

Report Highlights:

- **New Jersey is reporting two human cases of WNV in week 27 from Middlesex and Union counties. In addition, there is a report of one viremic blood donor (PVD) reported in week 29 from Somerset County.**
- **Sixty mosquito pools tested positive for West Nile Virus (WNV) this week in 11 counties (additional tests pending). The number of positive pools this week is higher than the 5-year average. There has been a total of 286 WNV positive pools in 2024.**
- **Three mosquito pools have tested positive for EEE in 2024 in Cape May, Morris, and Union counties.**
- **One human case of Jamestown Canyon Virus (JCV) was reported in week 19 from Sussex County. There was 1 JCV case reported in 2023 also from Sussex County.**
- **The number of travel-associated dengue cases is considerably higher in 2024 (57 cases) compared to the same timeframe in 2023 (18 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week continued to decrease and is below the average number reported this week in the past two years. The number of several other tickborne diseases is lower this year than expected.**
- **In week 30, the number of tick-related ED visits continued to decrease and is lower than the 5-year average. The highest number of visits continues to be 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	92	360
Dengue	57	98	Anaplasmosis	73	195
Eastern equine encephalitis	-	-	Babesiosis	121	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	6	18
Malaria	36	102	Ehrlichiosis	37	109
West Nile	2	14	Lyme disease*	3,850	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	6	24
			Tularemia	2	2

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

Mosquito-borne Disease Activity

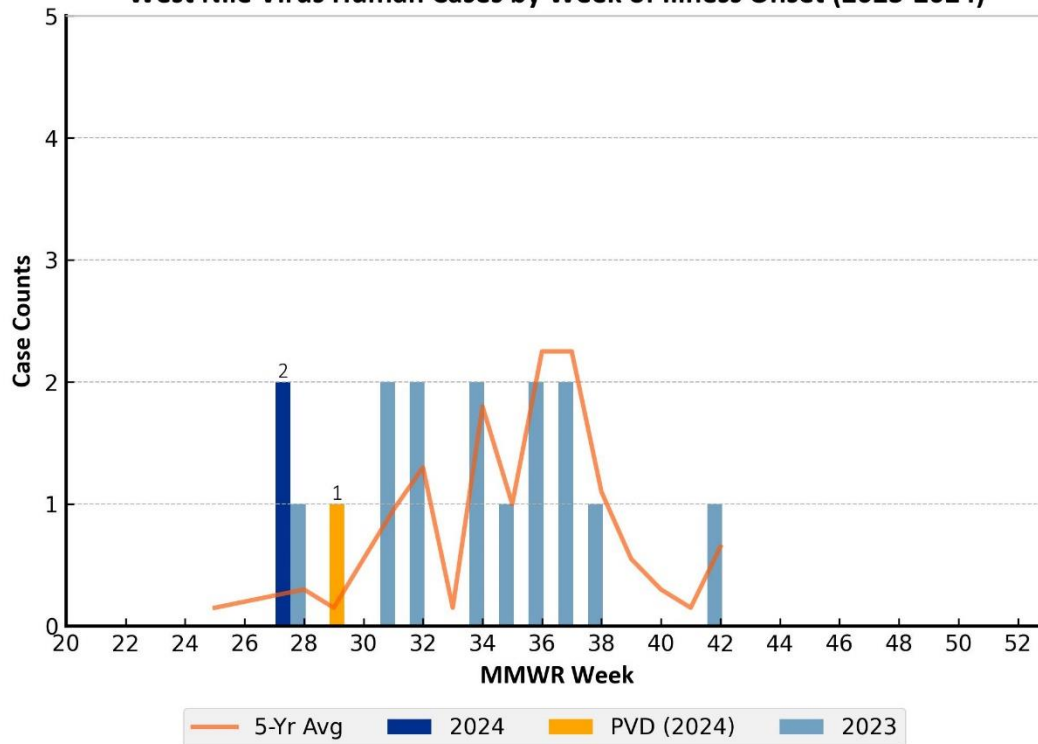
The New Jersey Department of Health Public Health and Environmental Laboratories (PHEL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

**Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on July 31, 2024.*

West Nile Virus

- Two human cases of WNV have been reported in week 27 from Middlesex and Union counties. There has been one presumptive viremic donor (PVD) in week 29 from Somerset County. No animal cases of WNV have been reported in 2024.
- Out of 5,602 mosquito pools submitted for testing, 286 mosquito pools have tested positive for WNV this year. 60 pools tested positive in Week 30 in 11 counties (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (257), *Aedes japonicus* (6), *Cx. pipiens* (5), *Cx. restuans* (4), *Aedes albopictus* (9), *Aedes triseriatus* (2), *Coquillettidia perturbans* (1), *Cx. salinarius* (1), and *Culiseta melanura* (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.

