

Report Highlights:

- NJDOH is reporting five new human cases of West Nile virus (WNV) including two deaths (Cumberland, Mercer). The new cases were in Camden, Cumberland, Hudson, Mercer, and Middlesex counties. To date, there have been eight human WNV cases and three presumptive viremic blood donors (PVDs). An additional 86 mosquito pools tested positive for WNV since last report, including 37 this week (additional tests pending) for a total of 702 WNV positive pools in 2024. Three red-tailed hawks tested positive for WNV in week 28.
- No new human or animal cases of Eastern Equine Encephalitis (EEE) are reported this week. To date, there has been one human case and one horse that tested positive for EEE in Atlantic County. Three additional mosquito pools tested positive for EEE since last report from Gloucester and Morris counties, for a total of 10 EEE positive pools in 2024.
- No new human cases of Jamestown Canyon virus (JCV) are reported this week, but one additional mosquito detection was identified since last report in Monmouth County. To date, there has been one human case of JCV in Sussex County and detections in three mosquito pools in Cumberland and Monmouth counties.
- Five new travel-associated dengue cases are reported this week, for a total of 68 cases in 2024 compared to 40 cases in the same timeframe in 2023. Cases are associated with outbreaks in several Latin American countries.
- The number of Lyme disease cases this week remained level and is below the average number reported this week in the past two years. Several other tickborne disease cases are lower than in 2023.

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	3	13	Alpha-gal syndrome	133	360
Dengue	68	98	Anaplasmosis	94	195
Eastern equine encephalitis	1	-	Babesiosis	179	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	10	18
Malaria	48	102	Ehrlichiosis	55	109
West Nile	8	14	Lyme disease*	4,468	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	7	24
			Tularemia	2	2

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

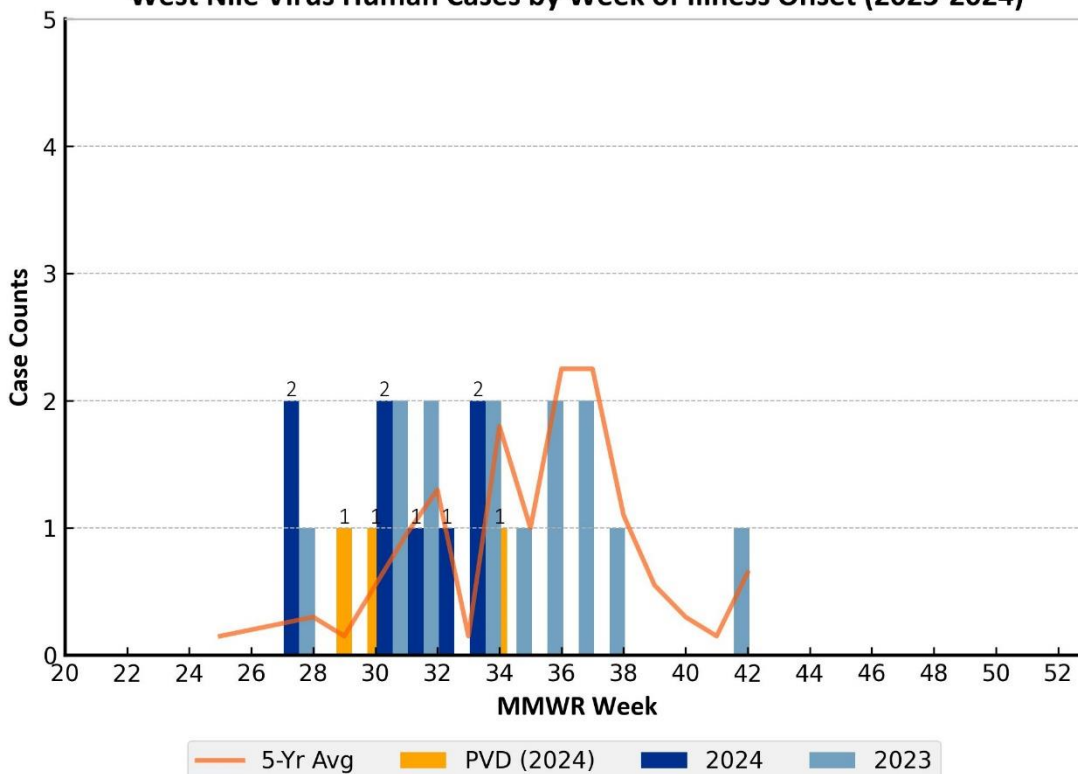
Mosquito-borne Disease Activity*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on August 29, 2024.

West Nile Virus

- Eight human cases of WNV have been reported in 2024 from Bergen, Camden, Cumberland, Hudson, Mercer, Middlesex (2), and Union counties. There were 2 deaths in Cumberland and Mercer counties. There have been three PVDs in Bergen, Passaic, and Somerset counties.
- Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.
- Out of 8,041 mosquito pools submitted for testing, 702 mosquito pools have tested positive for WNV this year with 37 pools positive in week 34 (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (603), *Aedes japonicus* (13), *Cx. pipiens* (33), *Cx. restuans* (7), *Aedes albopictus* (34), *Aedes triseriatus* (3), *Aedes vexans* (1), *Coquillettidia perturbans* (1), *Cx. erraticus* (1), *Cx. salinarius* (1), and *Culiseta melanura* (5) 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.

