

Report Highlights:

- **One additional West Nile virus (WNV) human case was reported from week 30 in Bergen County. To date, there are three human cases of WNV from Bergen, Middlesex, and Union counties and two presumptive viremic blood donors (PVDs) from Passaic and Somerset counties. Sixty-two mosquito pools tested positive for WNV this week in 11 counties (additional tests pending) for a total of 513 WNV positive pools in 2024. Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.**
- **To date, one human case of Eastern Equine Encephalitis (EEE) was reported in week 27 from Atlantic County. This is the first reported human case of EEE in the state since 2019. One horse tested positive for EEE in week 31 from Atlantic County. There has been a total of 6 EEE positive pools in 2024.**
- **To date, one human case of Jamestown Canyon Virus (JCV) was reported in week 19 from Sussex County and JCV has been detected in two mosquito pools in Cumberland County.**
- **The number of travel-associated dengue cases is higher in 2024 (62 cases) compared to the same timeframe in 2023 (26 cases), associated with outbreaks in several Latin American countries.**
- **The number of Lyme disease cases this week increased but 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 32, the number of tick-related ED visits remained level and is lower than the 5-year average. The highest number of visits were in the northwest 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	95	360
Dengue	62	98	Anaplasmosis	86	195
Eastern equine encephalitis	1	-	Babesiosis	167	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	7	18
Malaria	41	102	Ehrlichiosis	44	109
West Nile	3	14	Lyme disease*	4,189	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	7	24
			Tularemia	2	2

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

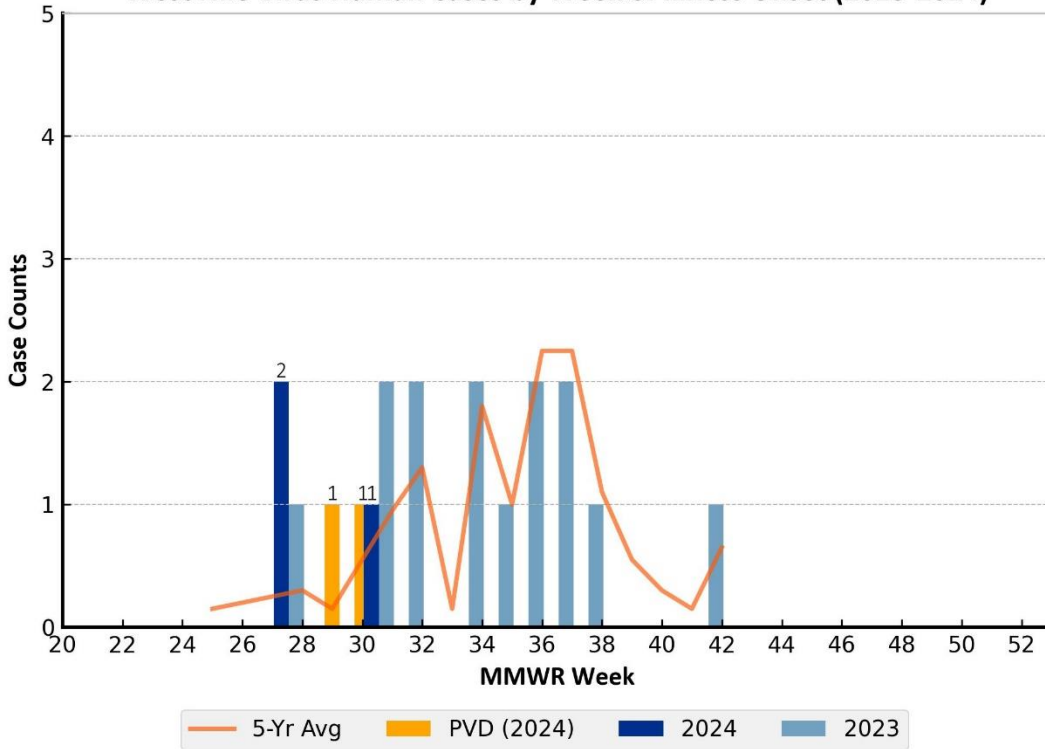
Mosquito-borne Disease Activity*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on August 14, 2024.

West Nile Virus

- Three human cases of WNV have been reported in 2024; 1 in week 30 from Bergen County and 2 in week 27 from Middlesex and Union counties. There have been two PVDs; in week 29 from Somerset County and in week 31 from Passaic County.
- Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.
- Out of 6,732 mosquito pools submitted for testing, 513 mosquito pools have tested positive for WNV this year. 62 pools tested positive in week 32 in 11 counties (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (461), *Aedes japonicus* (12), *Cx. pipiens* (12), *Cx. restuans* (5), *Aedes albopictus* (16), *Aedes triseriatus* (2), *Coquillettidia perturbans* (1), *Cx. salinarius* (1), and *Culiseta melanura* (3) 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.