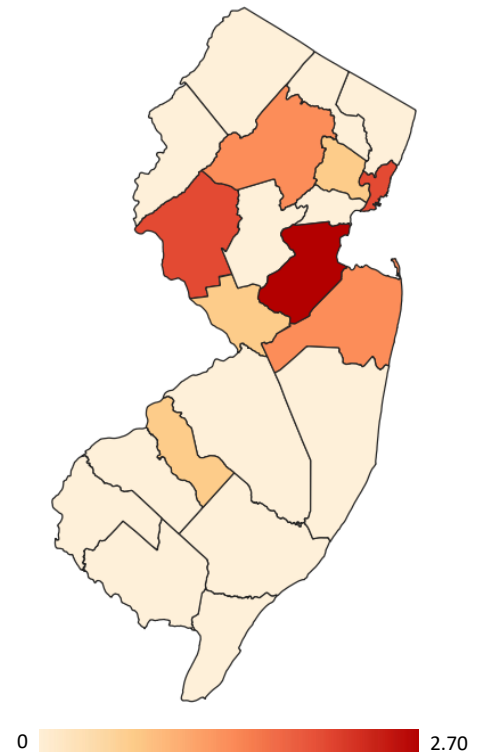
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 30 Positive Pools		Cumulative Pos. Total* (WEEK 30)		# Pools Tested*	WEEK 30 Vector Index	
	2024	2023	2024	2023		2024 ^t	
Middlesex	15	6	38	6	179	2.70	(↑)
Hudson	10	6	34	9	136	2.30	(↑)
Bergen	14	4	33	31	165	0.00	(↓)
Union	2	6	29	14	133	0.00	(-)
Passaic			20		135	0.00	(-)
Gloucester		2	15	3	311	0.00	(-)
Hunterdon	6	2	15	6	199	2.12	(↑)
Somerset		3	15	5	140	0.00	(-)
Monmouth	2		14		226	0.84	(↑)
Morris	4	3	12	6	218	0.52	(↑)
Mercer	4	3	11	4	218	0.25	(↑)
Burlington			10	1	88	0.00	(↓)
Essex	1		10		172	0.14	(↓)
Cape May	1		9	3	1951	0.00	(↓)
Warren		2	9	2	199	0.00	(-)
Ocean			5		183	0.00	(↓)
Salem			3	1	218	0.00	(-)
Camden	1	1	2	6	115	0.14	(↑)
Atlantic		1	1	4	196	0.00	(-)
Sussex			1		200	0.00	(-)
Cumberland					220	0.00	(-)
Total	60	39	286	101	5,602	-	