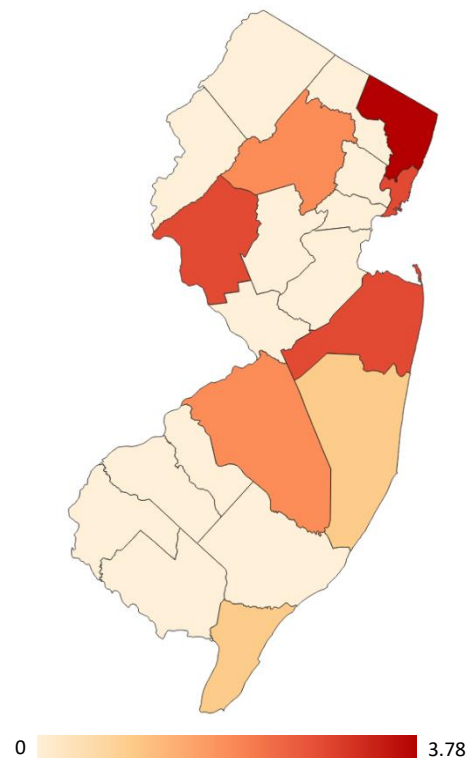
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 34 Positive Pools		Cumulative Pos. Total* (WEEK 34)		# Pools Tested*	WEEK 34 Vector Index	
	2024	2023	2024	2023		2024 [†]	
Bergen	4	7	118	76	269	3.78	(-)
Union		8	74	34	219	0.00	(↓)
Hudson	10	12	72	56	215	1.02	(↓)
Middlesex		4	69	40	253	0.00	(↓)
Monmouth	4	5	38	10	318	0.51	(↓)
Somerset		8	37	35	196	0.00	(↓)
Hunterdon	2	11	35	24	264	0.51	(↓)
Cape May	4	4	33	19	2,775	0.04	(-)
Passaic			33	11	185	0.00	(-)
Essex	4	1	31	1	261	0.00	(-)
Morris	3	5	31	24	296	0.31	(↑)
Mercer		11	26	29	298	0.00	(↓)
Warren		9	24	20	281	0.00	(↓)
Gloucester		13	22	29	434	0.00	(-)
Burlington	4	6	17	20	171	0.27	(↑)
Atlantic	1	2	13	14	303	0.00	(↓)
Sussex		1	11	11	282	0.00	(-)
Ocean	1	2	10	15	261	0.15	(↑)
Camden		1	5	7	156	0.00	(-)
Salem		1	3	3	304	0.00	(-)
Cumberland					300	0.00	(-)
Total	37	111	702	478	8,041	-	

WNV Vector Index, WEEK 34[†]



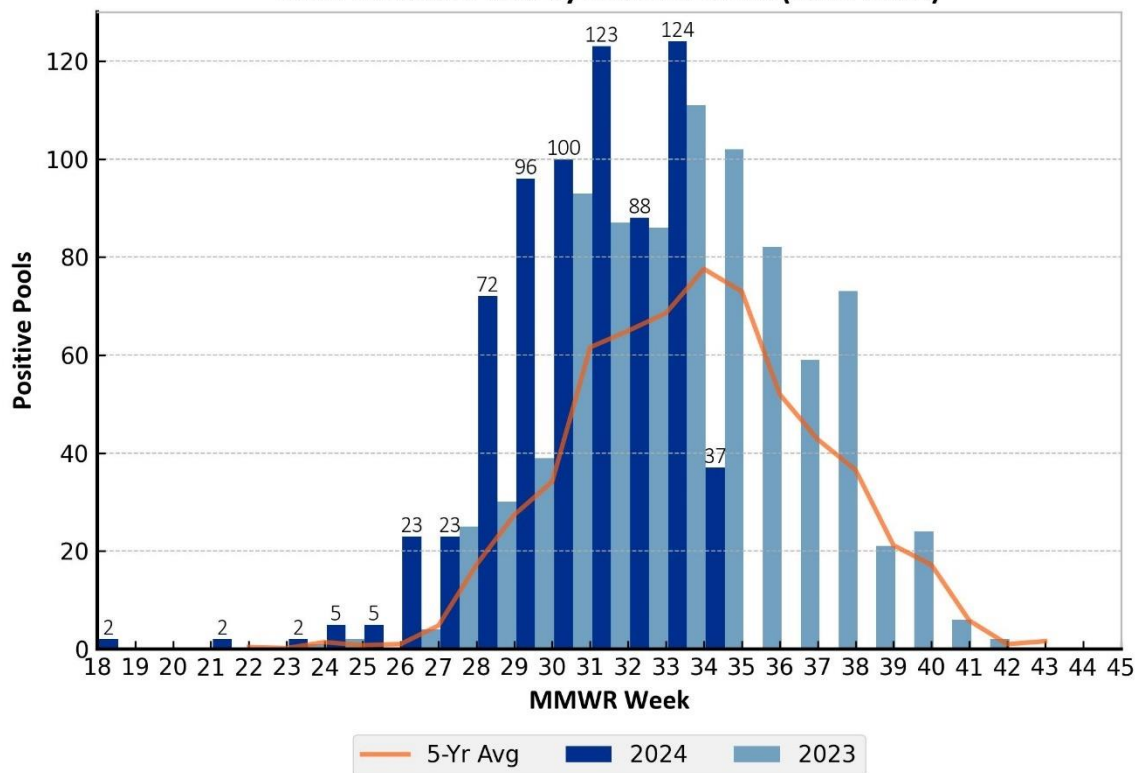
WEEK 34: Aug 20 - 26, 2023; Aug 18 - 24, 2024.

*184 mosquito pools submitted by 8 counties were collected prior to Week 20.

