

Report Highlights:

- NJDOH is reporting seven new human cases of West Nile virus (WNV) including one additional death and one additional presumptive viremic blood donor (PVD). New cases were reported in Bergen, Burlington, Cumberland, Middlesex, Union, and Warren counties. To date, there have been 15 human WNV cases, including 3 deaths and four PVDs. An additional 76 mosquito pools tested positive for WNV since last report, including 53 this week (additional tests pending) for a total of 778 WNV positive pools in 2024.
- 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. Two additional mosquito pools tested positive for EEE since last report from Camden and Gloucester counties, for a total of 12 EEE positive pools in 2024.
- No new human cases of Jamestown Canyon virus (JCV) or mosquito detections are reported this week. To date, there has been one human case of JCV in Sussex County and detections in three mosquito pools in Cumberland and Monmouth counties.
- Six new travel-associated dengue cases are reported this week, for a total of 74 cases in 2024 compared to 48 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 continued to decrease and remains below average. Several other tickborne disease cases are lower this year 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	74	98	Anaplasmosis	100	195
Eastern equine encephalitis	1	-	Babesiosis	189	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	12	18
Malaria	49	102	Ehrlichiosis	59	109
West Nile	15	14	Lyme disease*	4,575	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	7	24
			Tularemia	2	2

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

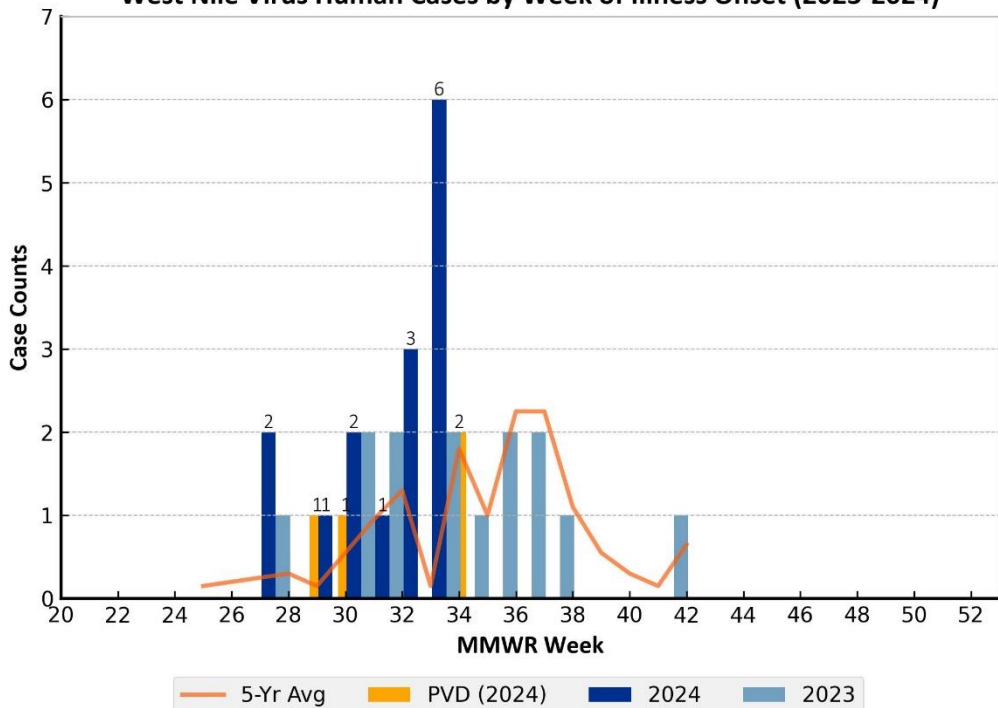
Mosquito-borne Disease Activity*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on September 5, 2024.

West Nile Virus

- Fifteen human cases of WNV have been reported in 2024 from Bergen (3), Burlington, Camden, Cumberland (2), Hudson, Mercer, Middlesex (3), Union (2), and Warren counties. There were three deaths in Cumberland, Mercer, and Middlesex counties. There have been four PVDs in Bergen, Essex, Passaic, and Somerset counties.
- Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.
- Out of 8,659 mosquito pools submitted for testing, 778 mosquito pools have tested positive for WNV this year with 53 pools positive in Week 35 (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (673), *Aedes japonicus* (13), *Cx. pipiens* (36), *Cx. restuans* (7), *Aedes albopictus* (34), *Aedes triseriatus* (3), *Aedes vexans* (1), *Coquillettidia perturbans* (1), *Cx. erraticus* (2), *Cx. salinarius* (2), and *Culiseta melanura* (6) 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.