WNV Vector Index, WEEK 30^t

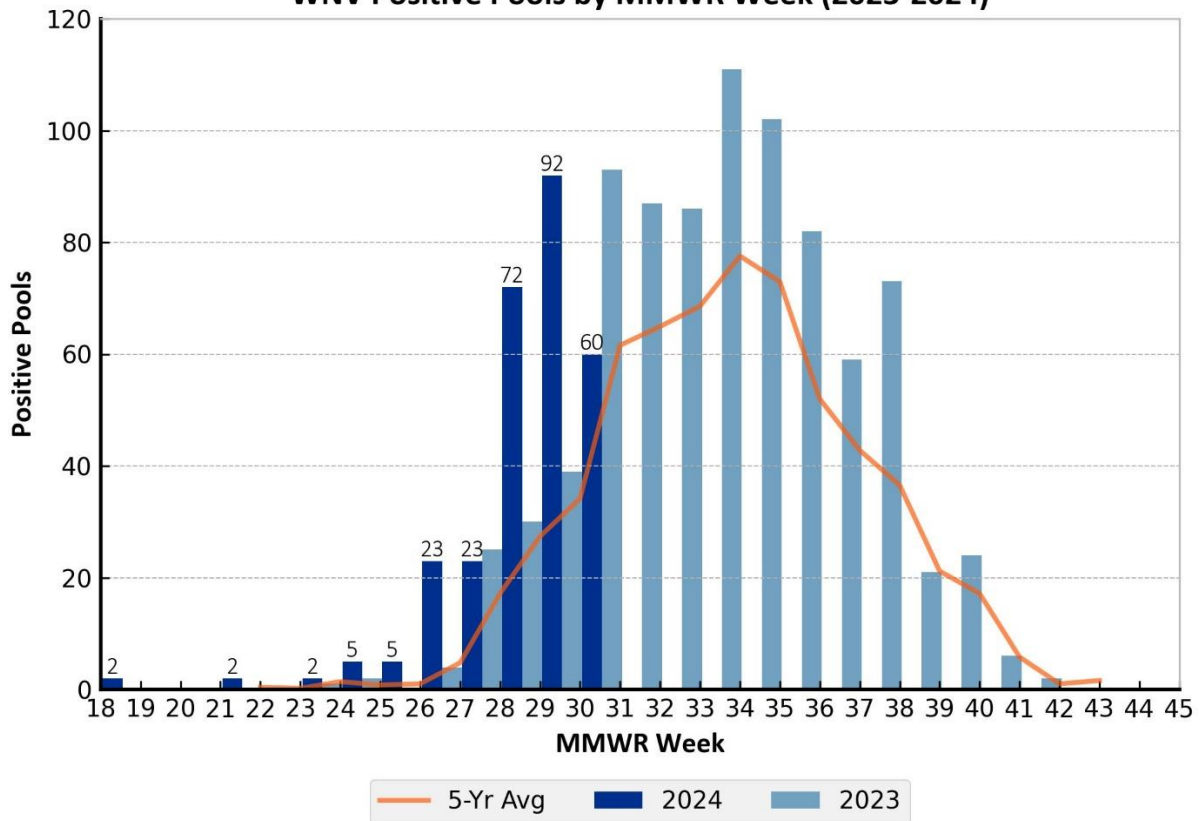


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

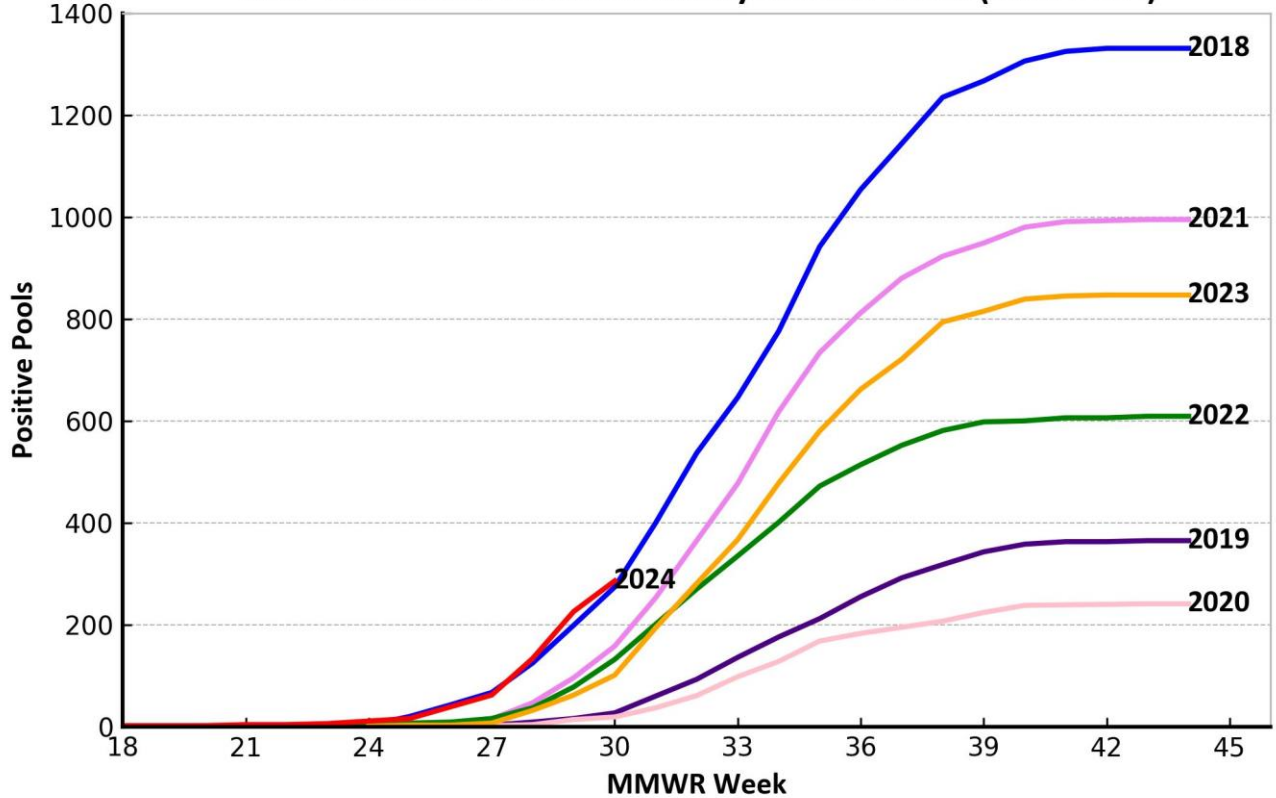
WEEK 30: July 23 - 29, 2023; July 21 - 27, 2024.

*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)



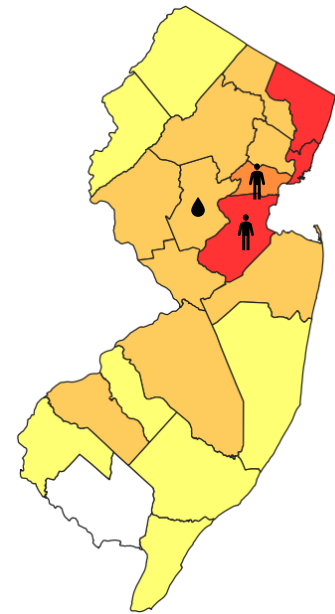
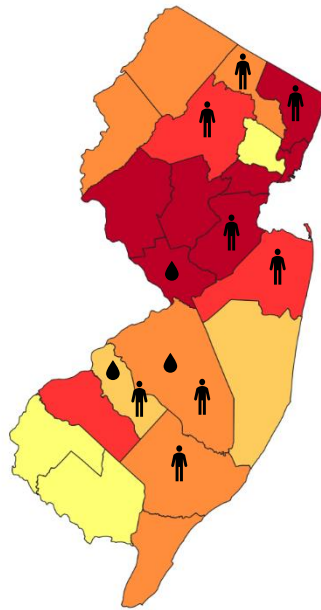
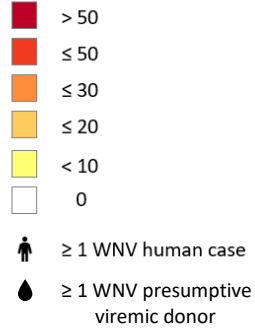
WNV Cumulative Positive Pools by MMWR Week (2018-2024)