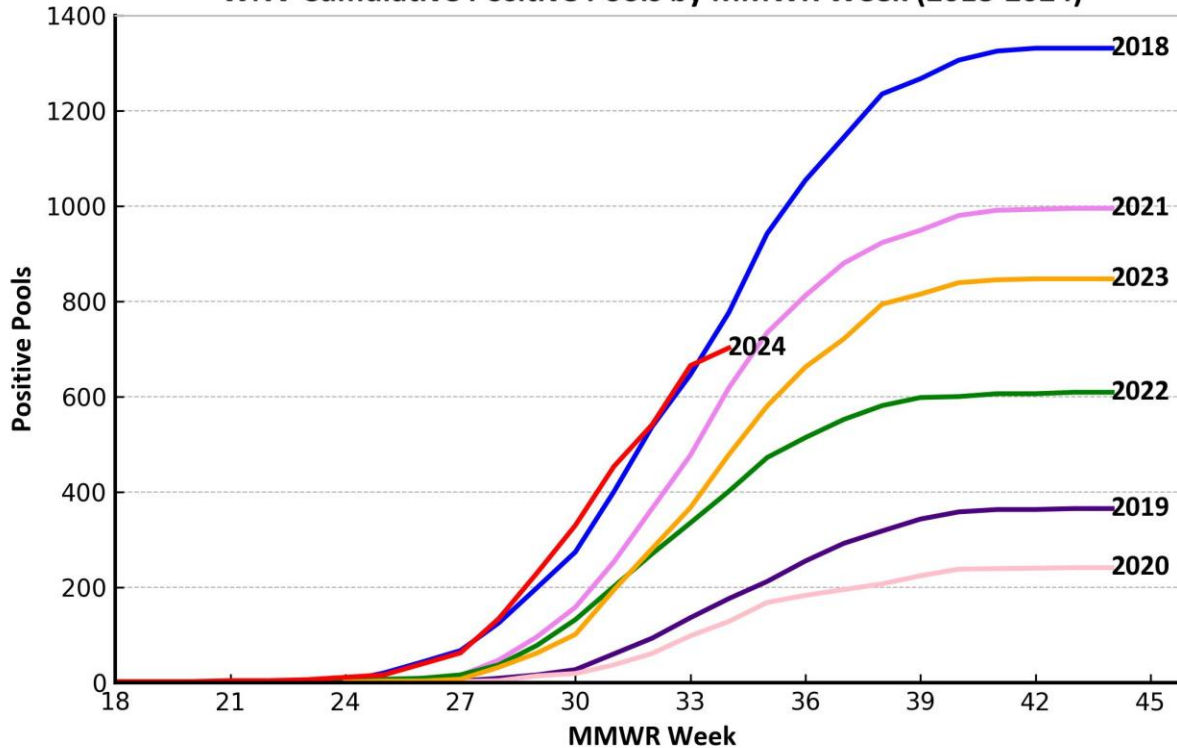
*Vector Index cannot be calculated because all tested pools were positive. In these situations, the county is shown on the map with red stripes to indicate elevated activity.

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

WNV Positive Pools by MMWR Week (2023-2024)



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

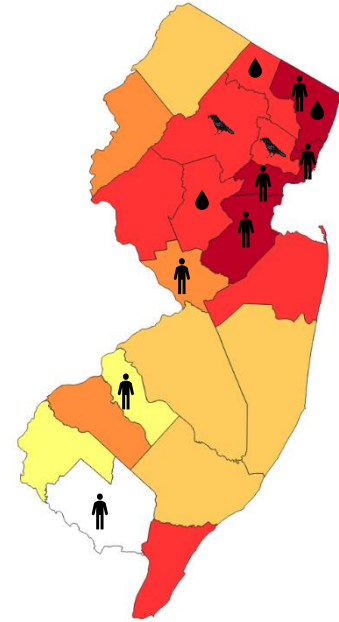
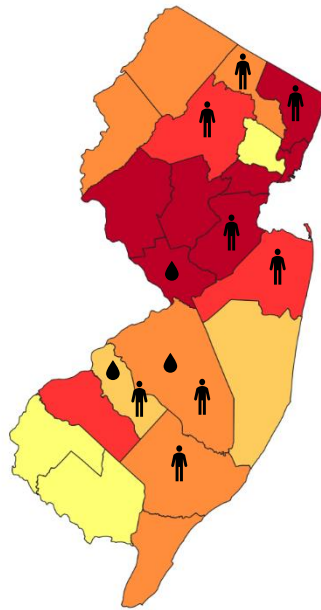


2023 WNV Activity

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



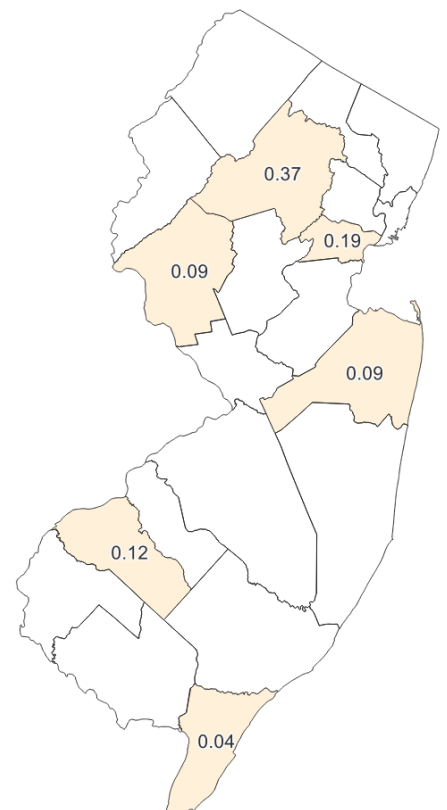
Eastern Equine Encephalitis (EEE)