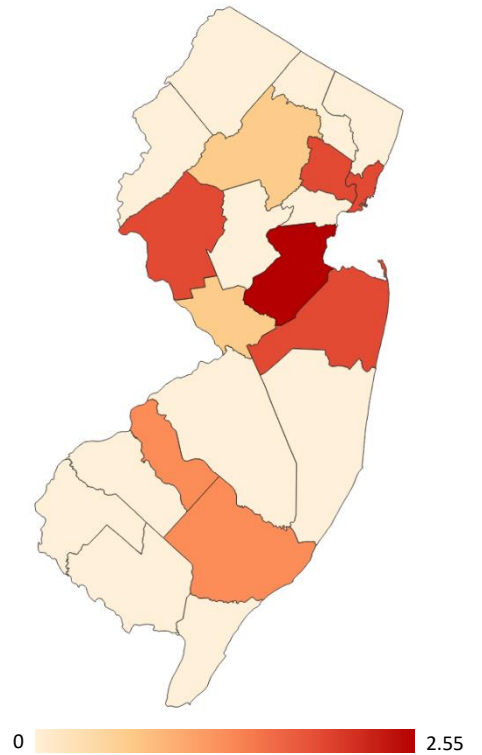
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested*	WEEK 32 Vector Index	
	2024	2023	2024	2023		2024 ^t	
Bergen	10	22	88	59	227	0.00	(-)
Middlesex	12	13	64	34	218	2.55	(↑)
Union		1	52	16	172	0.00	(-)
Hudson	8	13	51	36	177	1.75	(↑)
Monmouth	9	2	29	2	273	1.21	(↑)
Hunterdon	6	2	28	9	229	1.30	(↓)
Essex	4		27		217	1.55	(↑)
Passaic			24	10	155	0.00	(-)
Somerset		5	24	17	166	0.00	(-)
Morris	4	2	21	14	258	0.37	(↓)
Gloucester		3	20	16	404	0.00	(-)
Mercer	3	2	20	8	257	0.35	(↓)
Warren		4	15	7	239	0.00	(-)
Burlington		2	12	10	128	0.00	(↓)
Cape May		6	12	12	2,235	0.00	(-)
Atlantic	4	4	7	10	253	0.75	(↑)
Ocean	1	2	7	5	210	0.00	(↓)
Sussex		4	5	8	240	0.00	(-)
Camden	1		4	6	146	0.58	(↑)
Salem			3	2	268	0.00	(-)
Cumberland					260	0.00	(-)
Total	62	87	513	281	6,732	-	