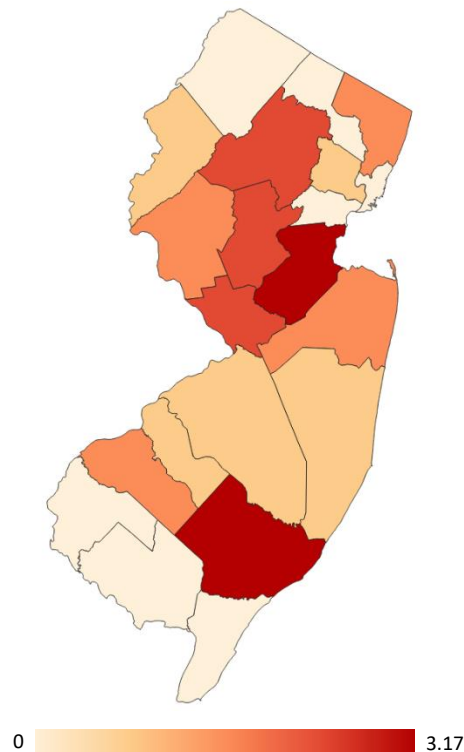
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 35 Positive Pools		Cumulative Pos. Total* (WEEK 35)		# Pools Tested*	WEEK 35 Vector Index	
	2024	2023	2024	2023		2024	2024 [†]
Bergen	6	24	124	100	299	0.55	(↓)
Union		7	80	41	239	0.00	(-)
Middlesex	9	12	78	52	273	3.17	(↑)
Hudson		8	72	64	230	0.00	(↓)
Somerset	4	4	47	39	226	1.16	(↑)
Morris	10	3	41	27	316	1.79	(↑)
Monmouth	2	7	40	17	341	0.76	(↑)
Hunterdon	3	10	38	34	284	0.43	(↓)
Cape May			33	19	2,851	0.00	(↓)
Passaic			33	11	185	0.00	(-)
Essex	1	1	32	2	291	0.20	(↑)
Mercer	6	8	32	37	318	1.07	(↑)
Warren	2	1	28	21	328	0.15	(↑)
Gloucester	4		27	29	501	0.47	(↑)
Burlington	1	1	18	21	192	0.12	(↓)
Atlantic	3	6	16	20	321	2.88	(↑)
Sussex		7	16	18	300	0.00	(-)
Ocean	1	3	11	18	288	0.18	(↑)
Camden	1		6	7	182	0.28	(↑)
Salem			5	3	374	0.00	(-)
Cumberland			1		320	0.00	(-)
Total	53	102	778	580	8,659	-	

WNV Vector Index, WEEK 35[†]



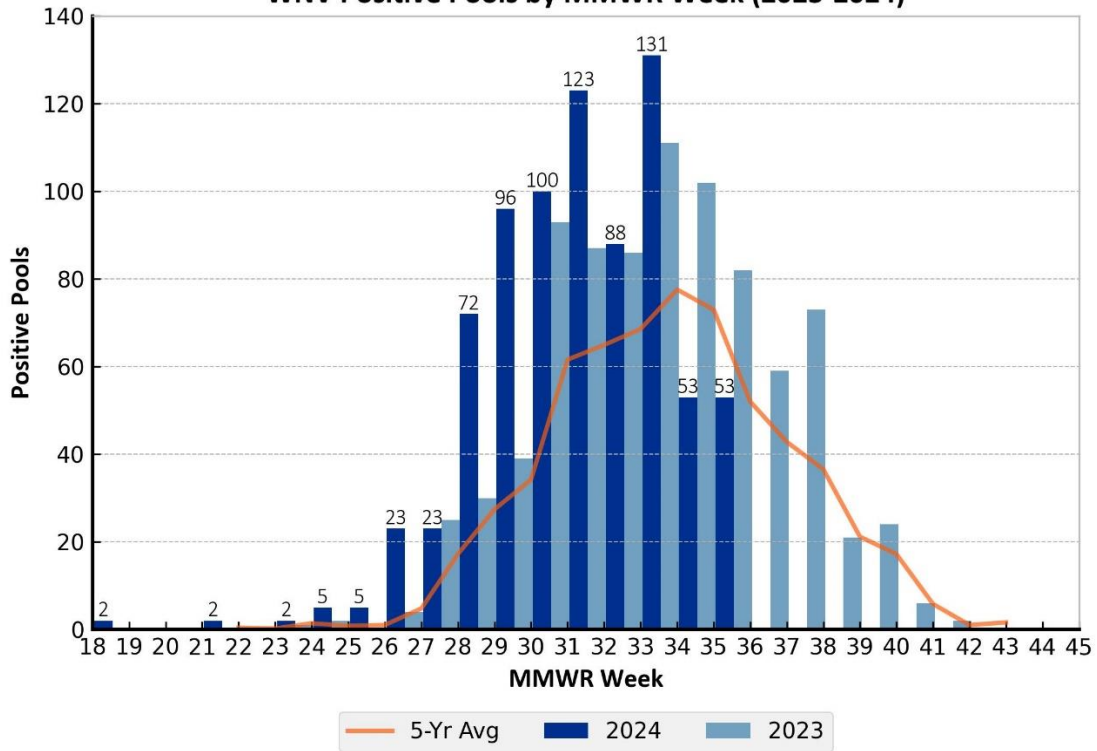
WEEK 35: Aug 27 - Sep 2, 2023; Aug 25 - 31, 2024.