- One human case of EEE was reported in week 27 in Atlantic County. EEE human cases were last reported in 2019 (4 cases).
- One horse tested positive for EEE in week 31 in Atlantic County. The horse was not current on EEE vaccination.
- Out of 7,934 mosquito pools tested for EEE, 10 pools have tested positive in 2024. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (4), *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

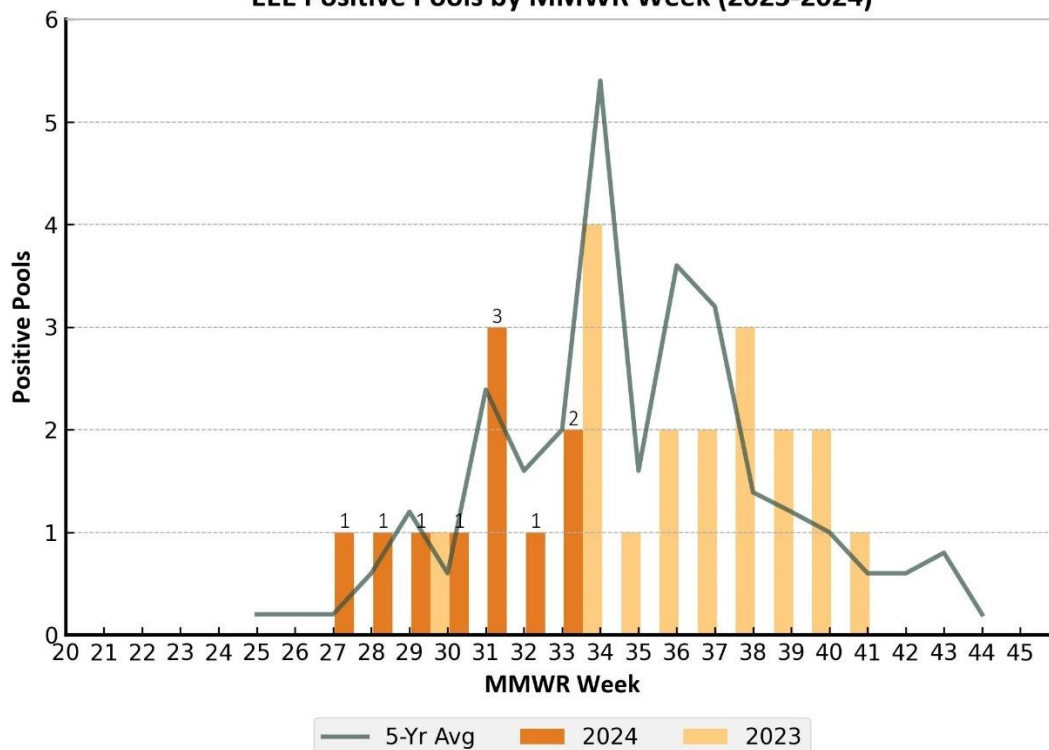
County	WEEK 34 Positive Pools		Cumulative Pos. Total* (WEEK 34)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Morris			4		296	0.37
Union			2		219	0.19
Cape May			1		2,775	0.04
Gloucester			1		434	0.12
Hunterdon			1		261	0.09
Monmouth			1		318	0.09
Atlantic		1		1	303	
Bergen					227	
Burlington		1		1	170	
Camden		2		2	147	
Cumberland				1	300	
Essex					261	
Hudson					215	
Mercer					296	
Middlesex					247	
Ocean					259	
Passaic					185	
Salem					304	
Somerset					196	
Sussex					254	
Warren					267	
Total	0	4	10	5	7,934	-

Cumulative EEE MFIR, 2024



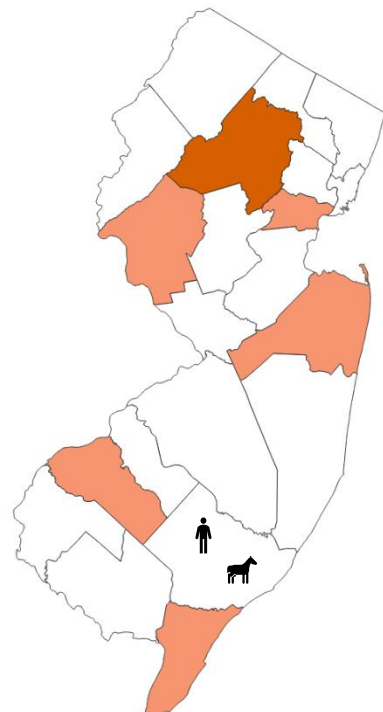
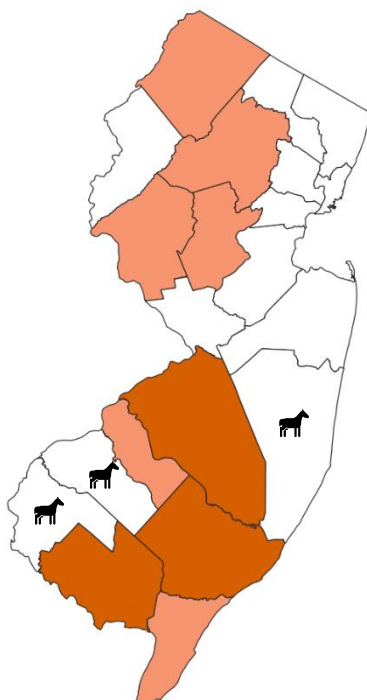
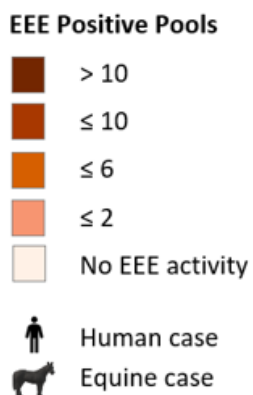
WEEK 34: Aug 20 - 26, 2023; Aug 18 - 24, 2024