WNV Vector Index, WEEK 32^t

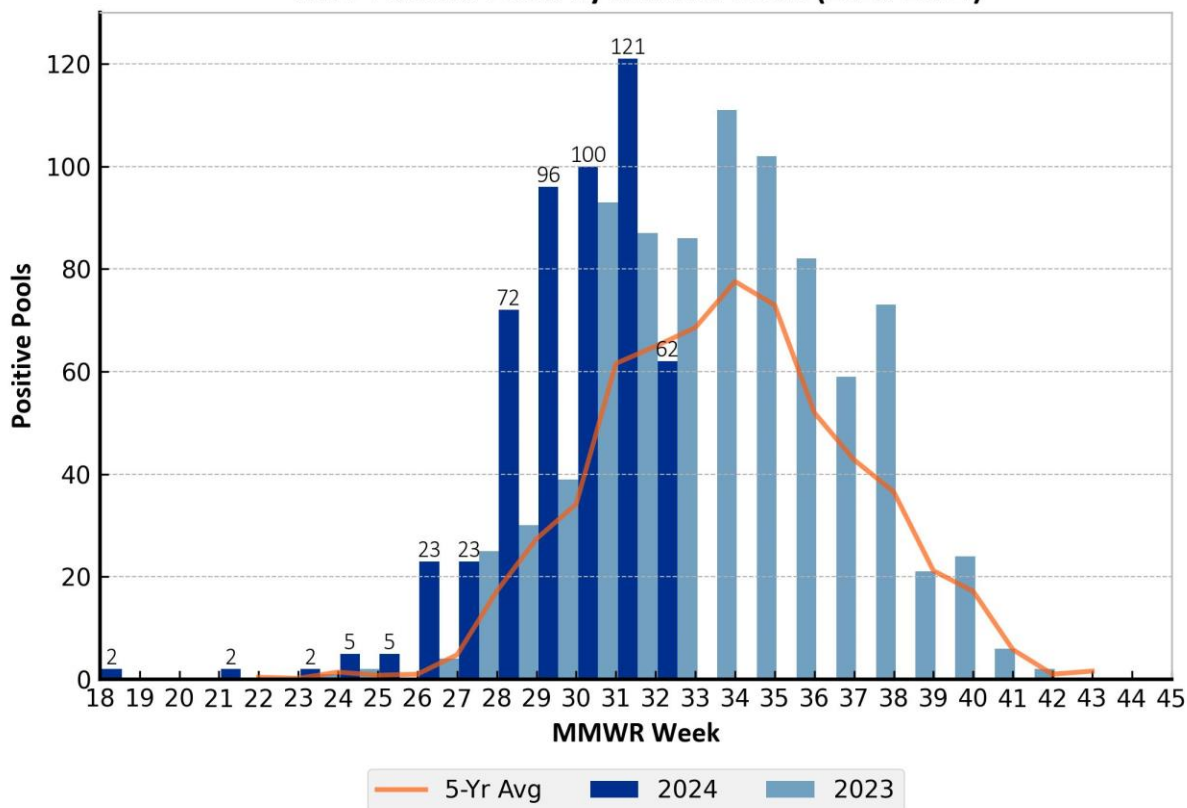


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

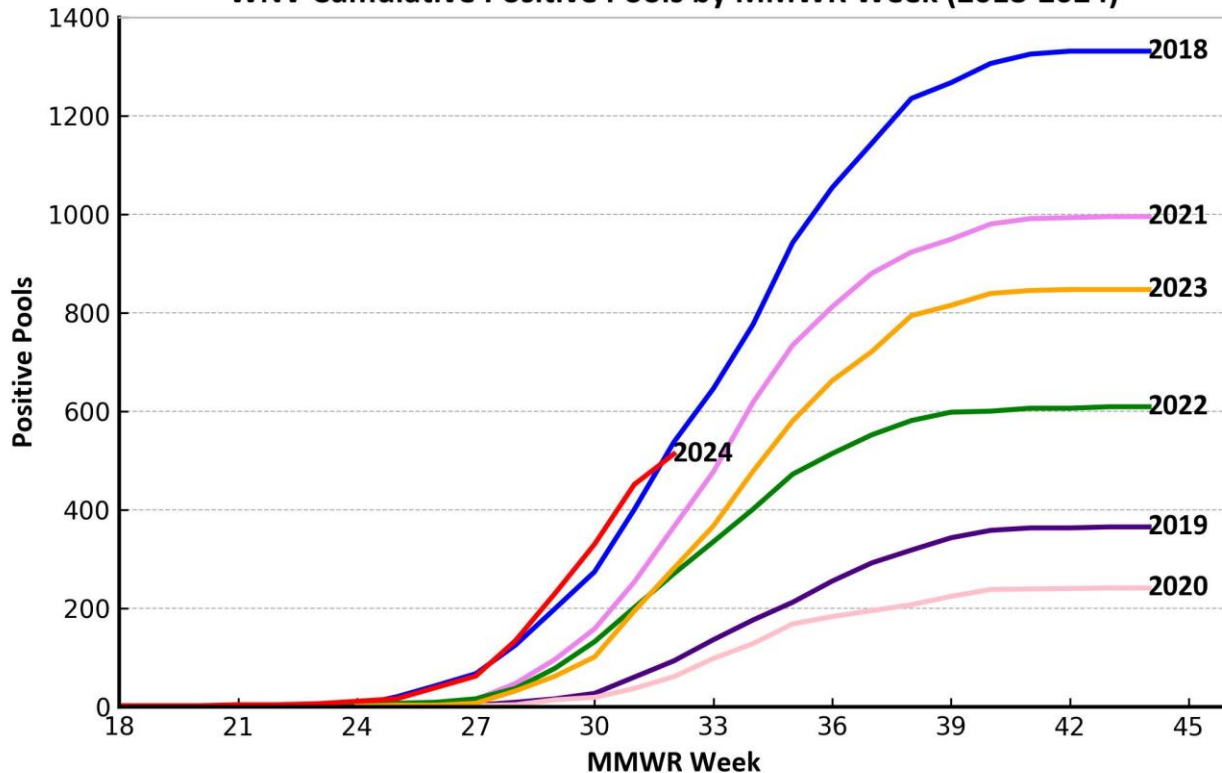
WEEK 32: Aug 6 - 12, 2023; Aug 4 - 10, 2024.

*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)

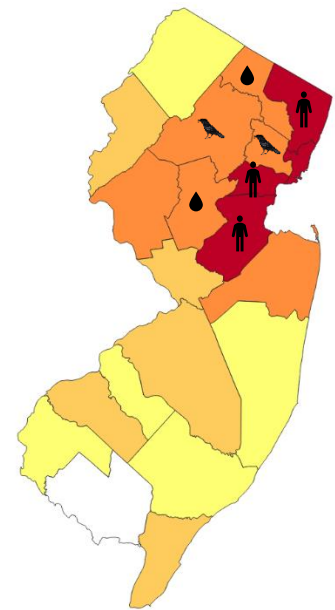
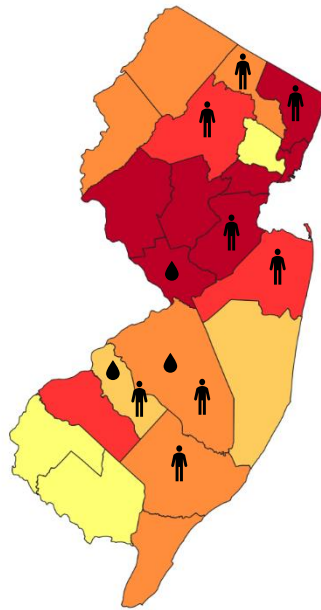


2023 WNV Activity

Cumulative WNV Activity, 2024

WNV Positive Pools

- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- ♀ ≥ 1 WNV human case
- ♂ ≥ 1 WNV presumptive viremic donor
- 🦅 ≥ 1 WNV avian case



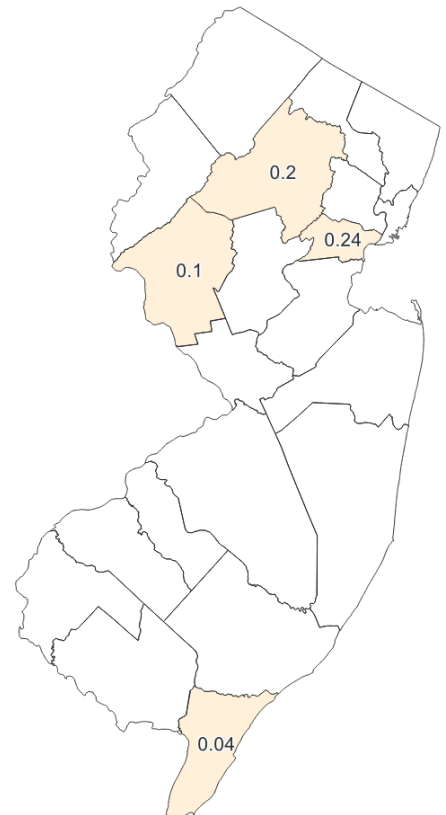
Eastern Equine Encephalitis (EEE)