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

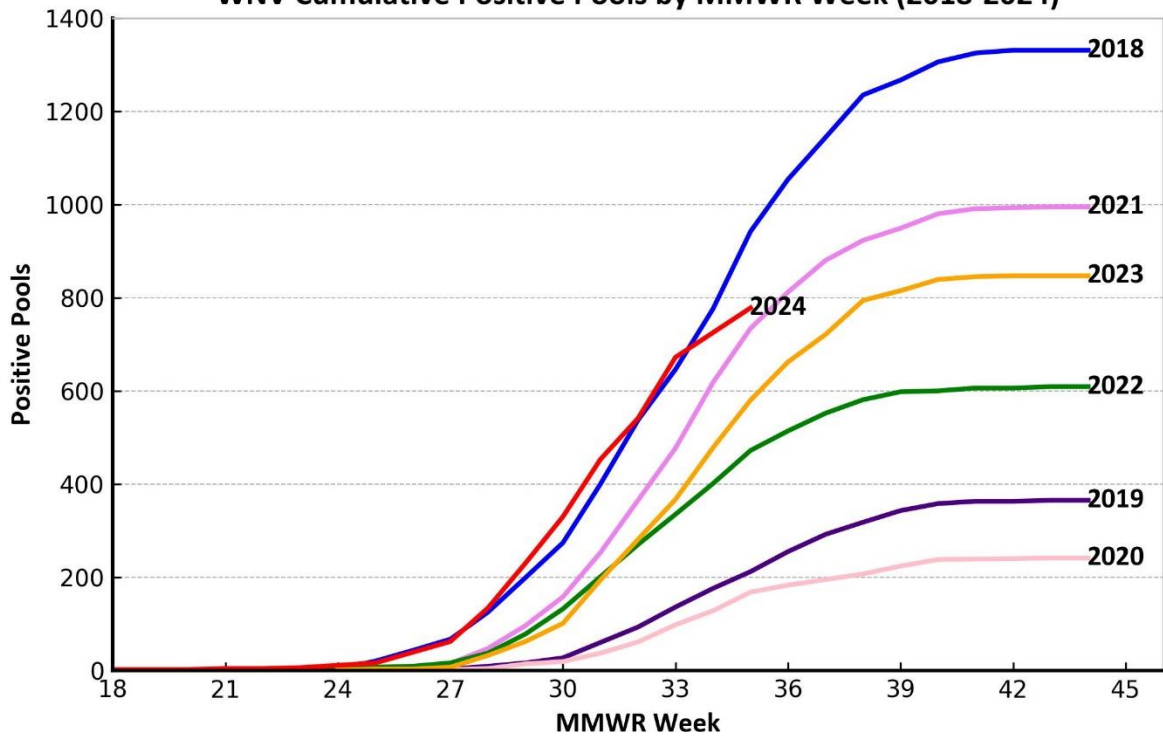
*Vector Index cannot be calculated because all tested pools were positive. In these situations, the county is shown on the map with red stripes to indicate elevated activity.

[†]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)

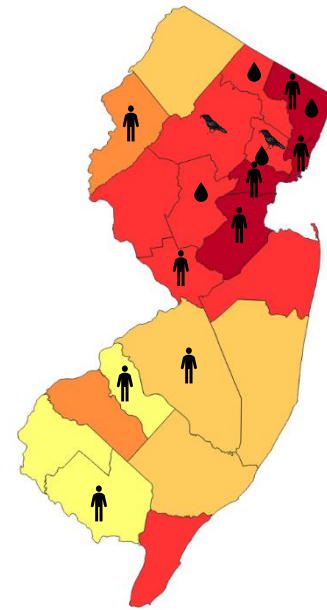
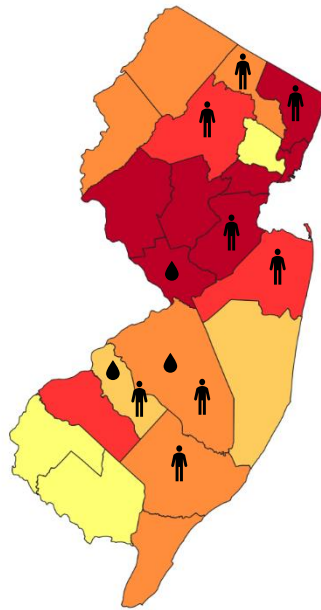


2023 WNV Activity

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



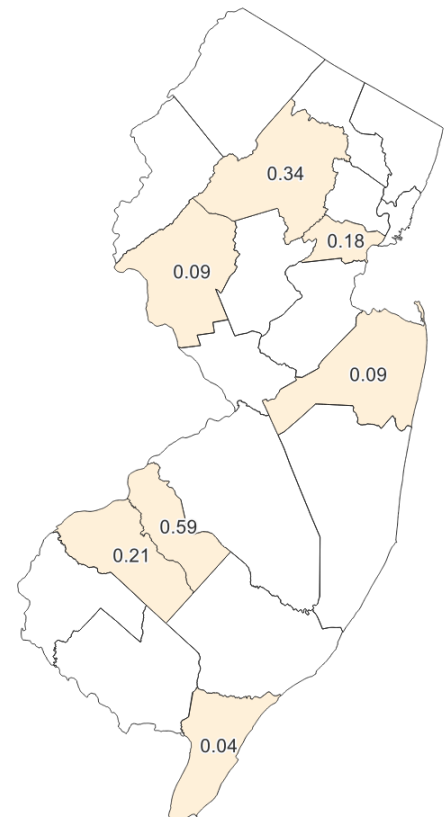
Eastern Equine Encephalitis (EEE)

- 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 8,541 mosquito pools tested for EEE, 12 pools have tested positive in 2024. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (6), *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

