

Report Highlights:

- *Four mosquito pools tested positive for West Nile Virus (WNV) this week in Hudson, Mercer, and Ocean counties (additional tests pending). There has been a total of 15 WNV positive pools in 2024.*
- *There have been no human or animal cases of WNV reported in New Jersey in 2024.*
- *Two mosquito pools have tested positive for Jamestown Canyon Virus (JCV) 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 (42 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 similar to the average number reported this week in the past two years.*
- *In week 25, the number of tick-related ED visits remained level 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	67	360
Dengue	42	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*	2,854	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

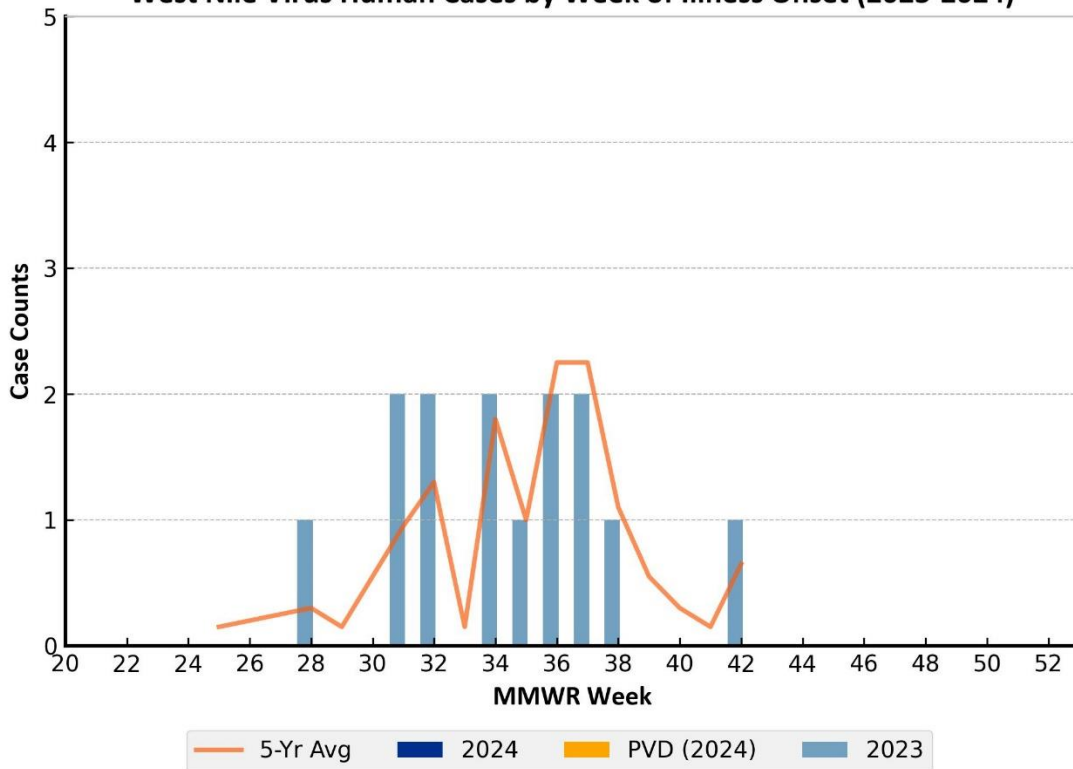
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

**Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on June 26, 2024.*

West Nile Virus

- There have been no human or animal cases of WNV reported in New Jersey in 2024.
- Out of 2,779 mosquito pools submitted for testing, 15 mosquito pools have tested positive for WNV so far this year. 4 pools tested positive in Week 25 in Hudson, Mercer, and Ocean counties. WNV has been detected in *Culex pipiens/restuans/salinarius* (11), *Cx. restuans* (2), *Aedes albopictus* (1), and *Aedes japonicus* (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 25 from Bergen County.