- One human case of EEE has been reported in week 27 from Atlantic County. EEE human cases were last reported in 2019 (4 cases).
- One horse tested positive for EEE in week 31 from Atlantic County. The horse was not current on EEE vaccination.
- Out of 6,657 mosquito pools tested for EEE, 6 pools have tested positive in 2024. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta morsitans* (1), and *Cx. pipiens/restuans/salinarius* (3) 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.

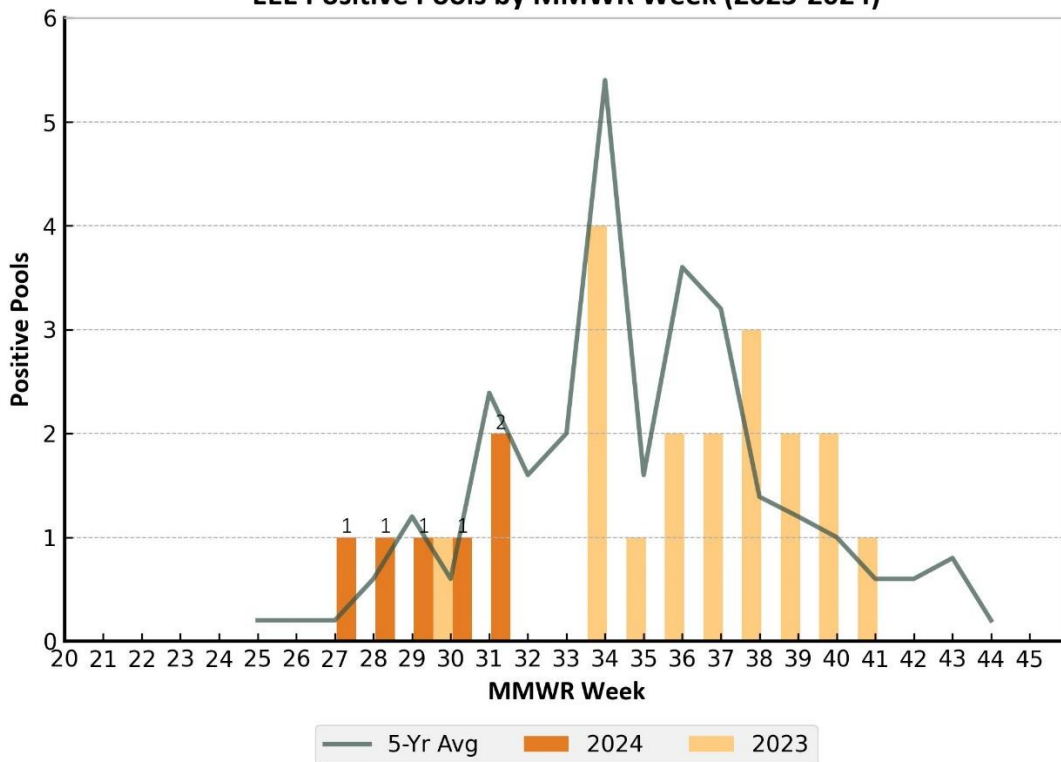
EEE Mosquito Pool Testing

County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Morris			2		258	0.20
Union			2		172	0.24
Cape May			1		2,235	0.04
Hunterdon			1		226	0.10
Atlantic					253	
Bergen					206	
Burlington					127	
Camden					139	
Cumberland				1	260	
Essex					217	
Gloucester					404	
Hudson					177	
Mercer					255	
Middlesex					212	
Monmouth					273	
Ocean					208	
Passaic					155	
Salem					268	
Somerset					166	
Sussex					218	
Warren					228	
Total	0	0	6	1	6,657	-

Cumulative EEE MFIR, 2024



EEE Positive Pools by MMWR Week (2023-2024)

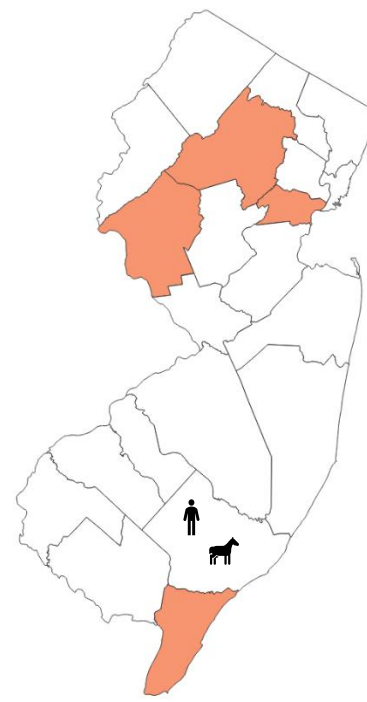
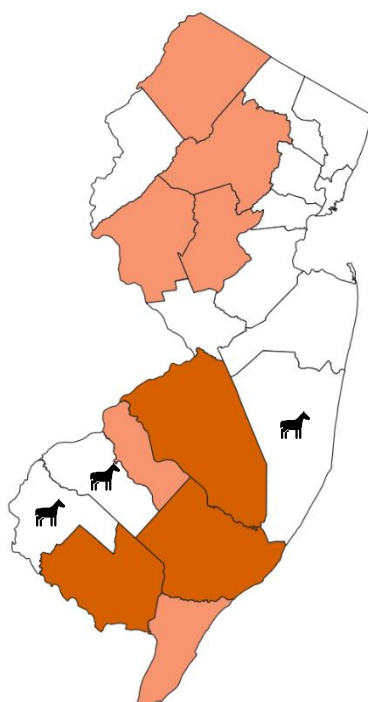