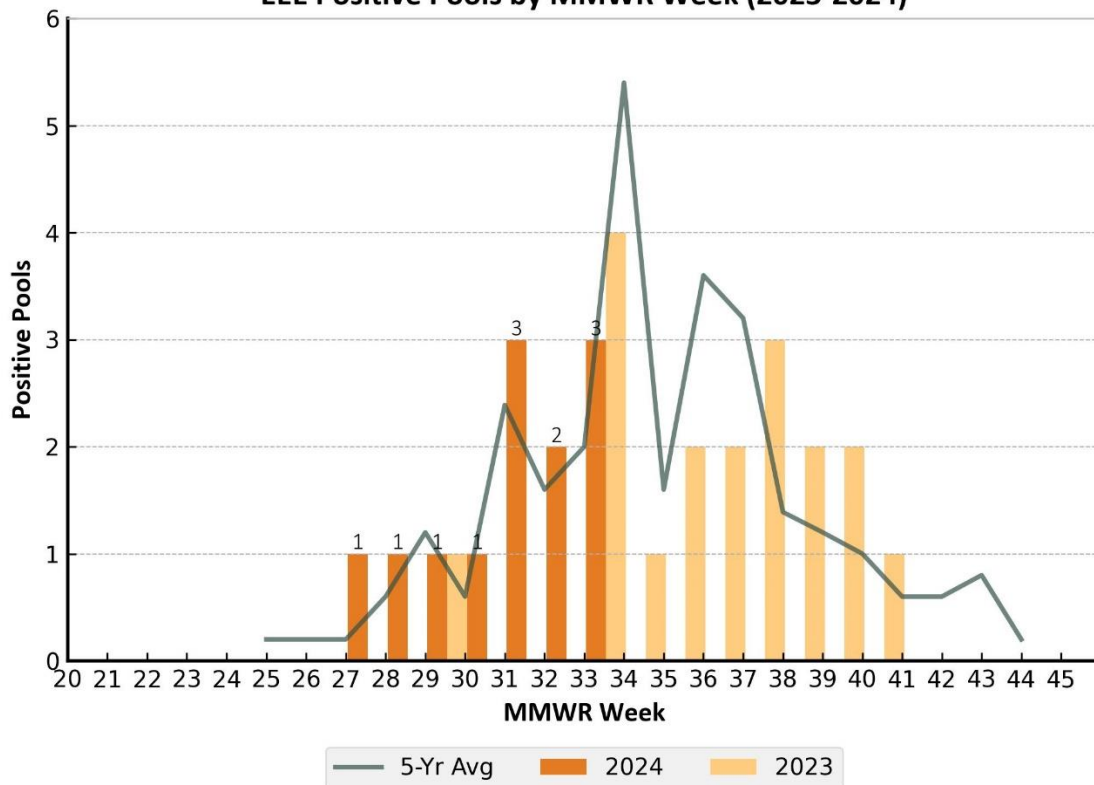
County	WEEK 35 Positive Pools		Cumulative Pos. Total* (WEEK 35)		# Pools Tested 2024	Cumulative MFIR 2024
	2024	2023	2024	2023		
Morris			4		316	0.34
Gloucester			2		501	0.21
Union			2		239	0.18
Camden			1	2	173	0.59
Cape May			1		2,851	0.04
Hunterdon			1		281	0.09
Monmouth			1		341	0.09
Atlantic		1		2	321	
Bergen					249	
Burlington				1	191	
Cumberland				1	320	
Essex					291	
Hudson					230	
Mercer					316	
Middlesex					267	
Ocean					286	
Passaic					185	
Salem					374	
Somerset					226	
Sussex					272	
Warren					311	
Total	0	1	12	6	8,541	-

Cumulative EEE MFIR, 2024



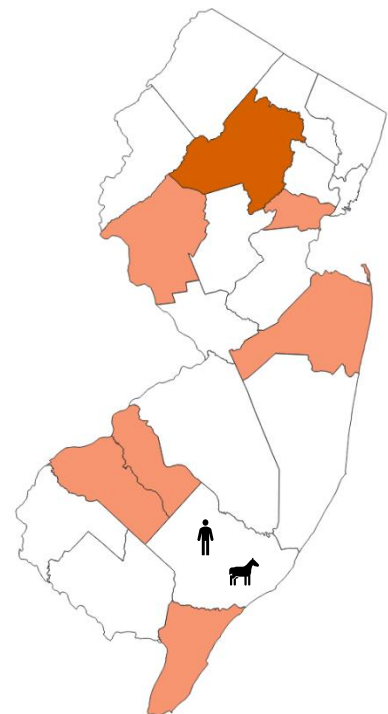
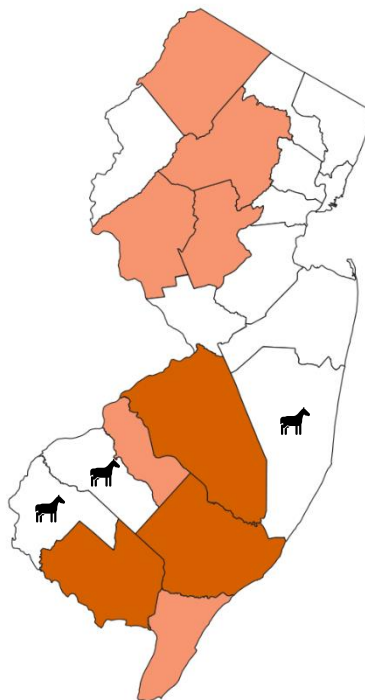
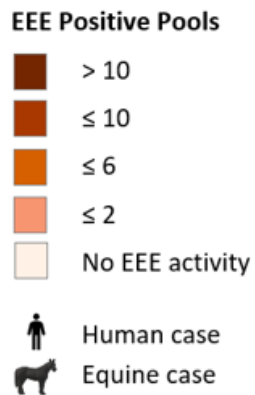
WEEK 35: Aug 27 - Sep 2, 2023; Aug 25 - 31, 2024