EEE Positive Pools by MMWR Week (2023-2024)



2023 EEE Activity

Cumulative EEE Activity, 2024



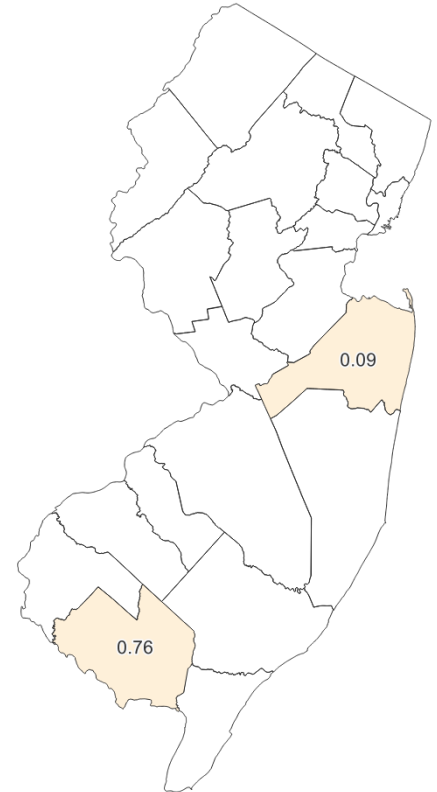
Jamestown Canyon Virus (JCV)

- There was one human case of JCV reported in New Jersey in 2024 in week 19 in Sussex County. In 2023, there was one human case of JCV in week 42 in Sussex County.
- Out of 7,934 mosquito pools tested for JCV, 3 pools have tested positive in 2024. The positive pools were found in *Aedes cantator* (1), *Cx. salinarius* (1), and *Psorophora columbiae* (1) mosquitoes.
- In 2023, the first JCV positive pool was detected in week 23 from Cumberland County.

JCV Mosquito Pool Testing

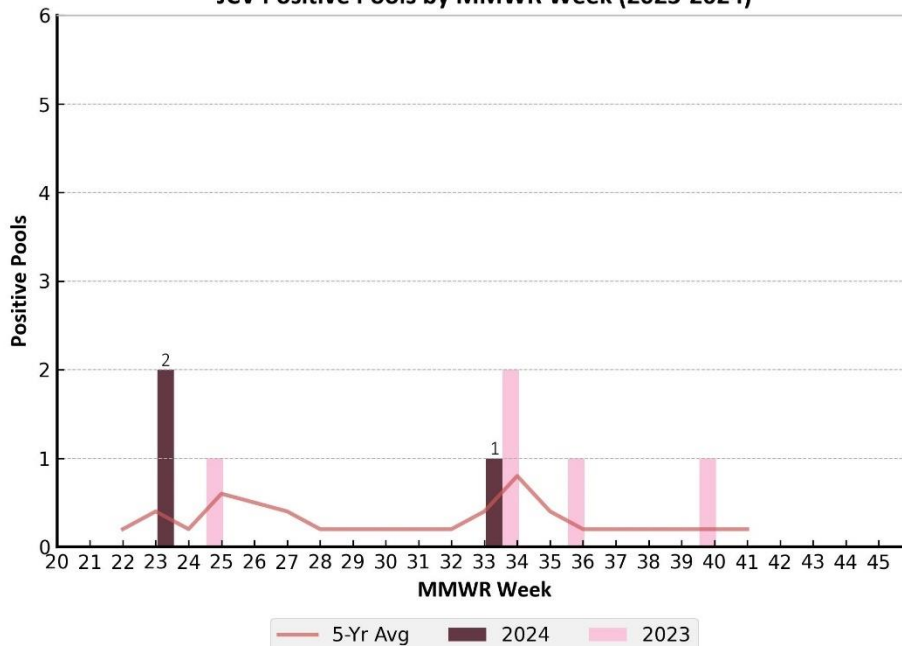
County	WEEK 34 Positive Pools		Cumulative Pos. Total* (WEEK 34)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	300	0.76
Monmouth			1		318	0.09
Atlantic					303	
Bergen					227	
Burlington					170	
Camden					147	
Cape May					2775	
Essex					261	
Gloucester					434	
Hudson					215	
Hunterdon					261	
Mercer					296	
Middlesex					247	
Morris					296	
Ocean					259	
Passaic					185	
Salem		1		1	304	
Somerset					196	
Sussex		1		1	254	
Union					219	
Warren					267	
Total	0	2	3	3	7,934	-