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 2024. EEE human cases were last reported in 2019 (4 cases).
- Out of 5,554 mosquito pools tested for EEE, three pools have tested positive in 2024. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), and *Cx. pipiens/restuans/salinarius* (1) 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

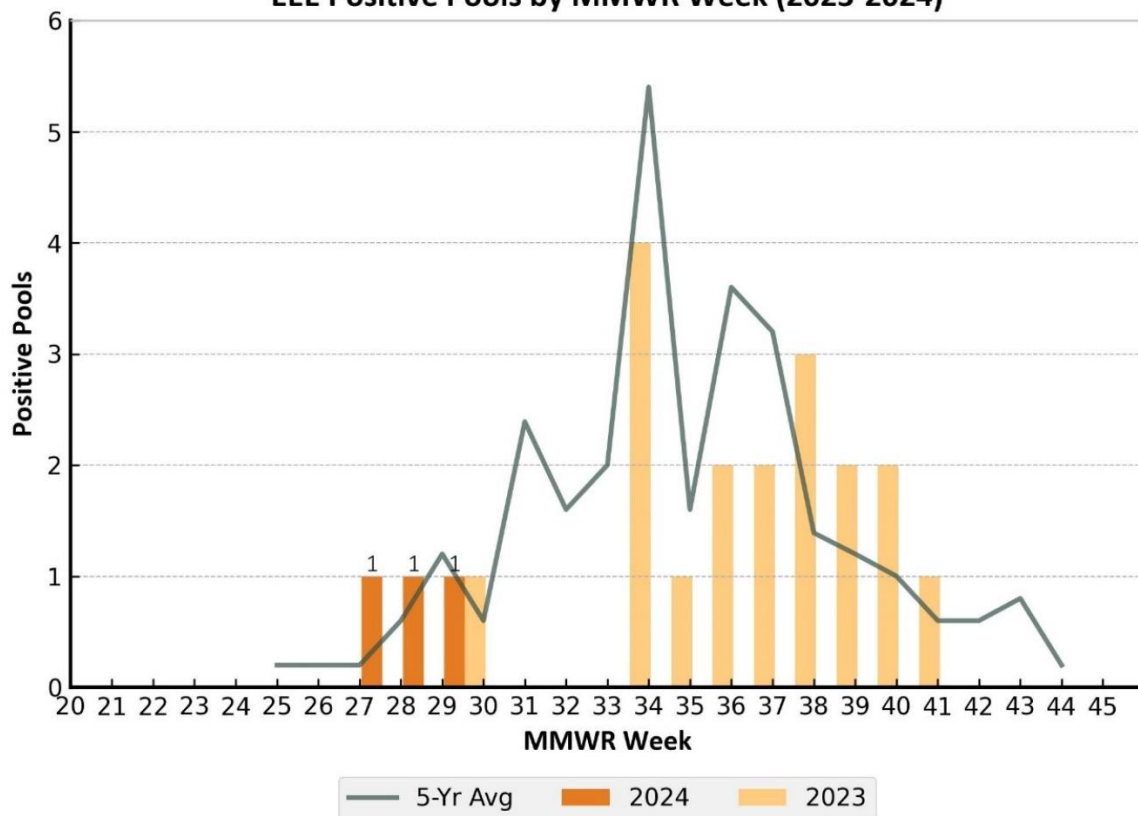
County	WEEK 30 Positive Pools		Cumulative Pos. Total* (WEEK 30)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cape May			1		1951	0.05
Morris			1		218	0.11
Union			1		133	0.16
Atlantic					196	
Bergen					165	
Burlington					87	
Camden					108	
Cumberland		1		1	220	
Essex					172	
Gloucester					311	
Hudson					136	
Hunterdon					197	
Mercer					216	
Middlesex					173	
Monmouth					226	
Ocean					181	
Passaic					135	
Salem					218	
Somerset					140	
Sussex					182	
Warren					189	
Total	0	1	3	1	5,554	-

Cumulative EEE MFIR, 2024



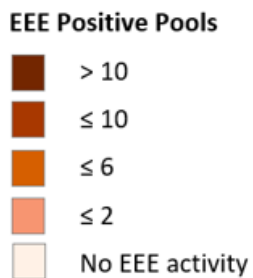
WEEK 30: July 23 - 29, 2023; July 21 - 27, 2024

EEE Positive Pools by MMWR Week (2023-2024)