EEE Positive Pools by MMWR Week (2023-2024)



2023 EEE Activity

Cumulative EEE Activity, 2024



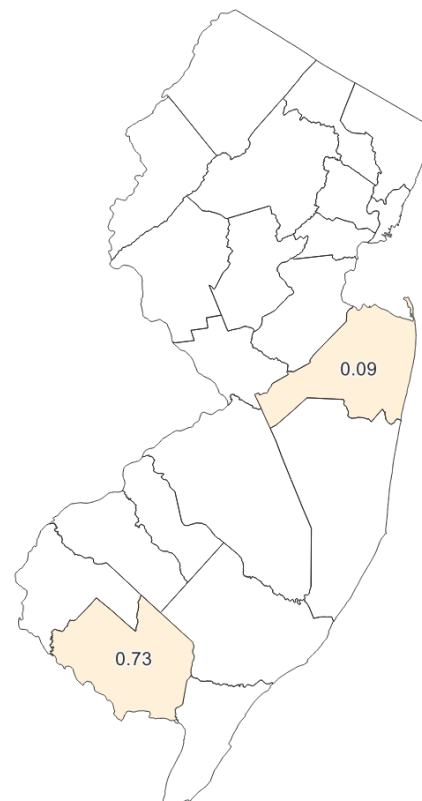
Jamestown Canyon Virus (JCV)

- 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 8,541 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

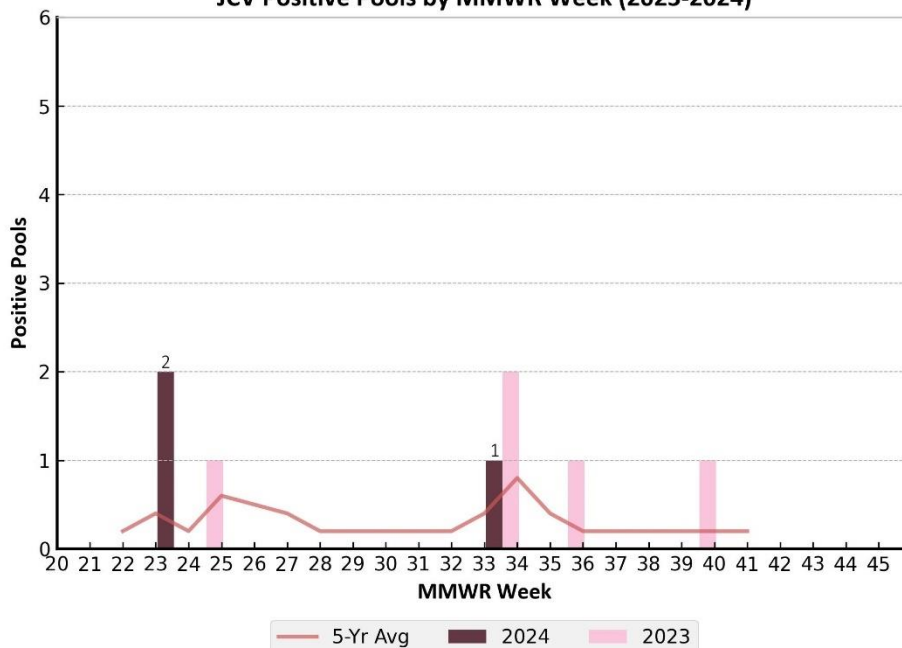
County	WEEK 35 Positive Pools		Cumulative Pos. Total* (WEEK 35)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	320	0.73
Monmouth			1		341	0.09
Atlantic					321	
Bergen					249	
Burlington					191	
Camden					173	
Cape May					2,851	
Essex					291	
Gloucester					501	
Hudson					230	
Hunterdon					281	
Mercer					316	
Middlesex					267	
Morris					316	
Ocean					286	
Passaic					185	
Salem		1		1	374	
Somerset					226	
Sussex		1		1	272	
Union					239	
Warren					311	
Total	0	2	3	3	8,541	-