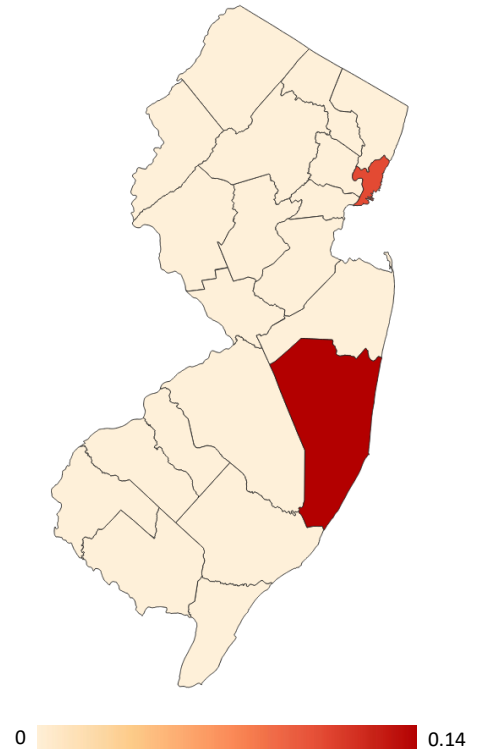
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 25 Positive Pools		Cumulative Pos. Total* (WEEK 25)		# Pools Tested*	WEEK 25 Vector Index	
	2024	2023	2024	2023		2024 [†]	
Cape May			2		1055	0.00	(-)
Gloucester			2		189	0.00	(-)
Mercer	1		2		119	0.00	(-)
Ocean	2		2		86	0.14	(↑)
Hudson	1		1		46	0.11	(↑)
Hunterdon			1		103	0.00	(-)
Monmouth			1		112	0.00	(-)
Morris			1		118	0.00	(-)
Somerset		1	1	1	60	0.00	(↓)
Union		1	1	1	46	0.00	(↓)
Warren			1		100	0.00	(-)
Atlantic					84	0.00	(-)
Bergen				1	91	0.00	(-)
Burlington					5	0.00	(-)
Camden					46	0.00	(-)
Cumberland					120	0.00	(-)
Essex					70	0.00	(-)
Middlesex					80	0.00	(-)
Passaic					59	0.00	(-)
Salem					90	0.00	(-)
Sussex					100	0.00	(-)
Total	4	2	15	3	2,779	-	

WNV Vector Index, WEEK 25[†]