Cumulative JCV MFIR, 2024



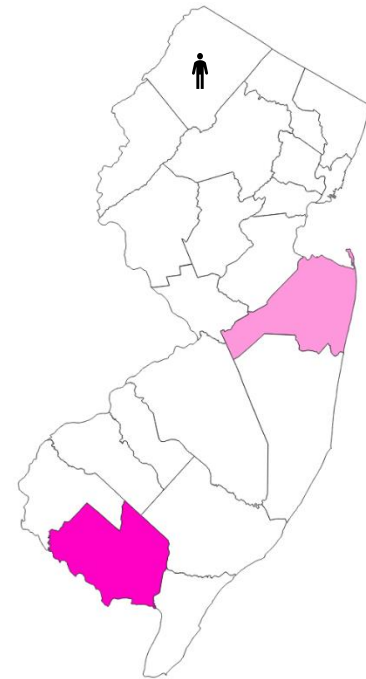
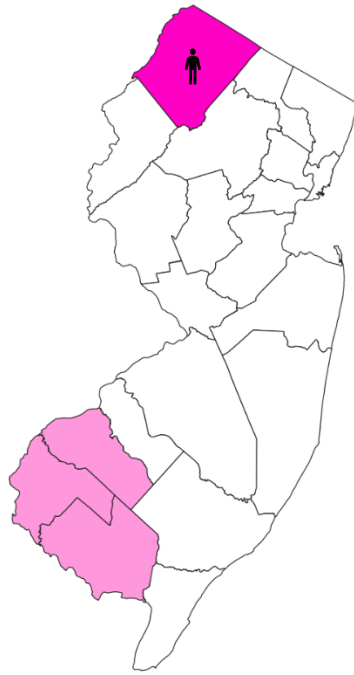
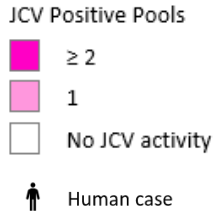
WEEK 34: Aug 20 - 26, 2023; Aug 18 - 24, 2024

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	303									
Bergen	227		4		6		6		6	
Burlington	170		1							
Camden	147		9		1		1		1	
Cape May	2775		175		152		152		152	
Cumberland	300									
Essex	261				1		1		1	
Gloucester	434									
Hudson	215									
Hunterdon	261		3		3		3		3	
Mercer	296		2		2		2		2	
Middlesex	247		6		5		5		5	
Monmouth	318									
Morris	296				4		4		4	
Ocean	259		2							
Passaic	185		3							
Salem	304		15							
Somerset	196									
Sussex	254		28							
Union	219									
Warren	267		14		1		1		1	
Total	7,934	-	262	-	175	-	175	-	175	-

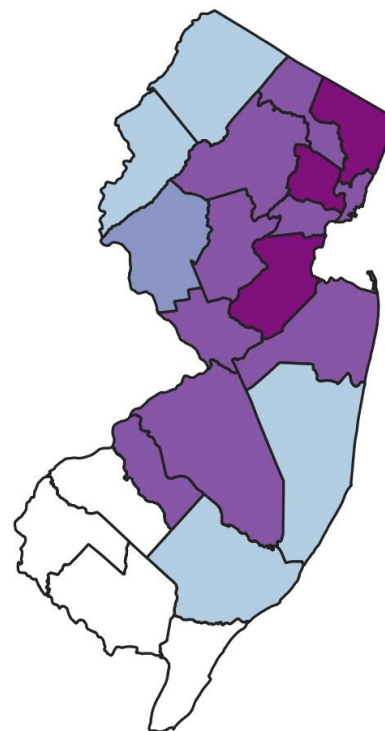
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

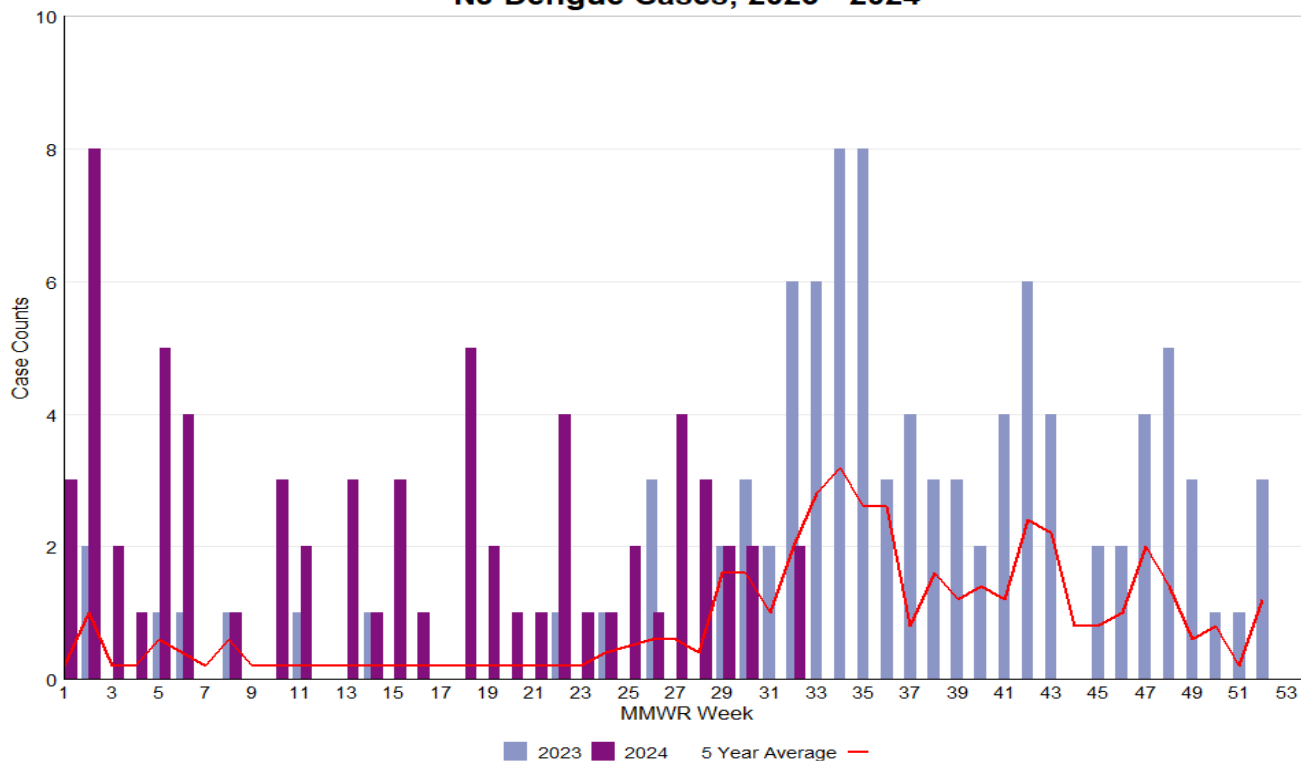
- There have been 68 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (40).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (64) cases have 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), Middlesex (9), and Essex (8) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	11
Puerto Rico	9
Brazil	6
Guatemala	6
Mexico	6
Colombia	5
Ecuador	3
India	3
Aruba	2
Costa Rica	2
El Salvador	2
Guyana	2
Martinique	2
Peru	2
Antigua and Barbuda	1
Cuba	1
Honduras	1
Indonesia	1
Paraguay	1
Trinidad & Tobago	1
U.S. Virgin Islands	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024