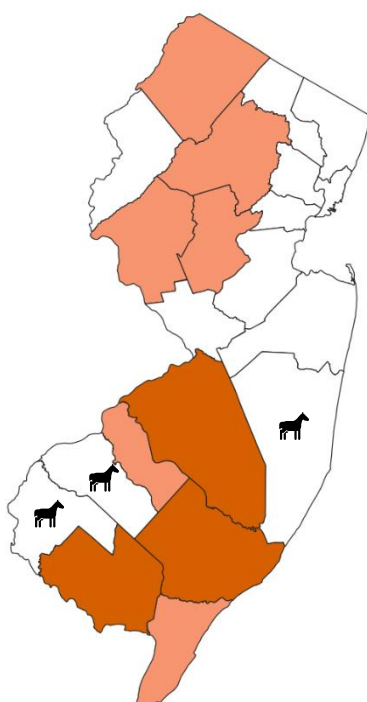


2023 EEE Activity

Cumulative EEE Activity, 2024



Equine case



Jamestown Canyon Virus (JCV)

- There has been one human case of JCV reported in New Jersey in 2024 in week 19 from Sussex County. In 2023, there was one human case of JCV in week 42 from Sussex County.
- Out of 5,554 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 23 from Cumberland County.

JCV Mosquito Pool Testing

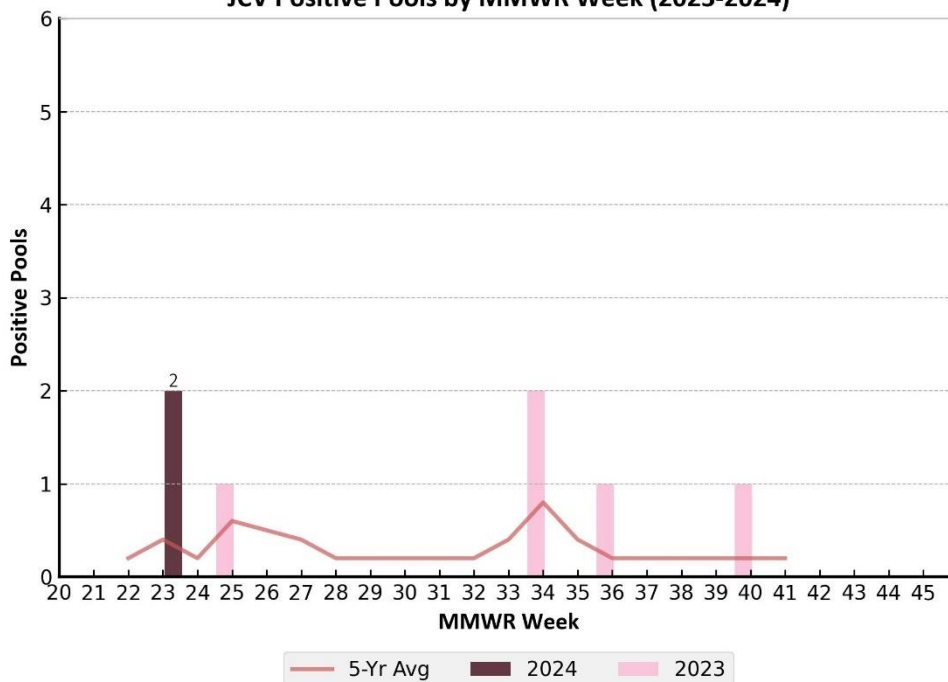
County	WEEK 30 Positive Pools		Cumulative Pos. Total* (WEEK 30)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	220	1.07
Atlantic					196	
Bergen					165	
Burlington					87	
Camden					108	
Cape May					1951	
Essex					172	
Gloucester					311	
Hudson					136	
Hunterdon					197	
Mercer					216	
Middlesex					173	
Monmouth					226	
Morris					218	
Ocean					181	
Passaic					135	
Salem					218	
Somerset					140	
Sussex					182	
Union					133	
Warren					189	
Total	0	0	2	1	5,554	-

Cumulative JCV MFIR, 2024



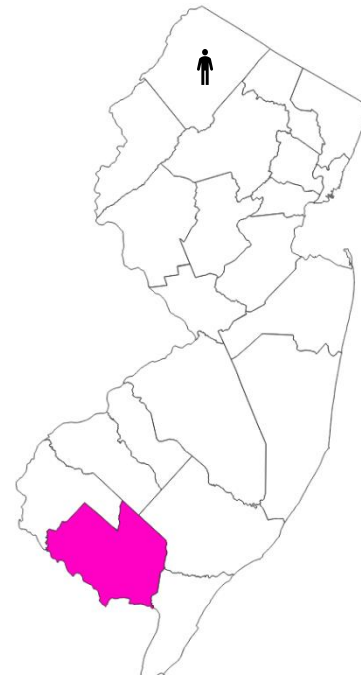
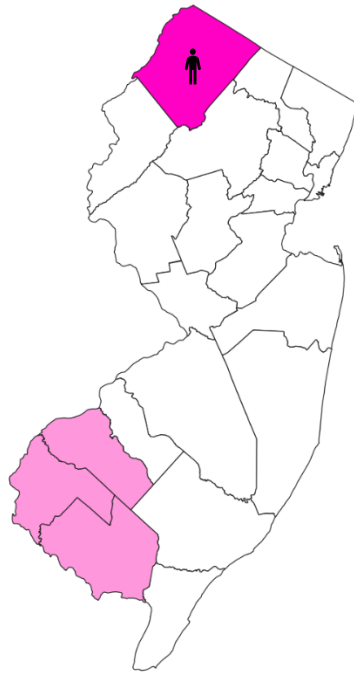
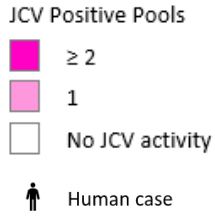
WEEK 30: July 23 - 29, 2023; July 21 - 27, 2024