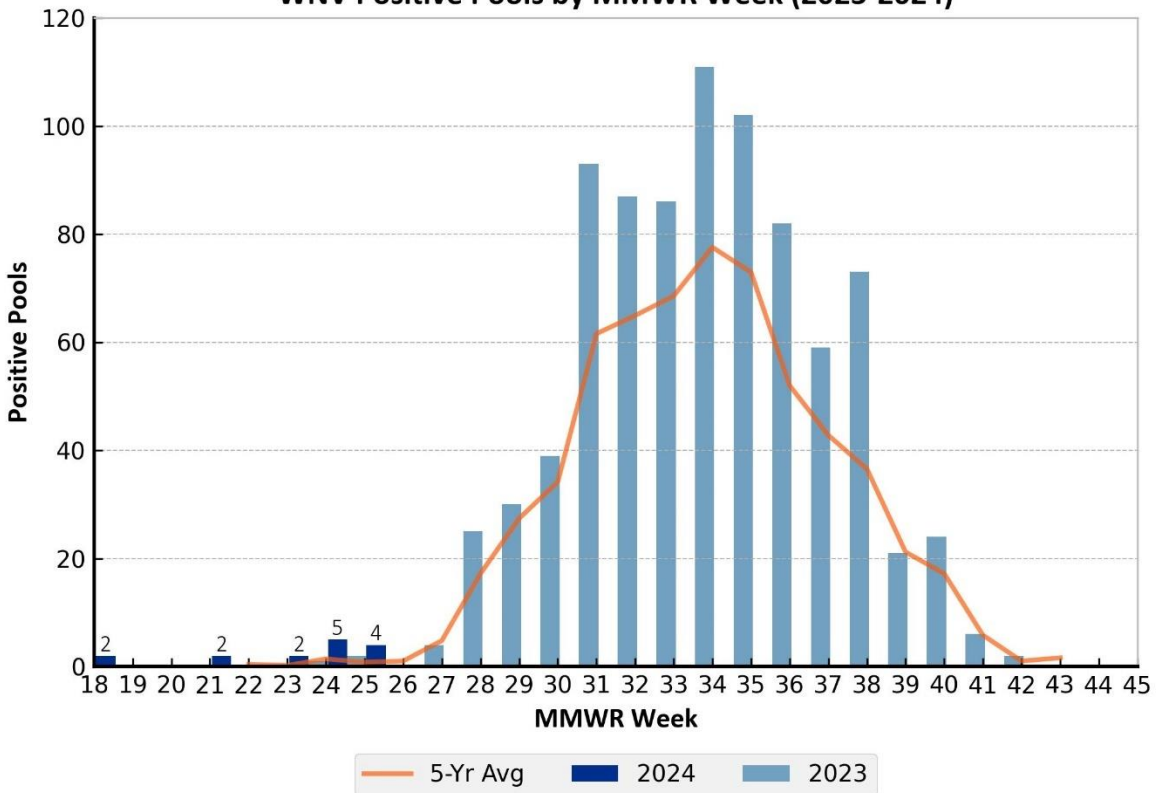


[†]Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

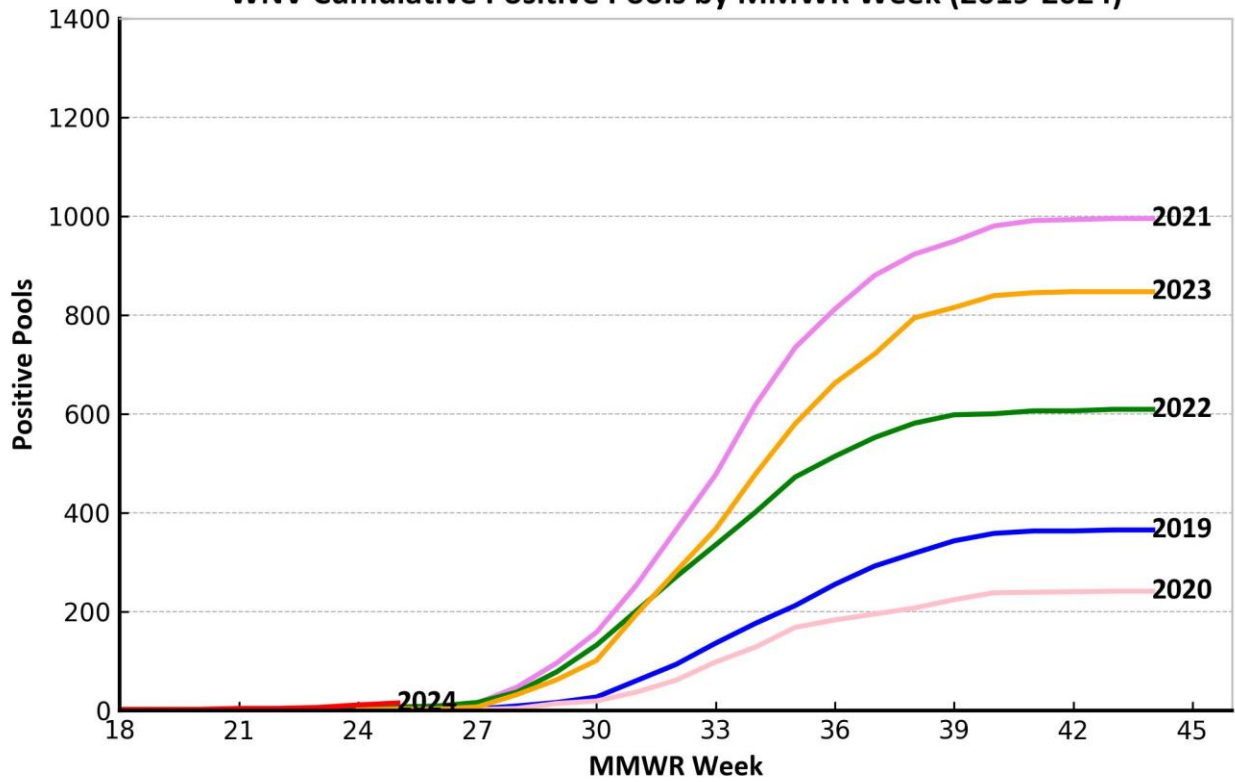
WEEK 25: June 18 - 24, 2023; June 16 - 22, 2024.

*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)

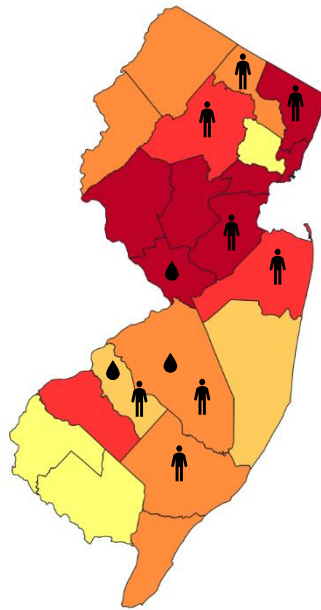
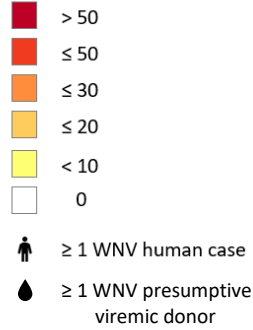


WNV Cumulative Positive Pools by MMWR Week (2019-2024)

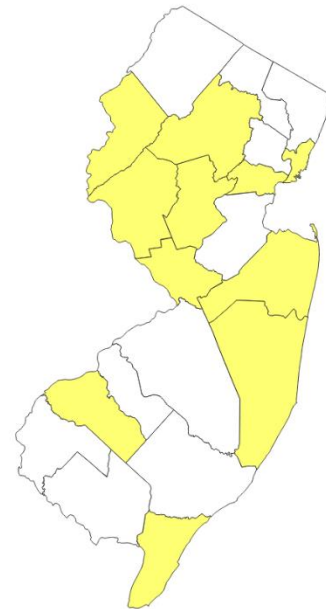


2023 WNV Activity

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 2,769 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