2023 EEE Activity

Cumulative EEE Activity, 2024

EEE Positive Pools

- > 10
- ≤ 10
- ≤ 6
- ≤ 2
- No EEE activity
- Human case
- Equine case



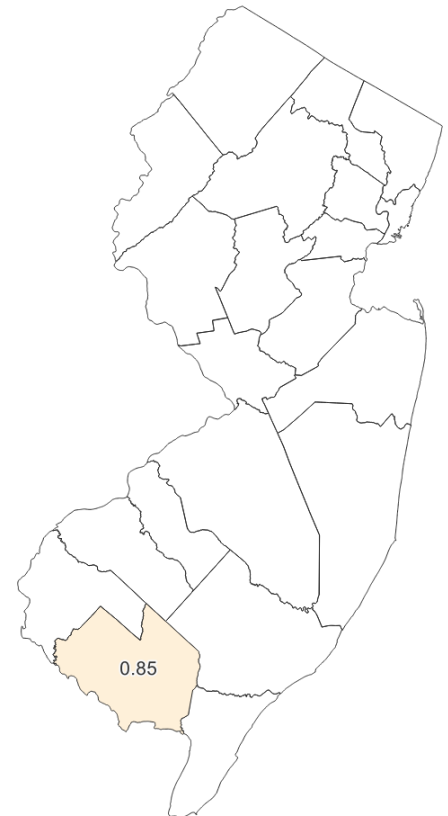
Jamestown Canyon Virus (JCV)

- 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 6,657 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

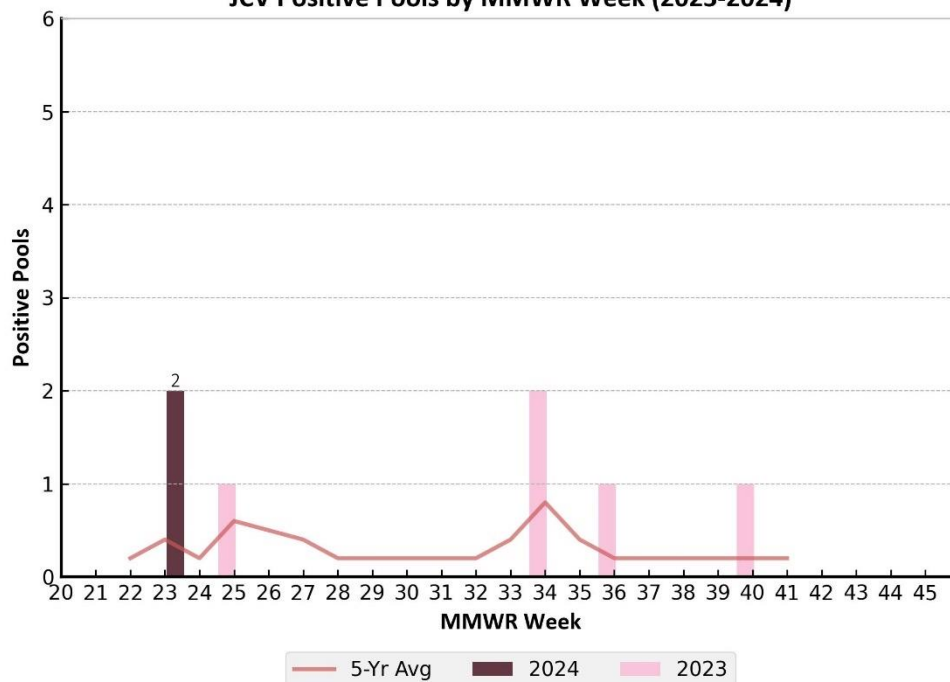
County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	260	0.85
Atlantic					253	
Bergen					206	
Burlington					127	
Camden					139	
Cape May					2,235	
Essex					217	
Gloucester					404	
Hudson					177	
Hunterdon					226	
Mercer					255	
Middlesex					212	
Monmouth					273	
Morris					258	
Ocean					208	
Passaic					155	
Salem					268	
Somerset					166	
Sussex					218	
Union					172	
Warren					228	
Total	0	0	2	1	6,657	-

