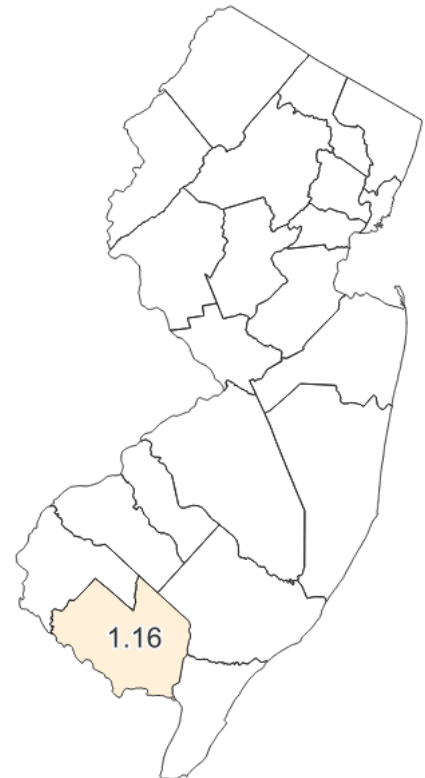
Jamestown Canyon Virus (JCV)

- 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 4,287 mosquito pools tested for JCV, two pools tested positive in week 23 from Cumberland County. The positive pools were found in *Aedes cantator* (1) and *Cx. salinarius* (1) mosquitos.
- In 2023, the first JCV positive pool was detected in week 28 from Cumberland County.

JCV Mosquito Pool Testing

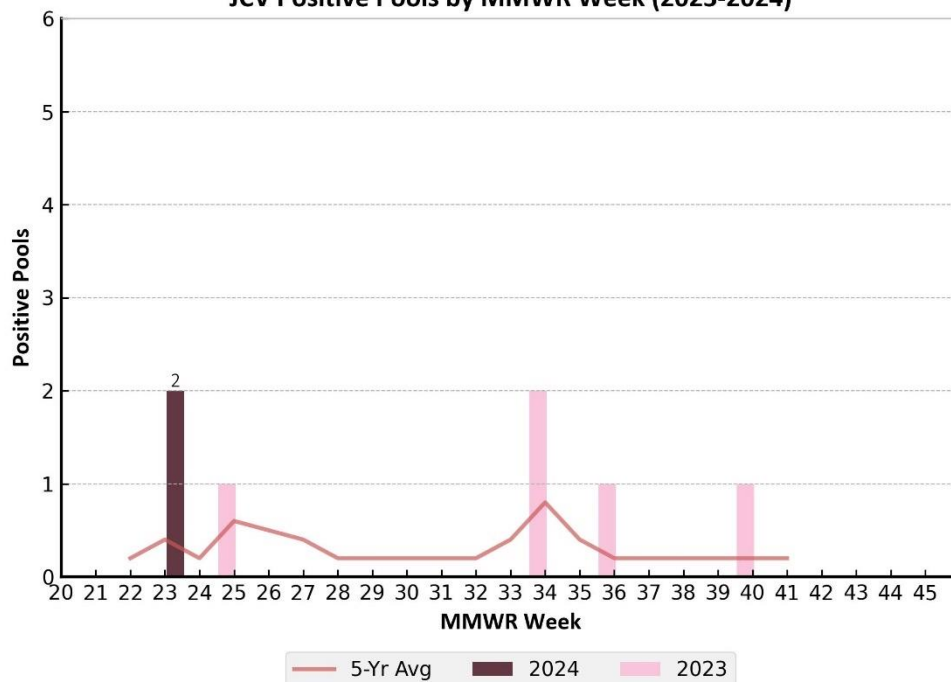
County	WEEK 28 Positive Pools		Cumulative Pos. Total* (WEEK 28)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	180	1.16
Atlantic					132	0
Bergen					131	0
Burlington					66	0
Camden					89	0
Cape May					1519	0
Essex					130	0
Gloucester					257	0
Hudson					85	0
Hunterdon					161	0
Mercer					173	0
Middlesex					134	0
Monmouth					181	0
Morris					158	0
Ocean					124	0
Passaic					95	0
Salem					163	0
Somerset					105	0
Sussex					148	0
Union					104	0
Warren					152	0
Total	0	0	2	1	4,287	-