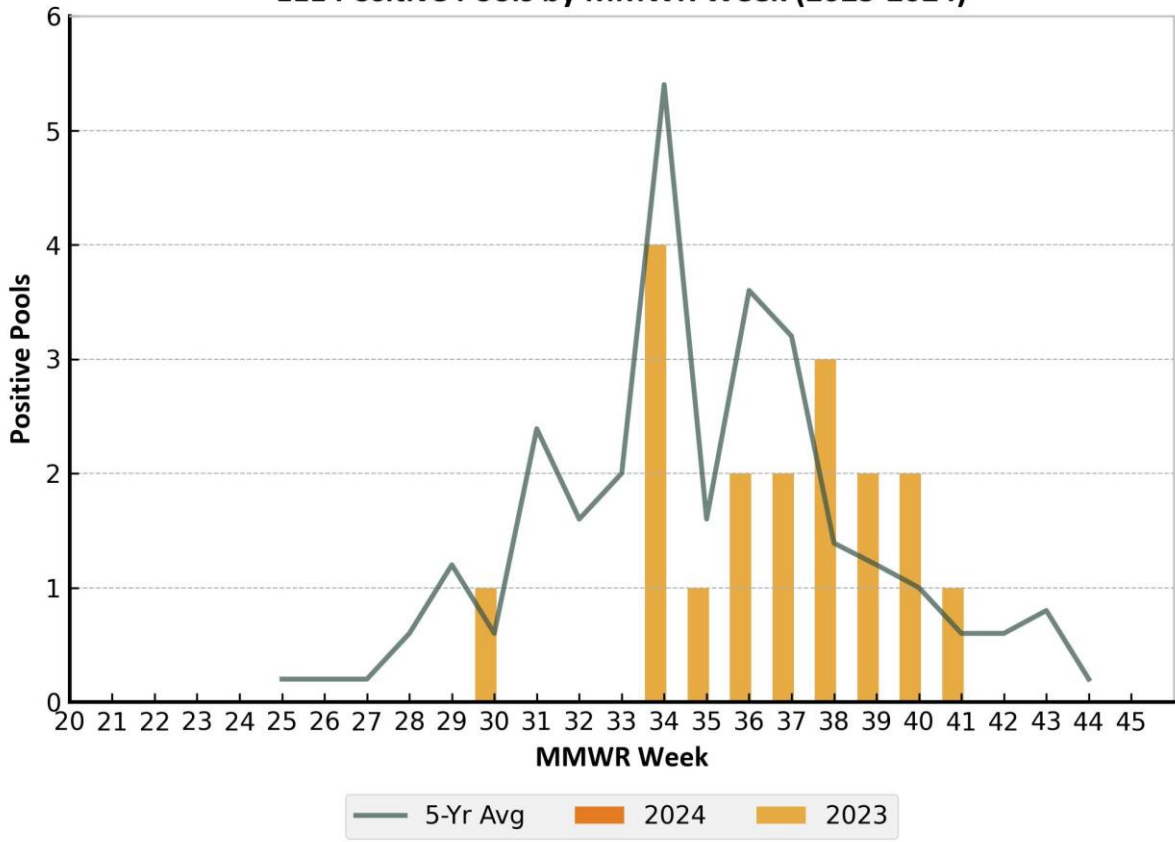
County	WEEK 25 Positive Pools		Cumulative Pos. Total* (WEEK 25)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Atlantic					84	
Bergen					91	
Burlington					5	
Camden					44	
Cape May					1055	
Cumberland					120	
Essex					70	
Gloucester					189	
Hudson					46	
Hunterdon					103	
Mercer					117	
Middlesex					80	
Monmouth					112	
Morris					118	
Ocean					85	
Passaic					59	
Salem					90	
Somerset					60	
Sussex					96	
Union					46	
Warren					99	
Total	0	0	0	0	2,769	-

Cumulative EEE MFIR, 2024



WEEK 25: June 18 - 24, 2023; June 16 - 22, 2024

EEE Positive Pools by MMWR Week (2023-2024)