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^a)

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	196									
Bergen	165		4		4		4		4	
Burlington	87		1							
Camden	108		7		1		1		1	
Cape May	1951		116		60		60		60	
Cumberland	220									
Essex	172				1		1		1	
Gloucester	311									
Hudson	136									
Hunterdon	197		2							
Mercer	216		2		1		1		1	
Middlesex	173		6							
Monmouth	226									
Morris	218				2		2		2	
Ocean	181		2							
Passaic	135		2							
Salem	218		6							
Somerset	140									
Sussex	182		18							
Union	133									
Warren	189		10							
Total	5,554	-	176	-	69	-	69	-	69	-

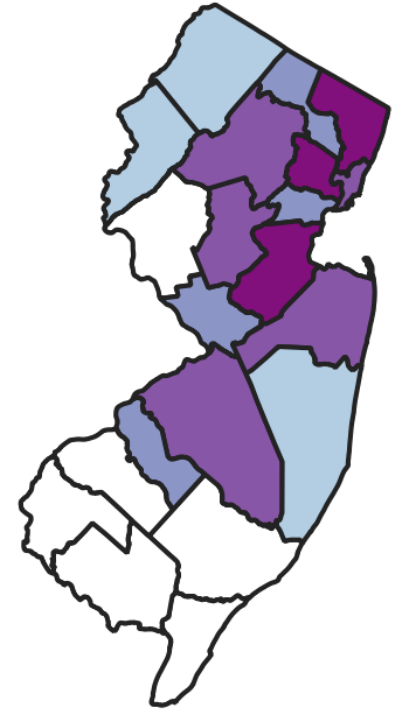
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

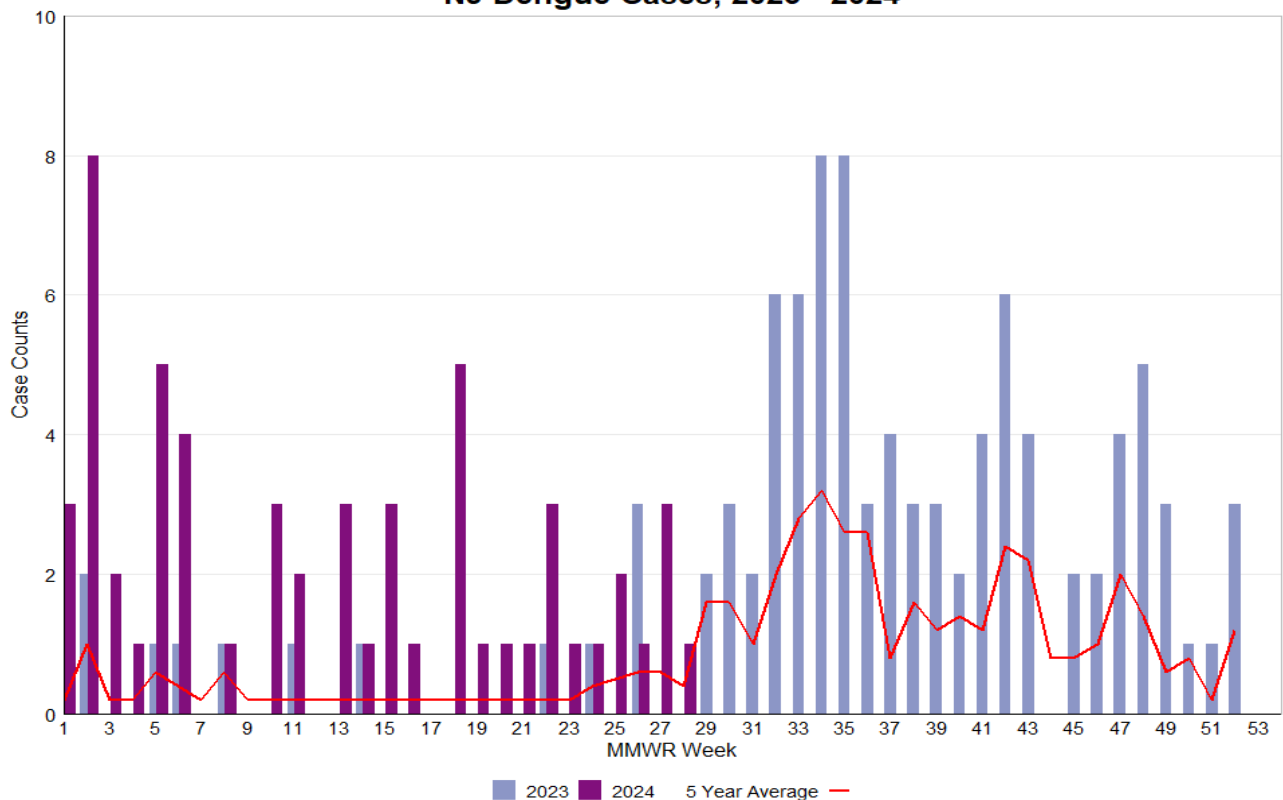
- There have been 57 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (18).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (55) cases have 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 (11), Essex (8), and Middlesex (7) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	10
Puerto Rico	8
Brazil	6
Colombia	4
Guatemala	4
Mexico	4
Ecuador	3
Aruba	2
Costa Rica	2
Guyana	2
India	2
Martinique	2
Peru	2
Antigua and Barbuda	1
Cuba	1
El Salvador	1
Honduras	1
Paraguay	1
U.S. Virgin Islands	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024