Cumulative JCV MFIR, 2024



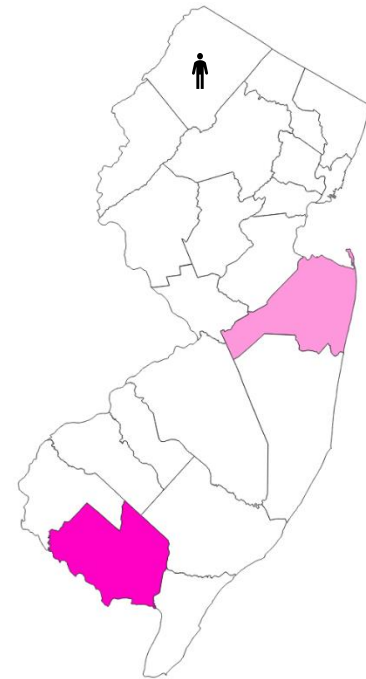
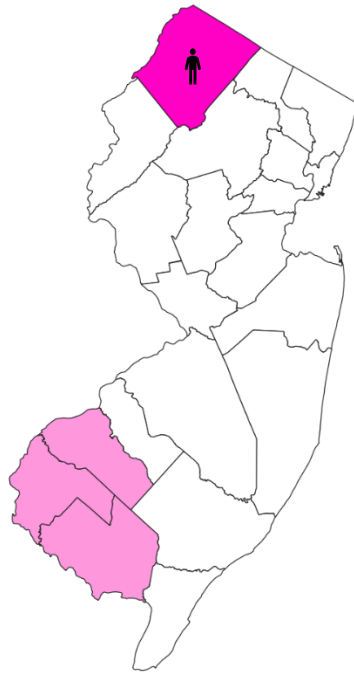
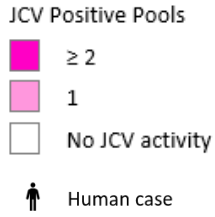
WEEK 35: Aug 27 - Sep 2, 2023; Aug 25 - 31, 2024

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	321									
Bergen	249		5		8		8		8	
Burlington	191		1							
Camden	173		9		1		1		1	
Cape May	2,851		175		152		152		152	
Cumberland	320									
Essex	291				1		1		1	
Gloucester	501									
Hudson	230									
Hunterdon	281		3		3		3		3	
Mercer	316		2		2		2		2	
Middlesex	267		6		5		5		5	
Monmouth	341									
Morris	316				4		4		4	
Ocean	286		2							
Passaic	185		3							
Salem	374		15							
Somerset	226									
Sussex	272		28							
Union	239									
Warren	311		17		1		1		1	
Total	8,541	-	266	-	177	-	177	-	177	-

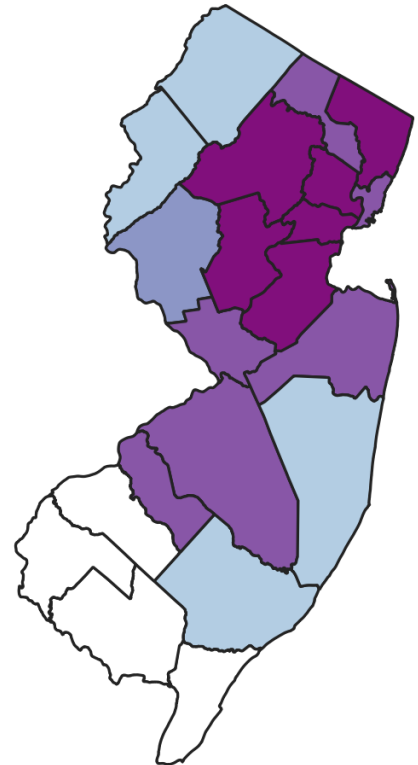
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

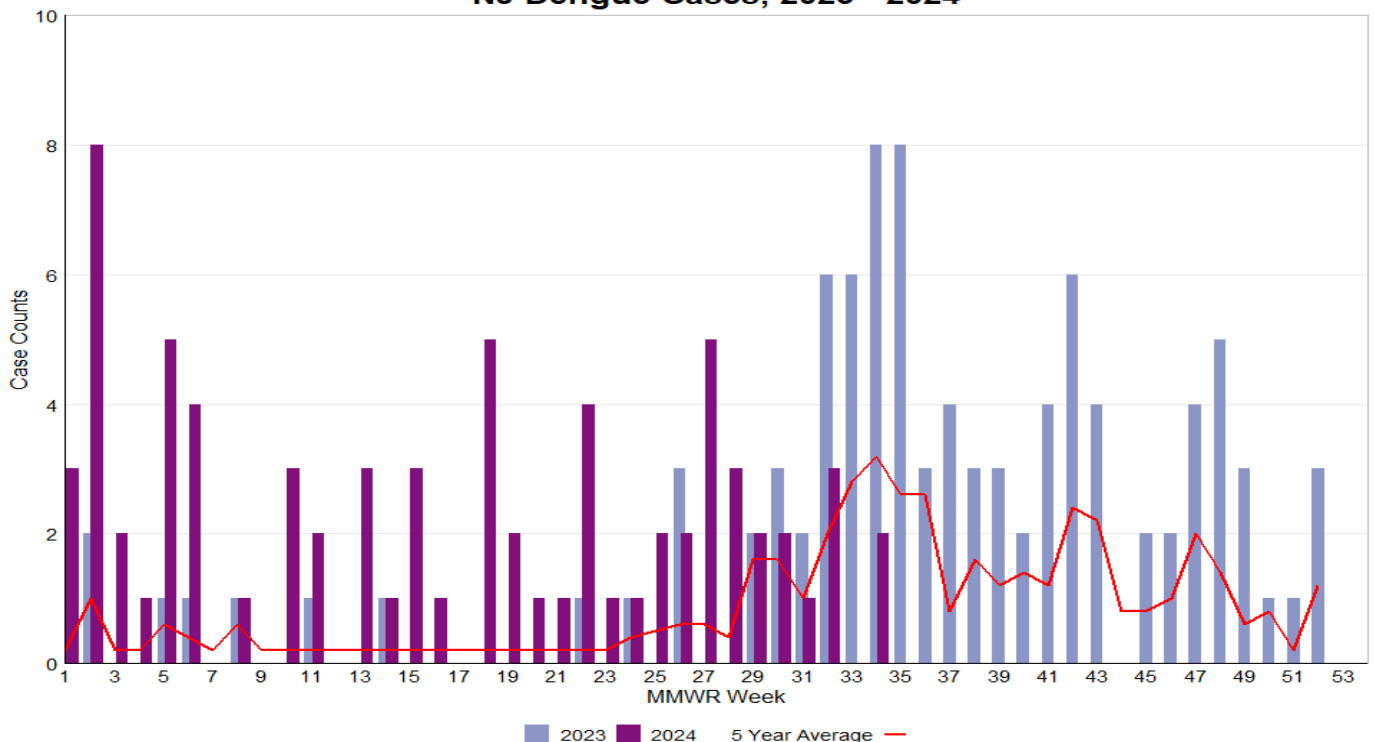
- There have been 74 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (48).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (69) cases have 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	10
Brazil	6
Colombia	6
Guatemala	6
Mexico	6
India	4
Ecuador	3
El Salvador	3
Aruba	2
Costa Rica	2
Guyana	2
Honduras	2
Martinique	2
Peru	2
U.S. Virgin Islands	2
Antigua and Barbuda	1
Cuba	1
Indonesia	1
Paraguay	1
Trinidad & Tobago	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024