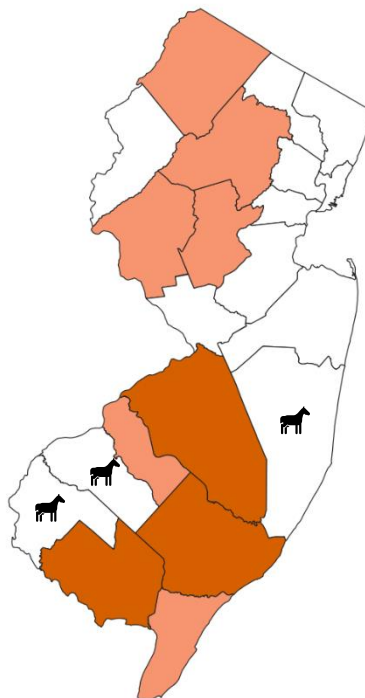
2023 EEE Activity

Cumulative EEE Activity, 2024

EEE Positive Pools

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

Equine case



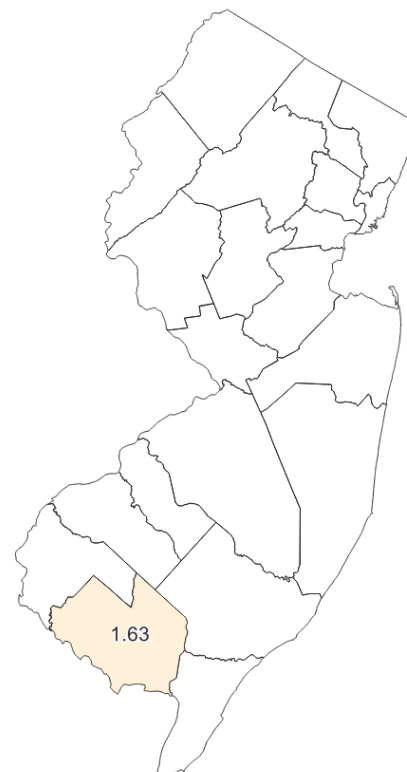
Jamestown Canyon Virus (JCV)

- 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 2,769 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) mosquitoes.
- In 2023, the first JCV positive pool was detected in week 25 from Cumberland County.

JCV Mosquito Pool Testing

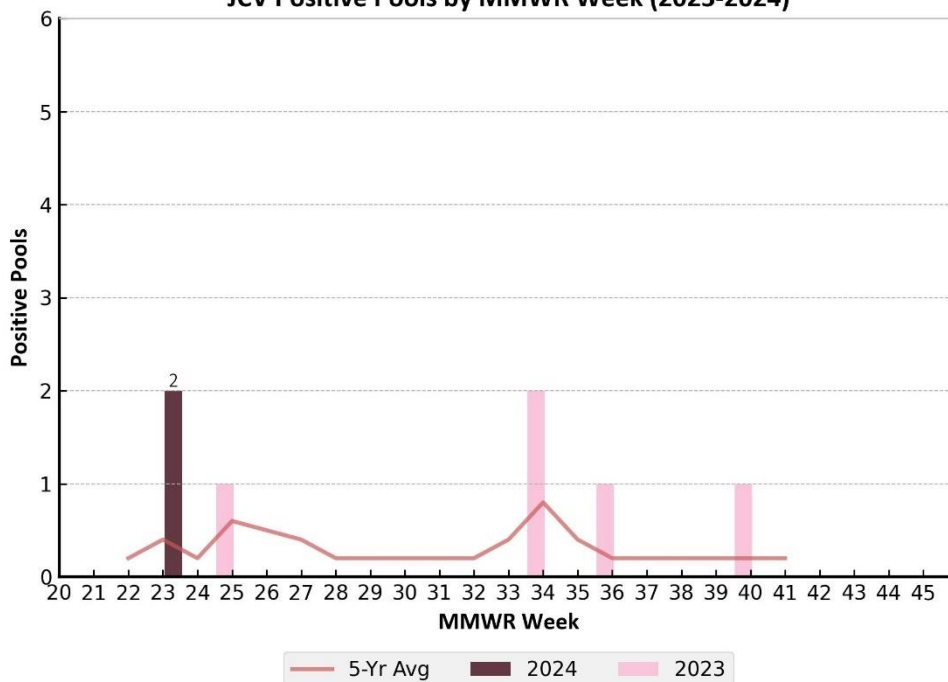
County	WEEK 25 Positive Pools		Cumulative Pos. Total* (WEEK 25)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland		1	2	1	120	1.63
Atlantic					84	
Bergen					91	
Burlington					5	
Camden					44	
Cape May					1055	
Essex					70	
Gloucester					189	
Hudson					46	
Hunterdon					103	
Mercer					117	
Middlesex					80	
Monmouth					112	
Morris					118	
Ocean					85	
Passaic					59	
Salem					90	
Somerset					60	
Sussex					96	
Union					46	
Warren					99	
Total	0	1	2	1	2,769	-

Cumulative JCV MFIR, 2024



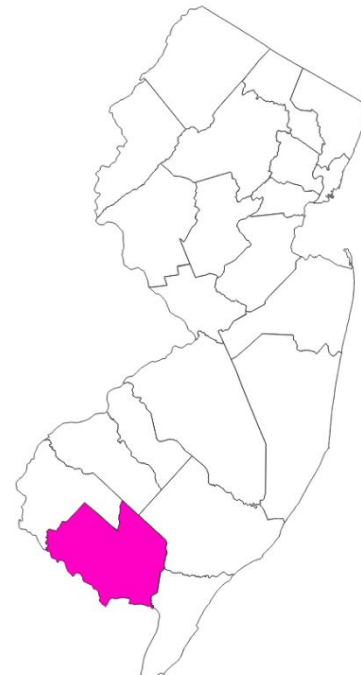
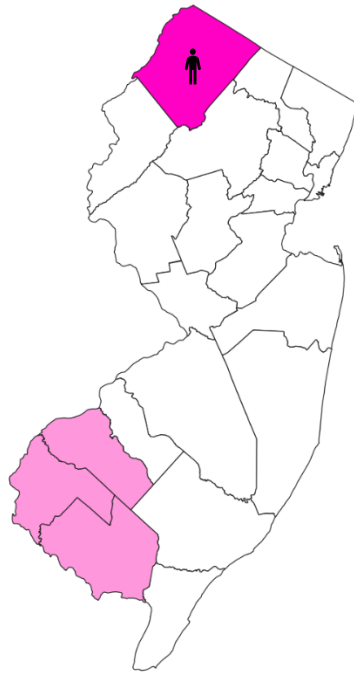
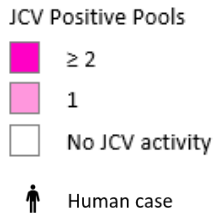
WEEK 25: June 18 - 24, 2023; June 16 - 22, 2024