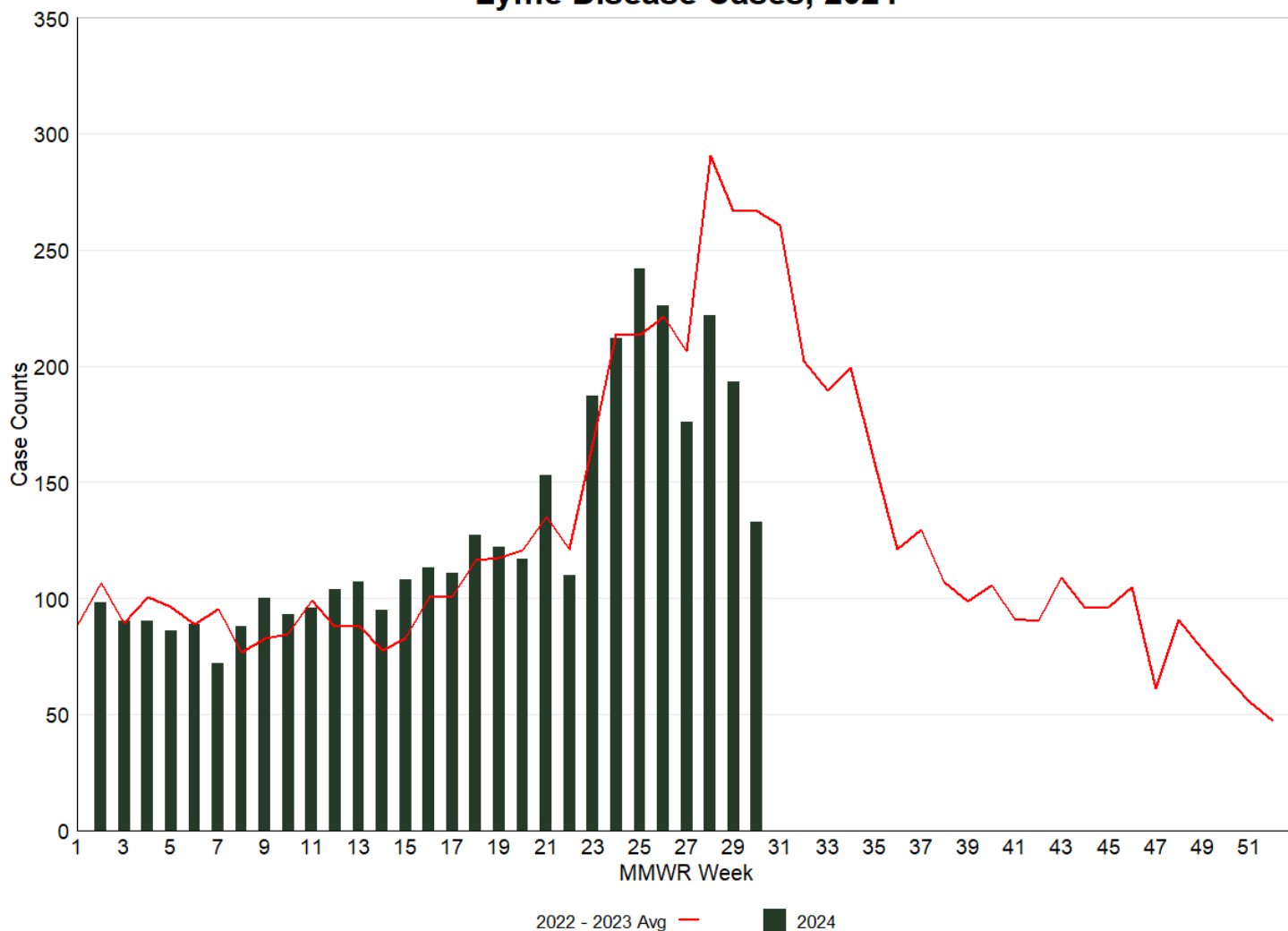


Tickborne Disease Activity

Lyme Disease

- There have been 3,850 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 30 continued to decrease and is below the average number of cases reported this week.