Cumulative JCV MFIR, 2024



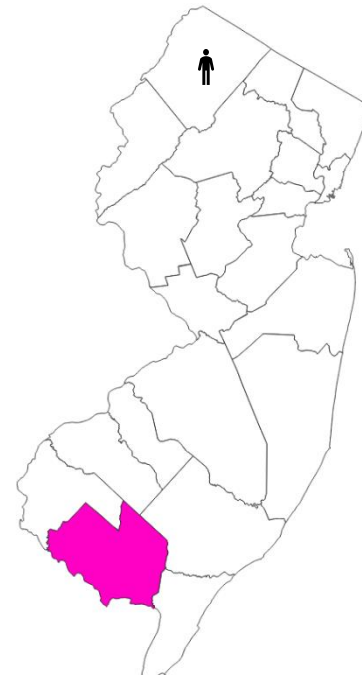
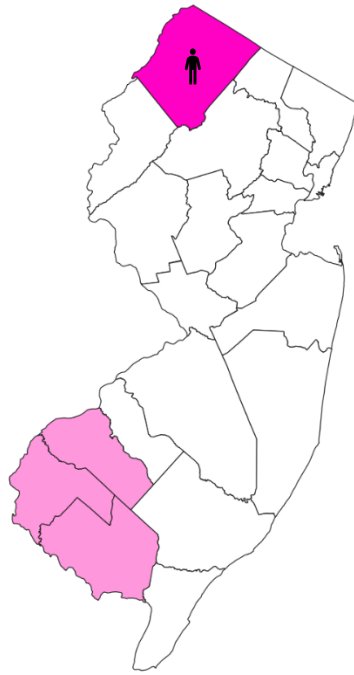
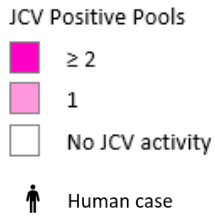
WEEK 32: Aug 6 - 12, 2023; Aug 4 - 10, 2024

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	253									
Bergen	206		4		6		6		6	
Burlington	127		1							
Camden	139		7		1		1		1	
Cape May	2235		131		108		108		108	
Cumberland	260									
Essex	217				1		1		1	
Gloucester	404									
Hudson	177									
Hunterdon	226		3		3		3		3	
Mercer	255		2		1		1		1	
Middlesex	212		6							
Monmouth	273									
Morris	258				2		2		2	
Ocean	208		2							
Passaic	155		3							
Salem	268		11							
Somerset	166									
Sussex	218		22							
Union	172									
Warren	228		11							
Total	6,657	-	203	-	122	-	122	-	122	-

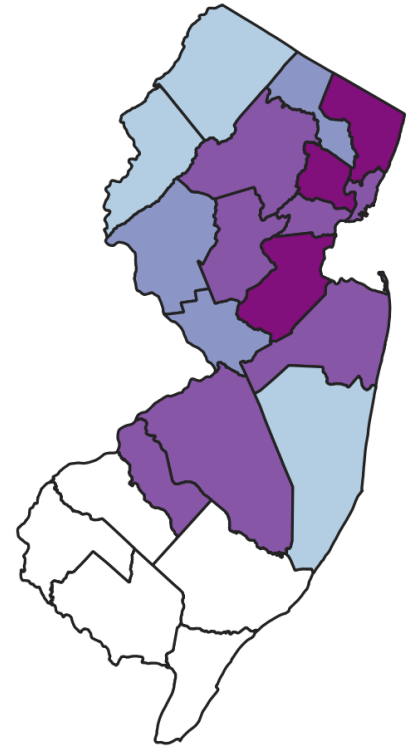
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

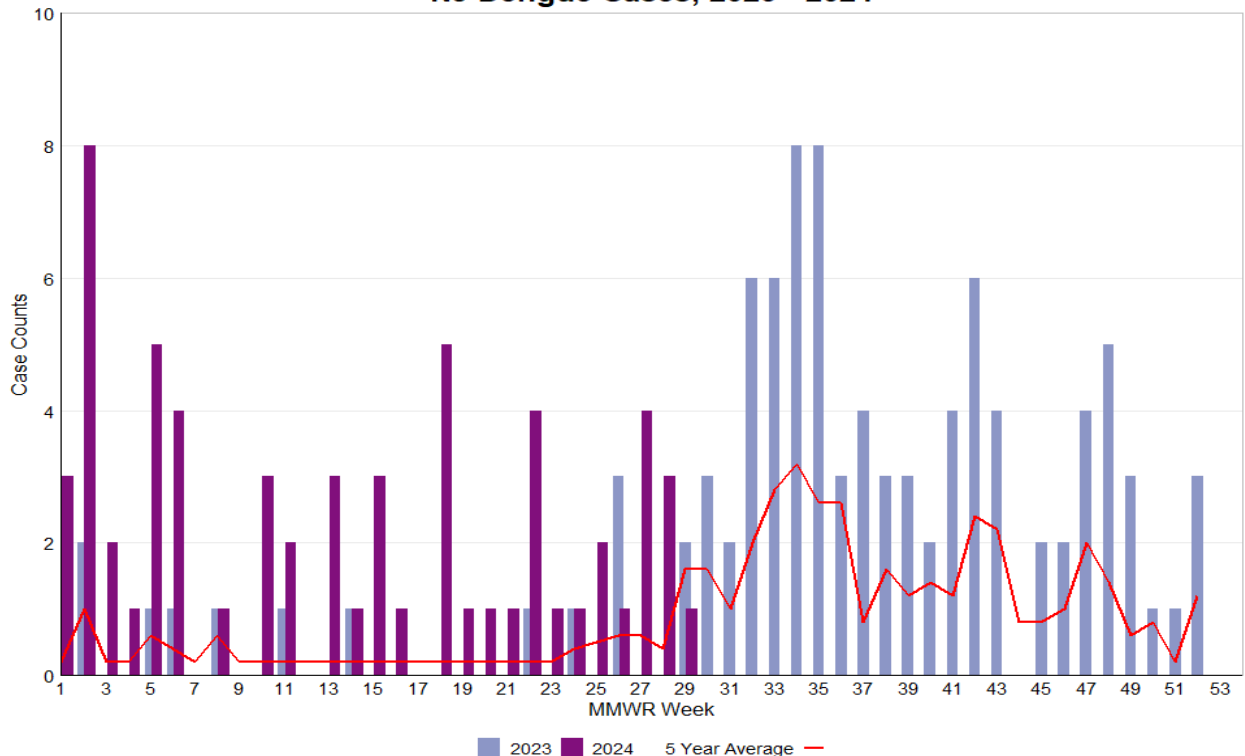
- There have been 62 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (26).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (59) cases have 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	11
Puerto Rico	8
Brazil	6
Mexico	5
Colombia	4
Guatemala	5
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
Indonesia	1
Paraguay	1
Trinidad & Tobago	1
U.S. Virgin Islands	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024