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	84									
Bergen	91									
Burlington	5									
Camden	44		2		1		1		1	
Cape May	1055		27		12		12		12	
Cumberland	120									
Essex	70									
Gloucester	189									
Hudson	46									
Hunterdon	103									
Mercer	117		2							
Middlesex	80									
Monmouth	112									
Morris	118				2		2		2	
Ocean	85		1							
Passaic	59									
Salem	90		1							
Somerset	60									
Sussex	96		4							
Union	46									
Warren	99		1							
Total	2,769	-	38	-	15	-	15	-	15	-

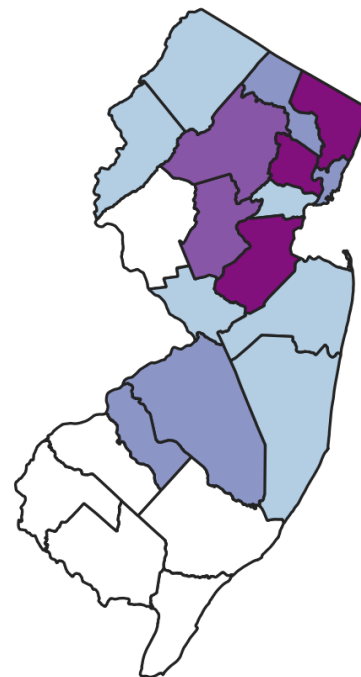
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

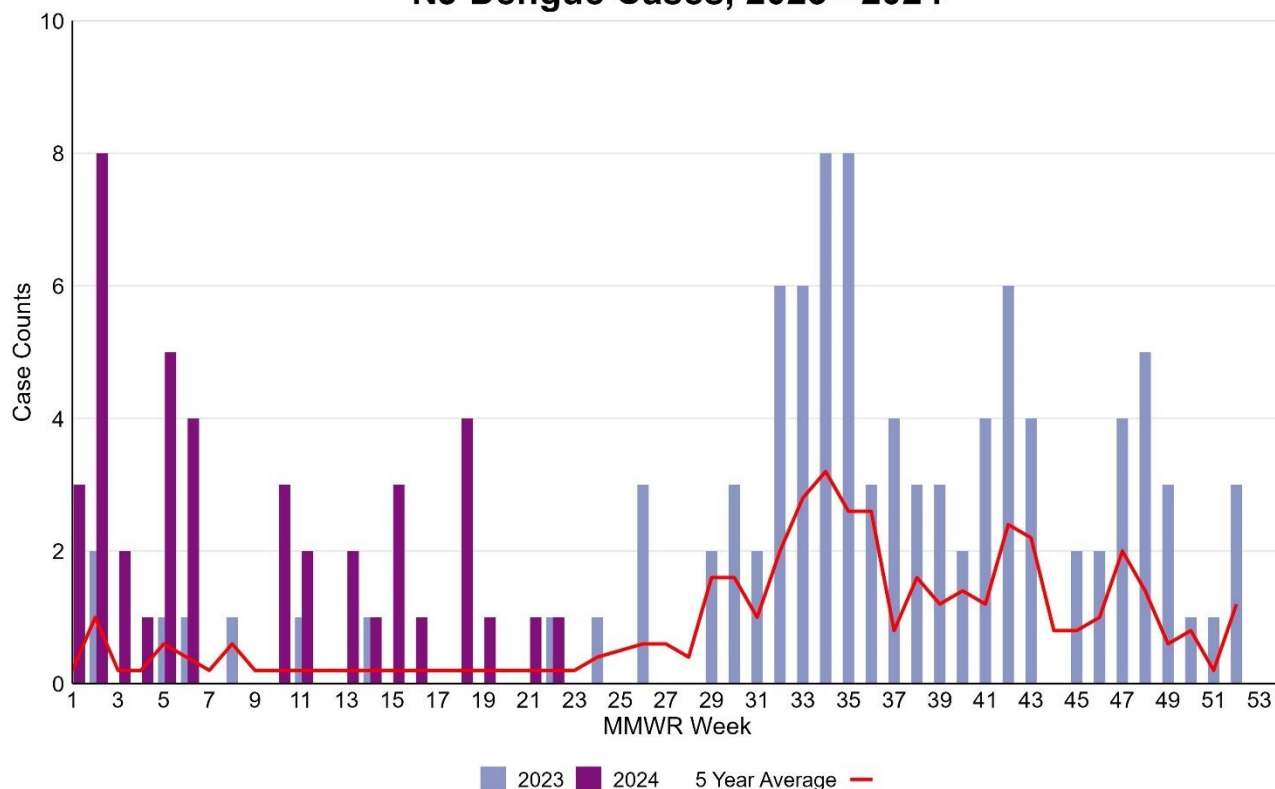
- There have been 42 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (10).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (41) cases have 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 (6) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	8
Puerto Rico	5
Brazil	4
Guatemala	4
Colombia	3
Ecuador	3
Aruba	2
Costa Rica	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