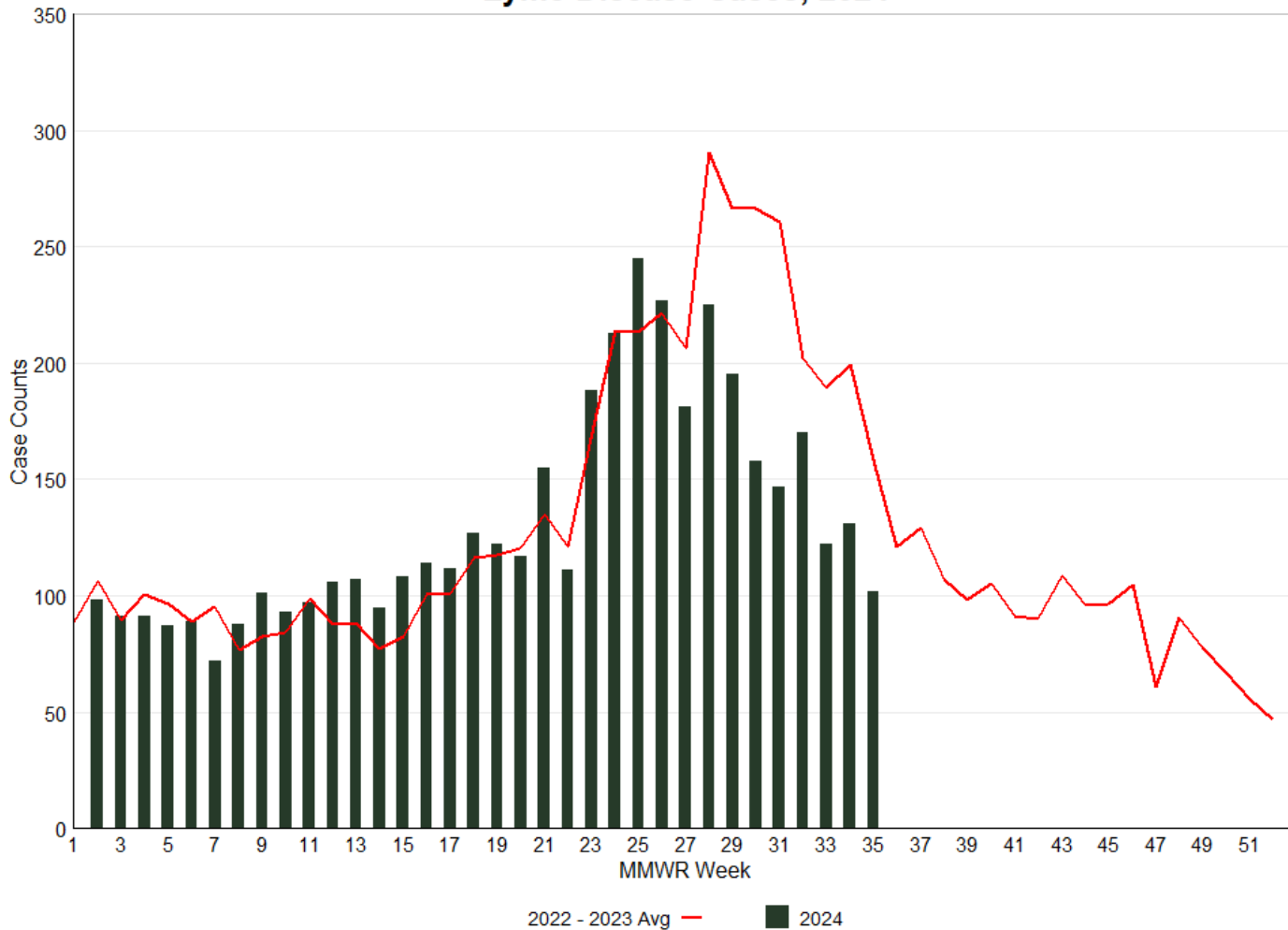


Tickborne Disease Activity

Lyme Disease

- There have been 4,575 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in Week 35 decreased and remains below the average number of cases reported this week.