Cumulative JCV MFIR, 2024



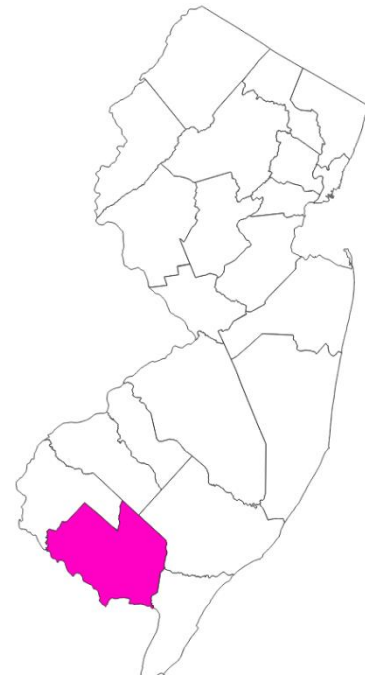
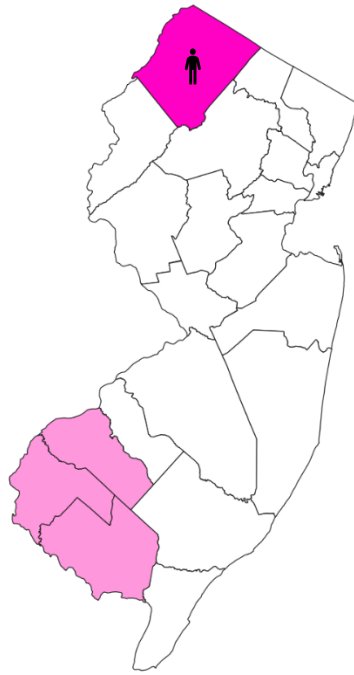
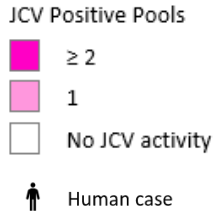
WEEK 28: July 9 - 15, 2023; July 7 - 13, 2024

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	132									
Bergen	131		4		3		3		3	
Burlington	66									
Camden	89		5		1		1		1	
Cape May	1519		80		24		24		24	
Cumberland	180									
Essex	130				1		1		1	
Gloucester	257									
Hudson	85									
Hunterdon	161		1							
Mercer	173		2		1		1		1	
Middlesex	134		6							
Monmouth	181									
Morris	158				2		2		2	
Ocean	124		2							
Passaic	95		2							
Salem	163		5							
Somerset	105									
Sussex	148		12							
Union	104									
Warren	152		10							
Total	4,287	-	129	-	32	-	32	-	32	-

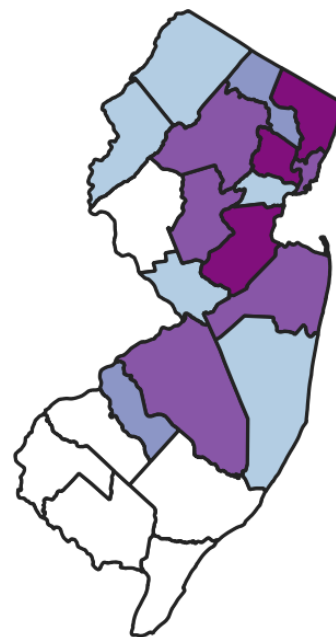
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