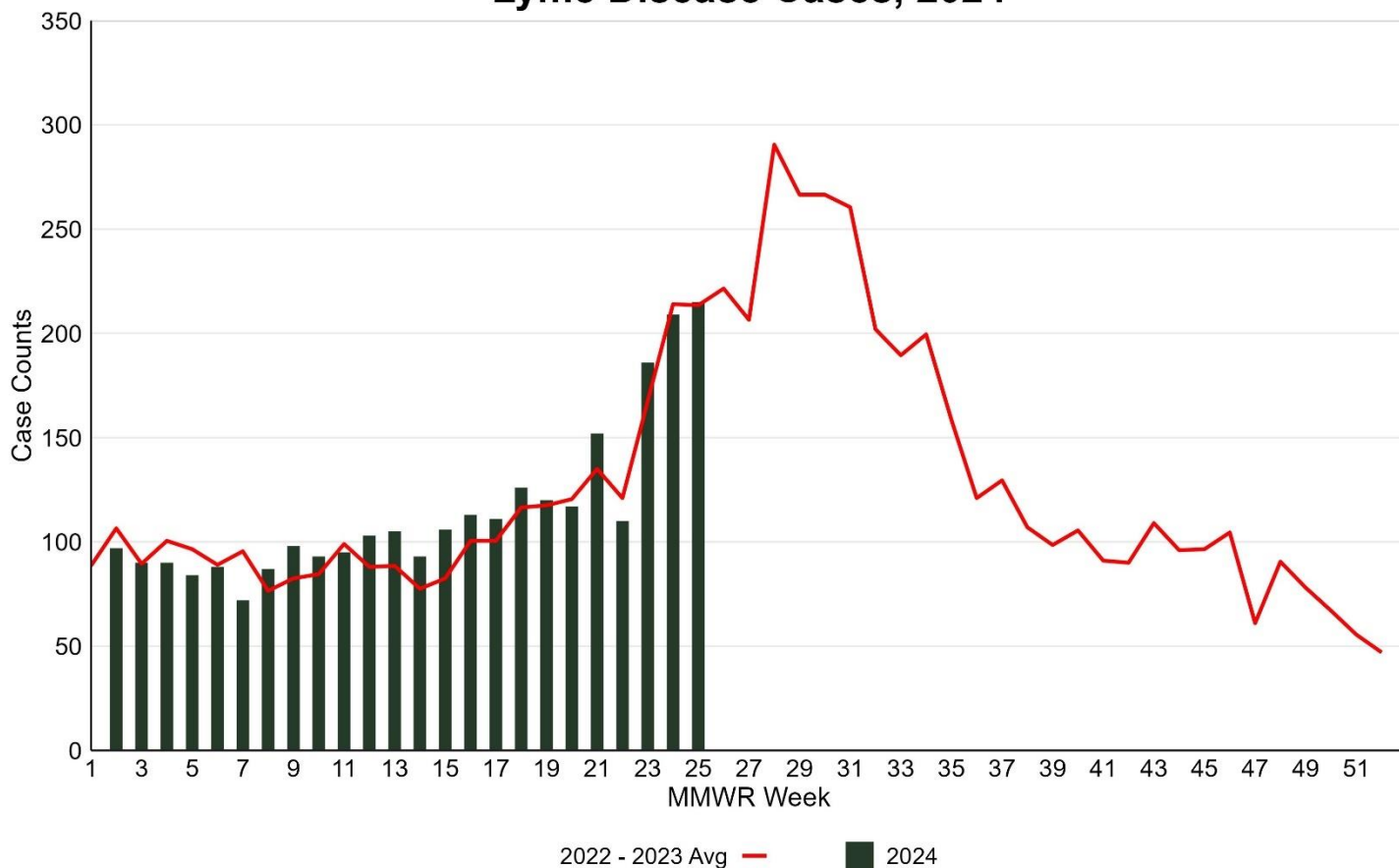


Tickborne Disease Activity

Lyme Disease

- There have been 2,804 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 25 slightly increased and is similar to the average number of cases reported this week.