Lyme Disease Cases, 2024

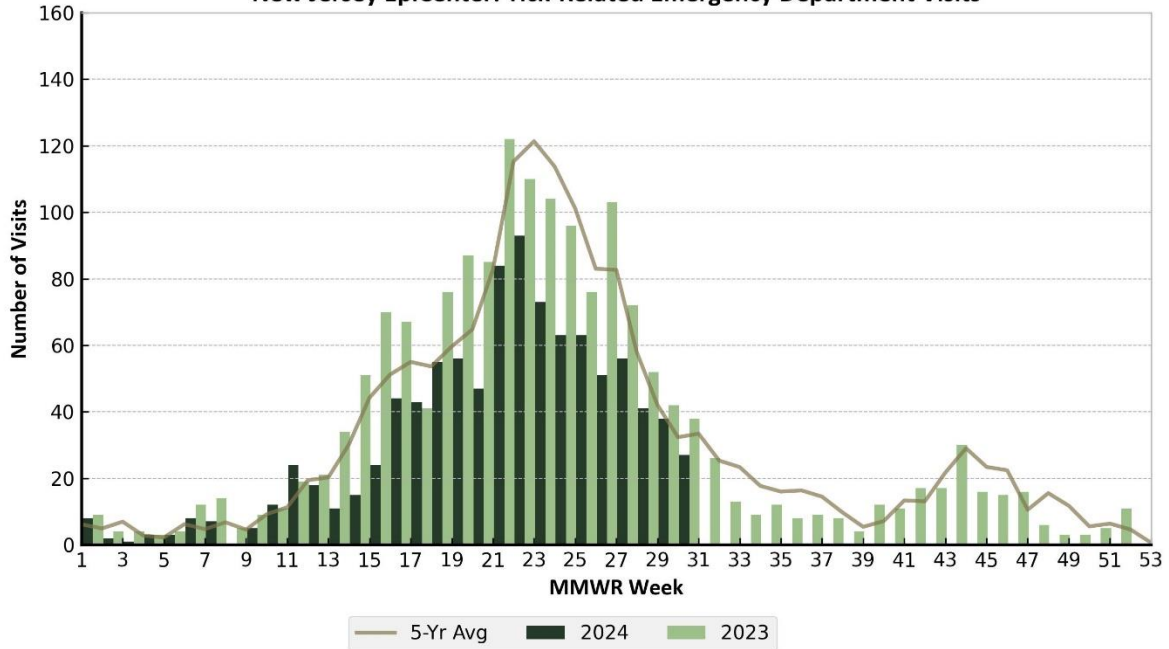


Tick-related Emergency Department Visits

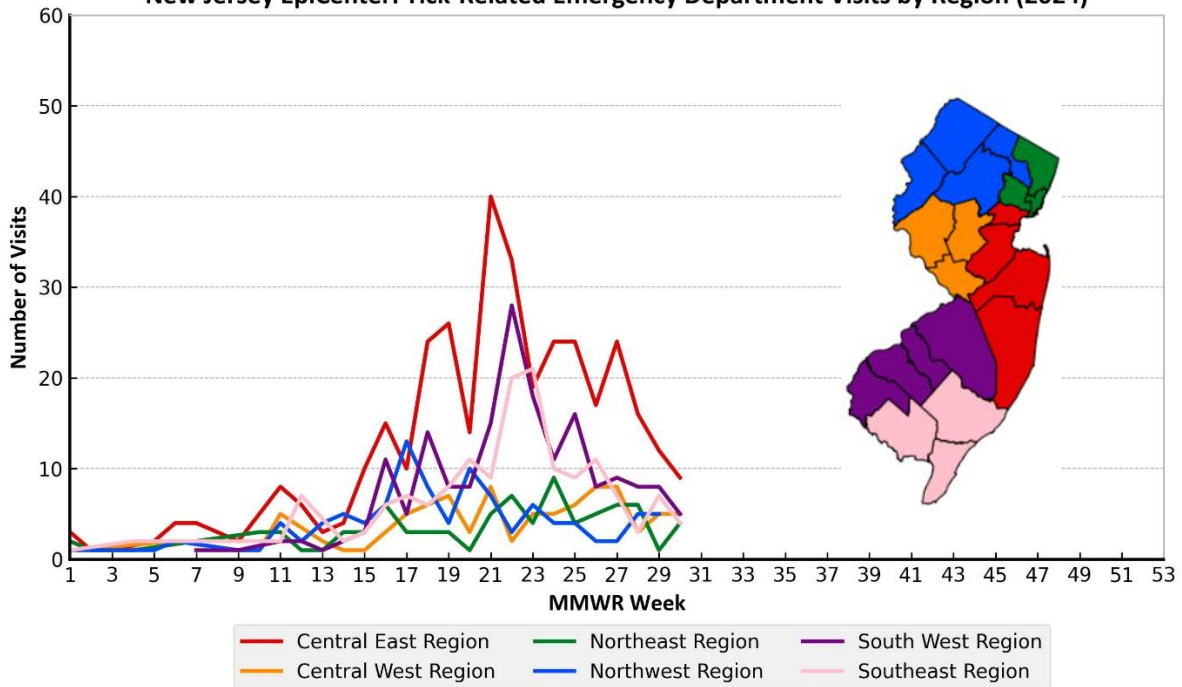
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 30, the number of tick-related ED visits continued to decrease and is 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
- 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/>