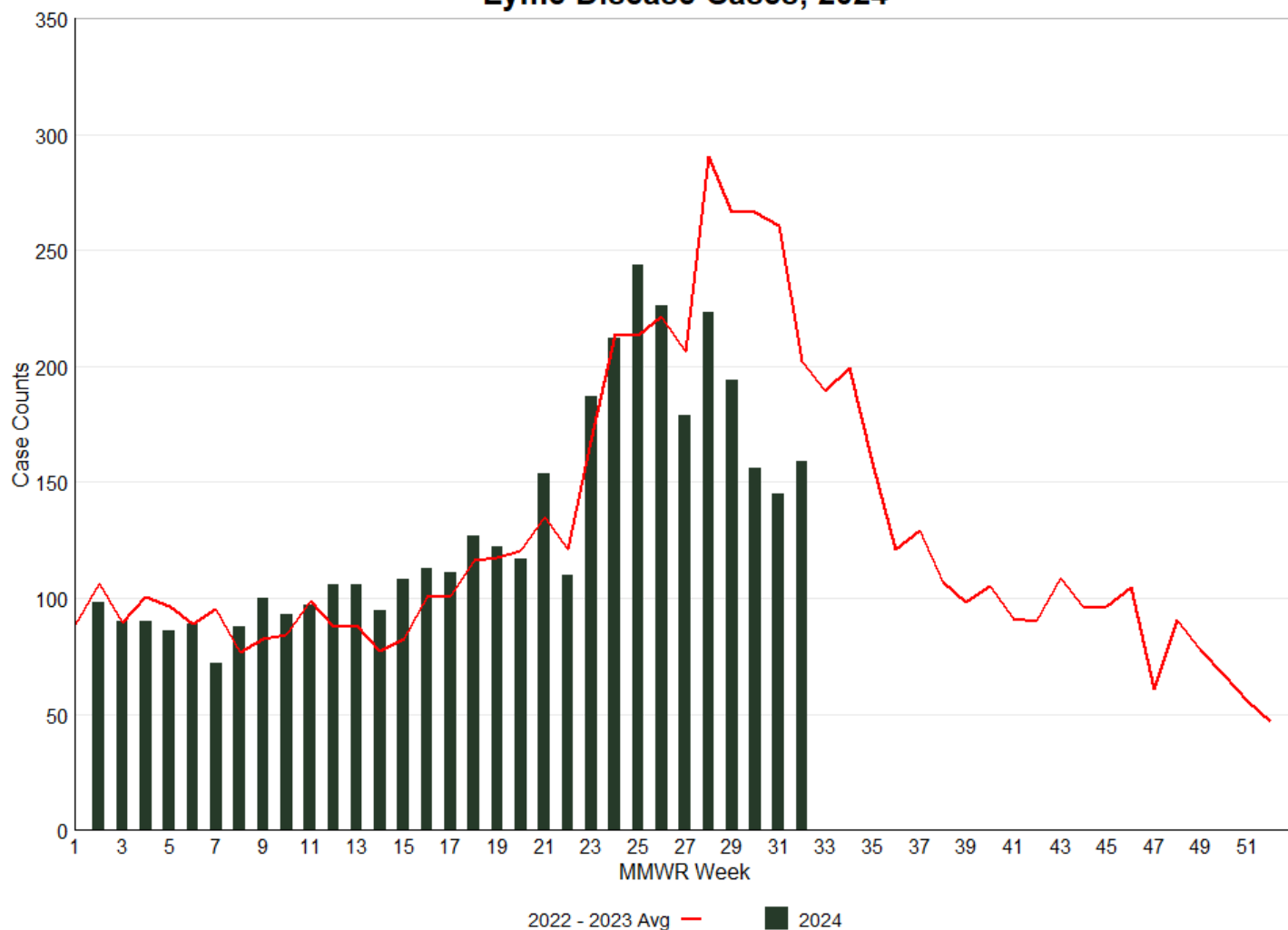


Tickborne Disease Activity

Lyme Disease

- There have been 4,189 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 32 increased but remains below the average number of cases reported this week.