Lyme Disease Cases, 2024

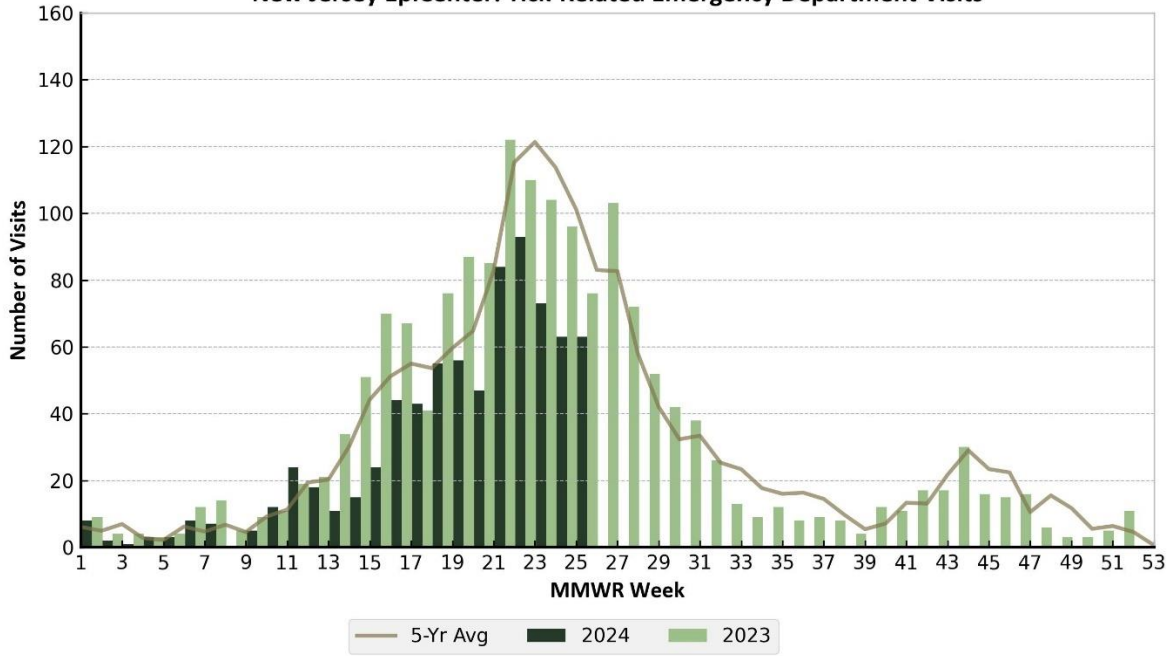


Tick-related Emergency Department Visits

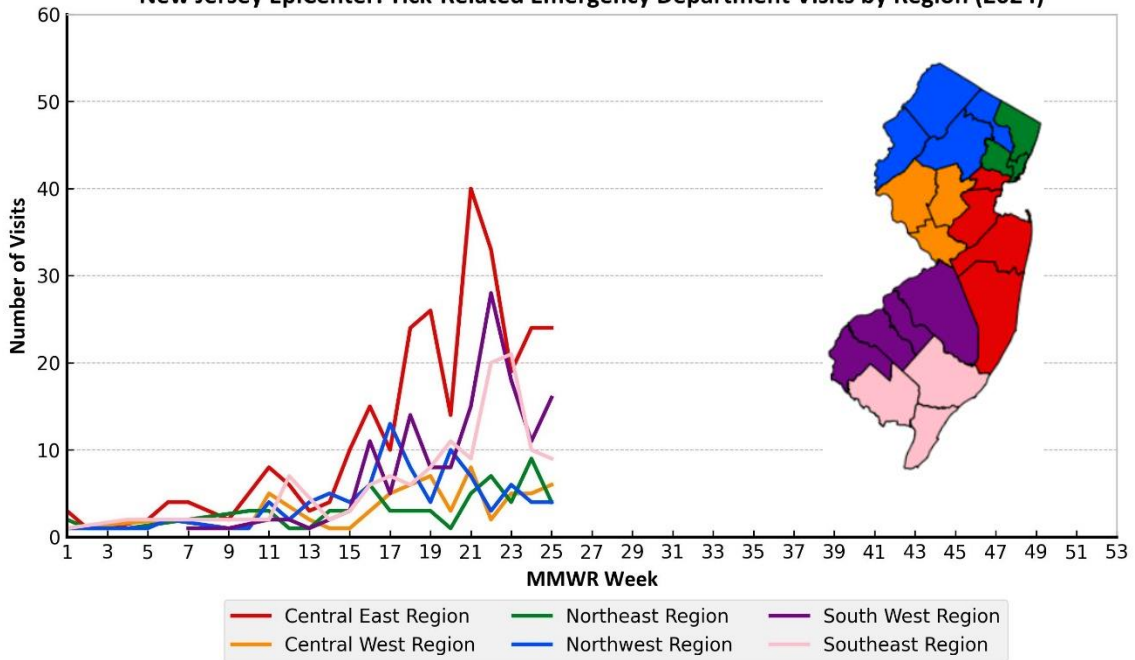
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 25, the number of tick-related ED visits remained level 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/>