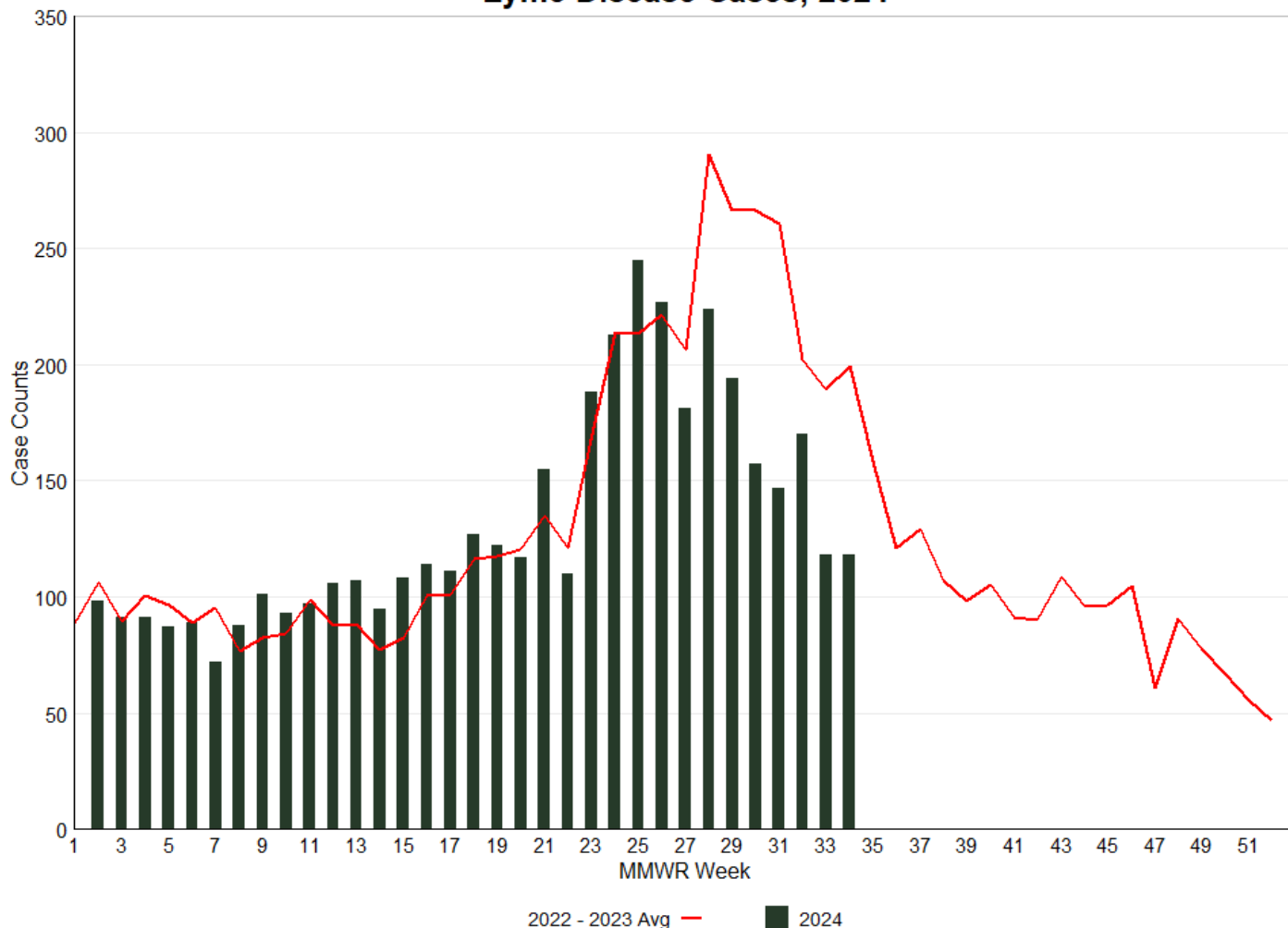


Tickborne Disease Activity

Lyme Disease

- There have been 4,468 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 34 stayed level and remains below the average number of cases reported this week.