Lyme Disease Cases, 2024

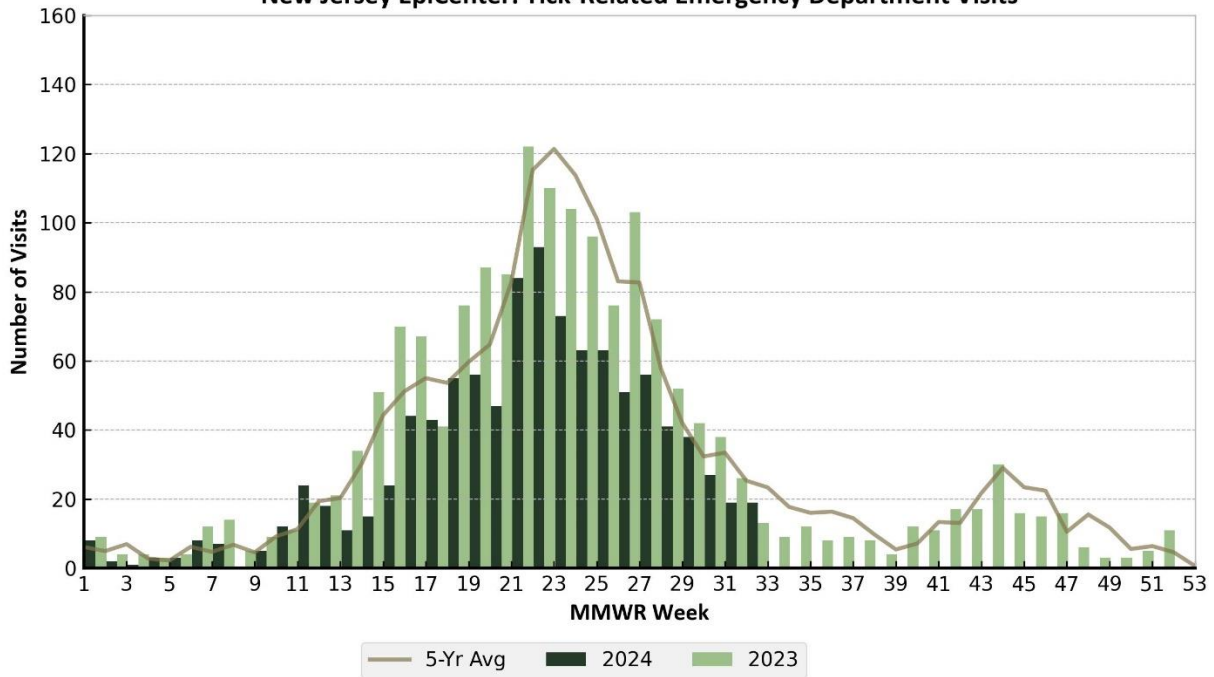


Tick-related Emergency Department Visits

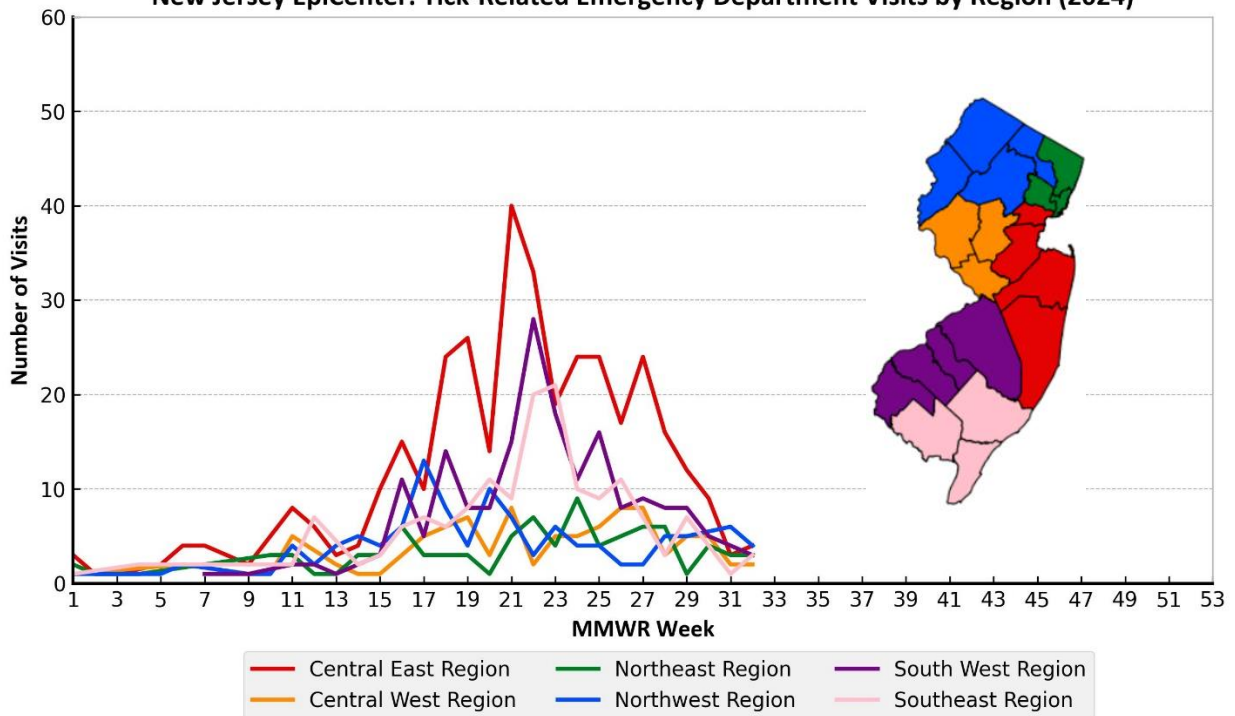
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 32, the number of tick-related ED visits remained level 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/>