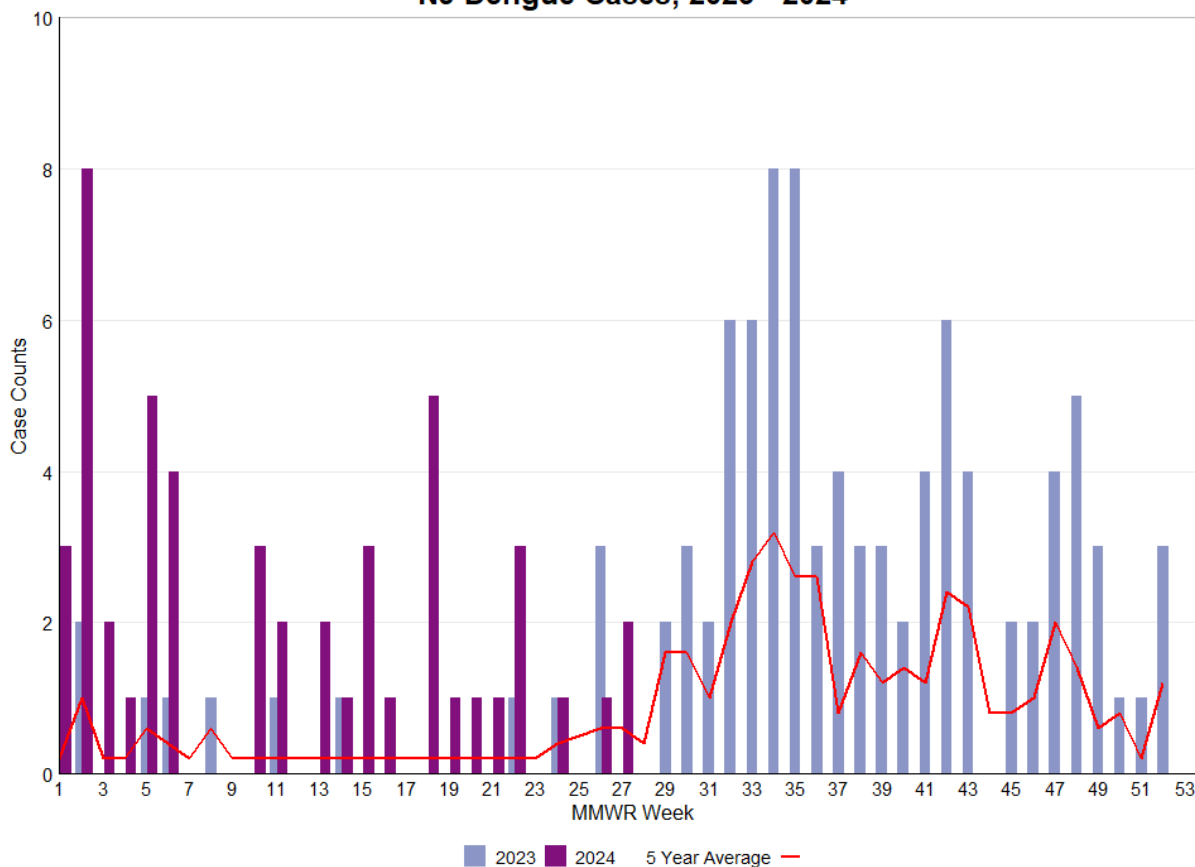
- There have been 50 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (13).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (48) cases have 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 (9), Essex (8), and Middlesex (6) counties.