Lyme Disease Cases, 2024

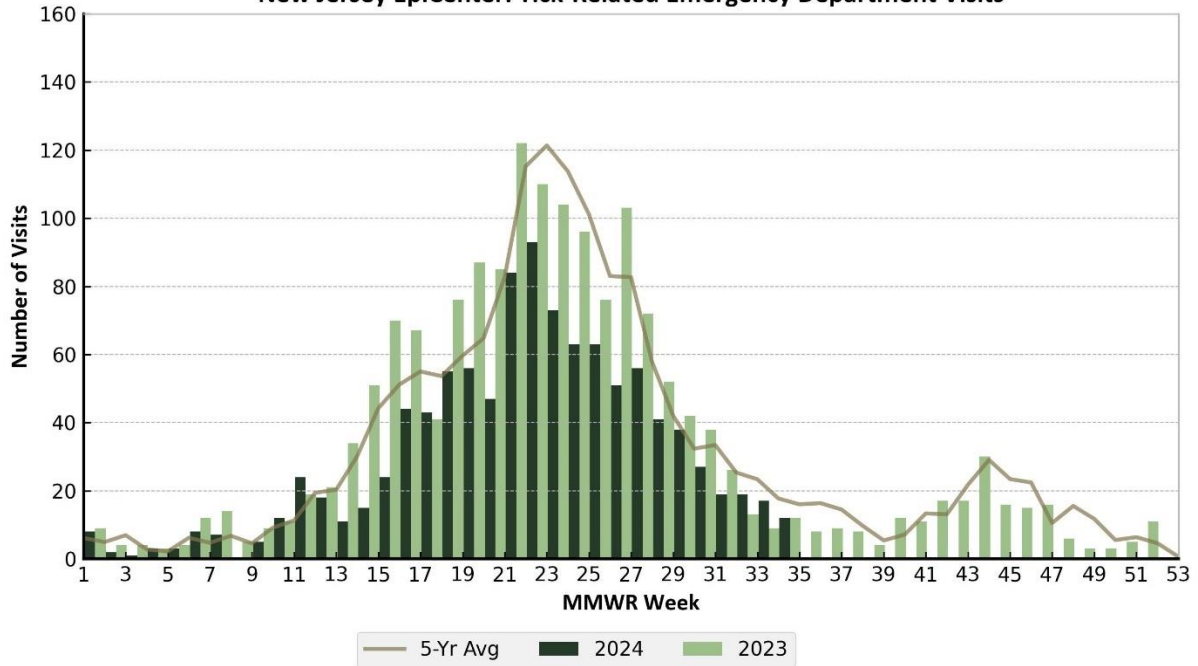


Tick-related Emergency Department Visits

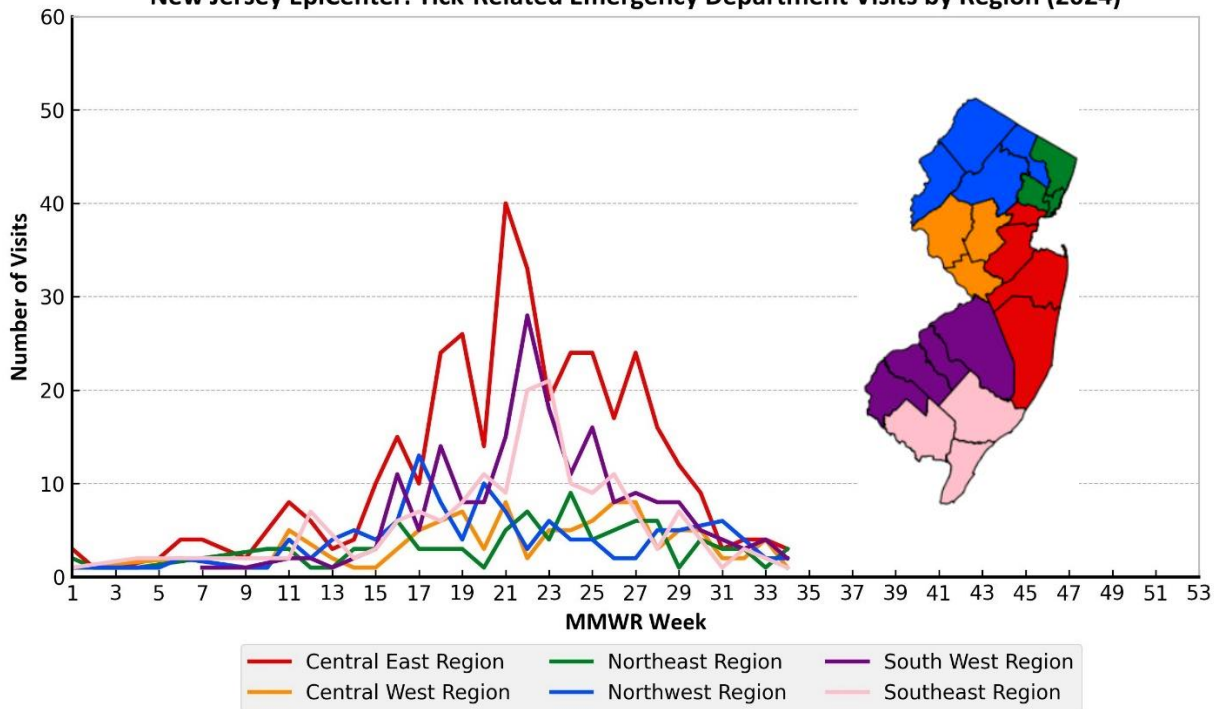
New Jersey’s syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing 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 34, the number of tick-related ED visits decreased 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/>