Lyme Disease Cases, 2024

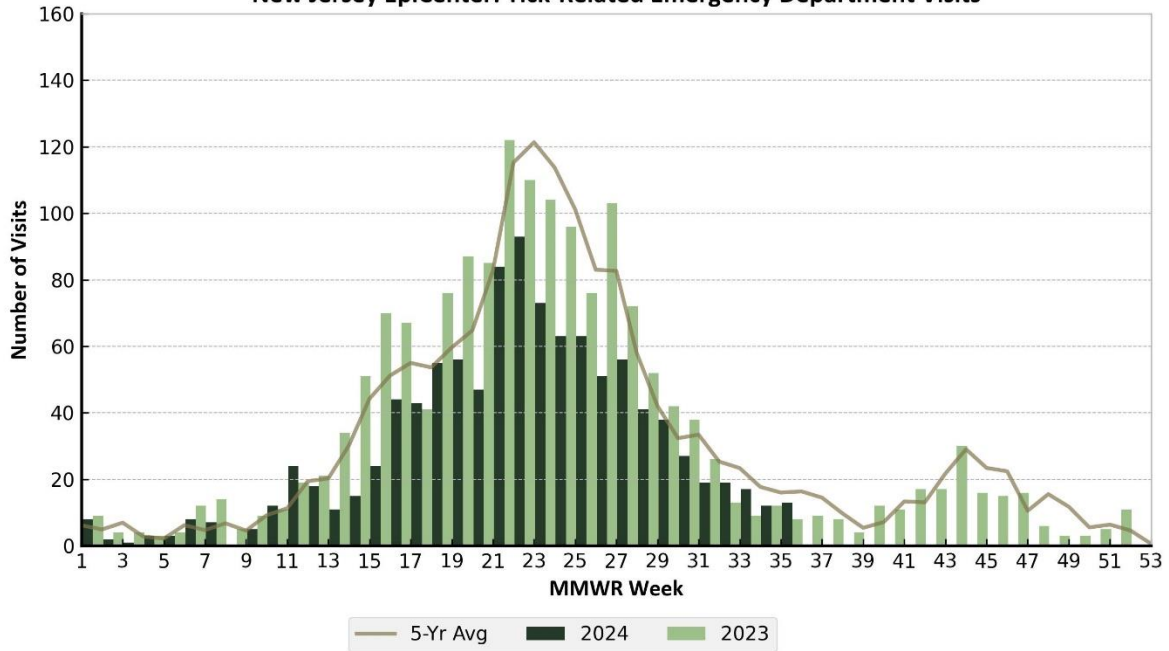


Tick-related Emergency Department Visits

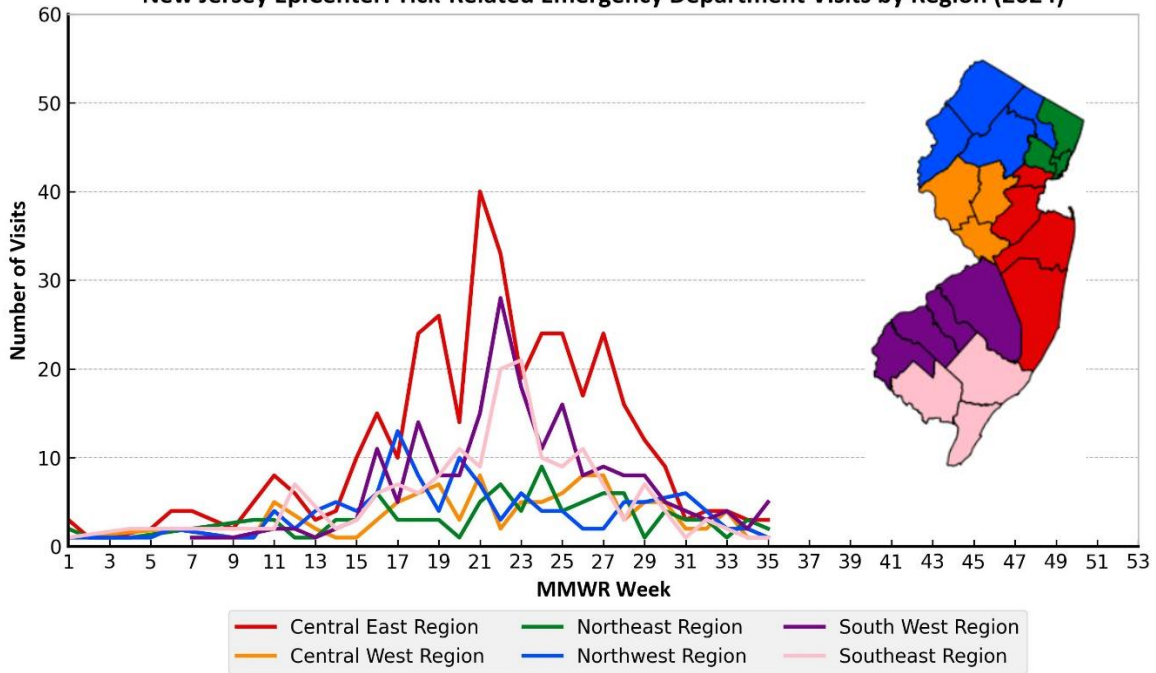
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 35, the number of tick-related ED visits remains 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/>