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

Dengue Cases



NJ Dengue Cases, 2023 - 2024

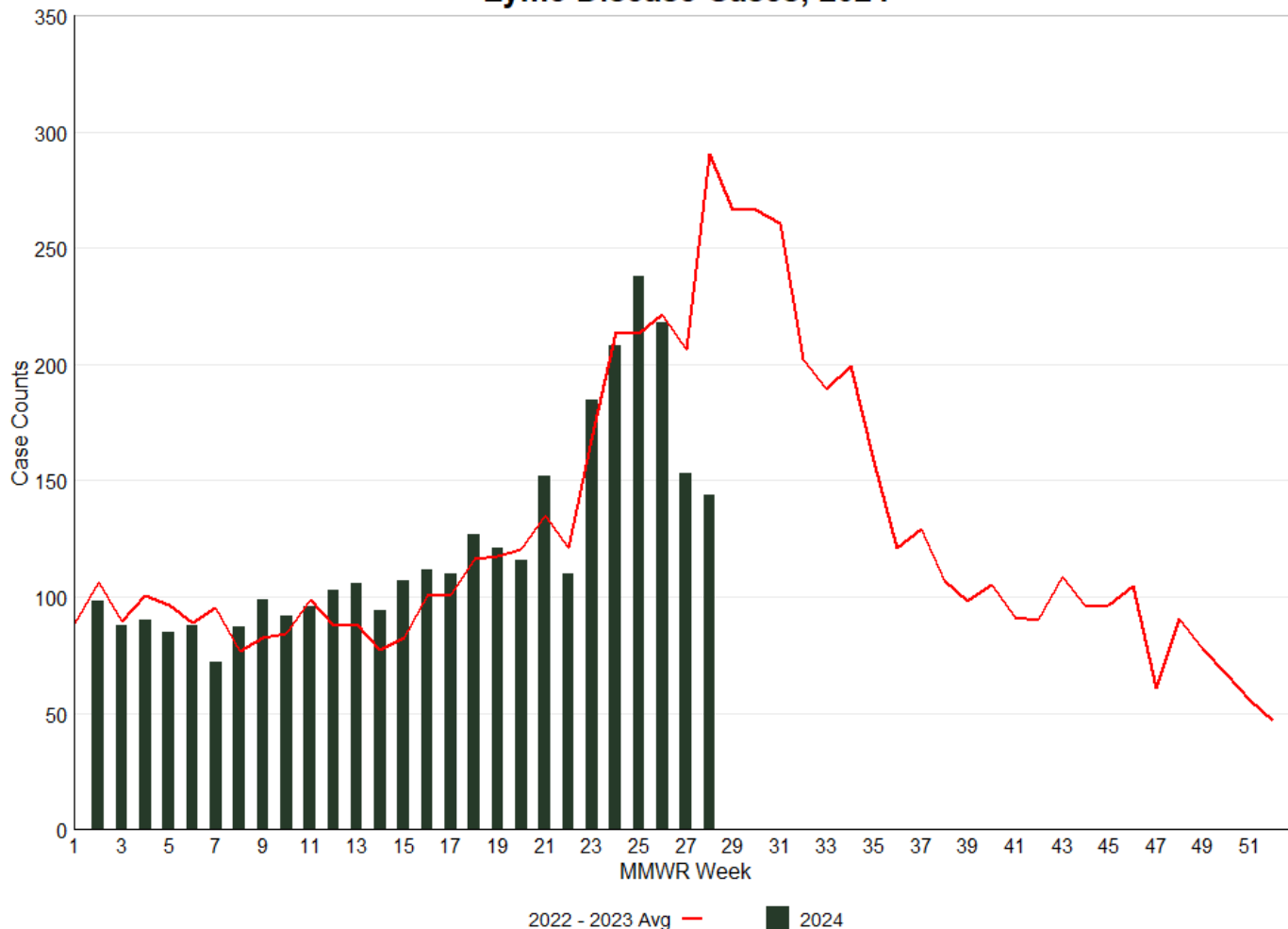


Tickborne Disease Activity

Lyme Disease

- There have been 3,387 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 28 continued to decrease and is below the average number of cases reported this week.

Lyme Disease Cases, 2024

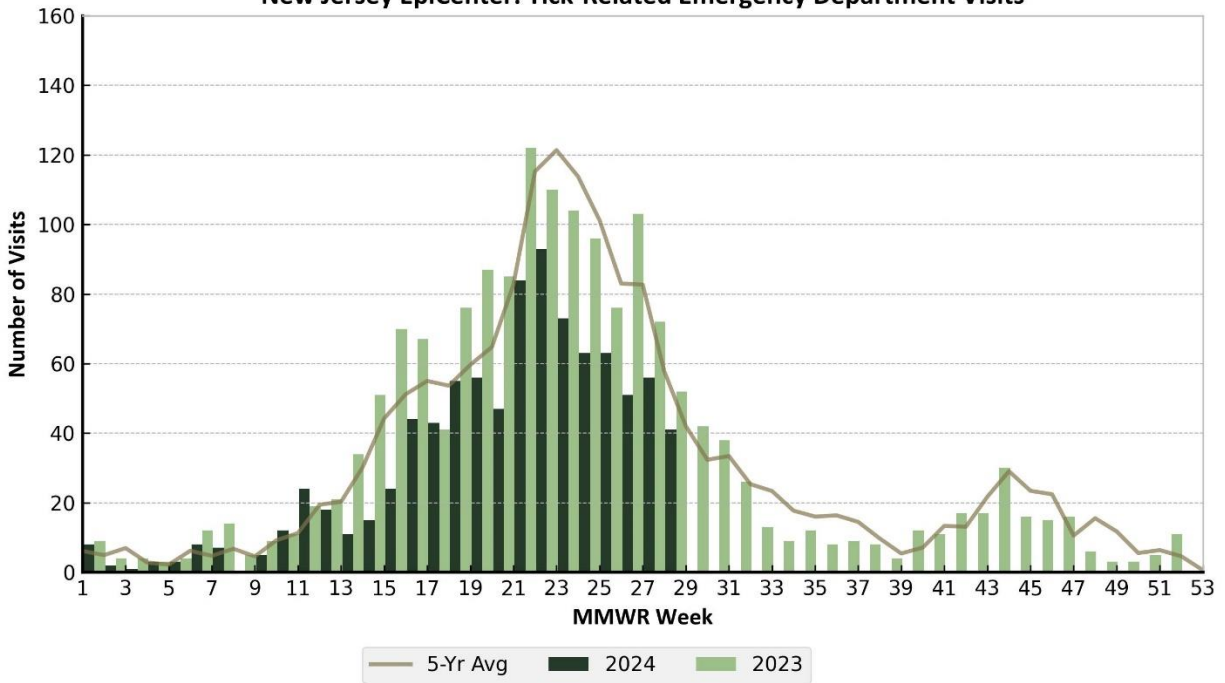


Tick-related Emergency Department Visits

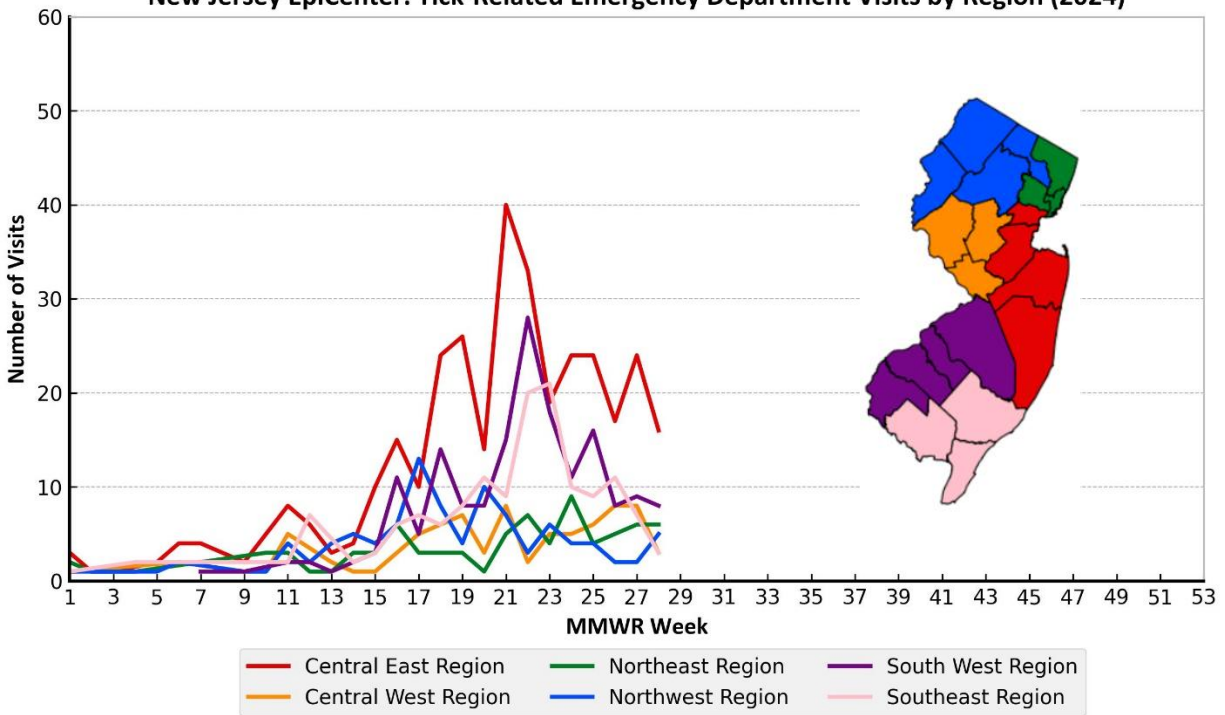
New Jersey’s syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing 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 28, the number of tick-related ED visits decreased and is still 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/>