

Report Highlights:

- No new human or animal cases of West Nile virus (WNV) are reported this week. To date, there have been three human cases from Bergen, Middlesex, and Union counties and two presumptive viremic blood donors (PVDs) from Passaic and Somerset counties. An additional 76 mosquito pools tested positive for WNV this week (additional tests pending) for a total of 616 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. One additional mosquito pool tested positive for EEE in week 33 from Monmouth County, for a total of 7 EEE positive pools in 2024.
- No new human cases or mosquito detections of Jamestown Canyon virus (JCV) are reported this week. To date, there has been one human case of JCV in Sussex County and detections in two mosquito pools in Cumberland County.
- The number of travel-associated dengue cases continued to be elevated, with 63 cases in 2024 compared to 32 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 decreased and is below the average number reported this week in the past two years. Several other tickborne disease cases are lower than in 2023.
- In week 33, the number of tick-related ED visits decreased and is lower than the 5-year average.

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	2	13	Alpha-gal syndrome	112	360
Dengue	63	98	Anaplasmosis	90	195
Eastern equine encephalitis	1	-	Babesiosis	172	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	7	18
Malaria	43	102	Ehrlichiosis	49	109
West Nile	3	14	Lyme disease*	4,319	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	7	24
			Tularemia	2	2

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

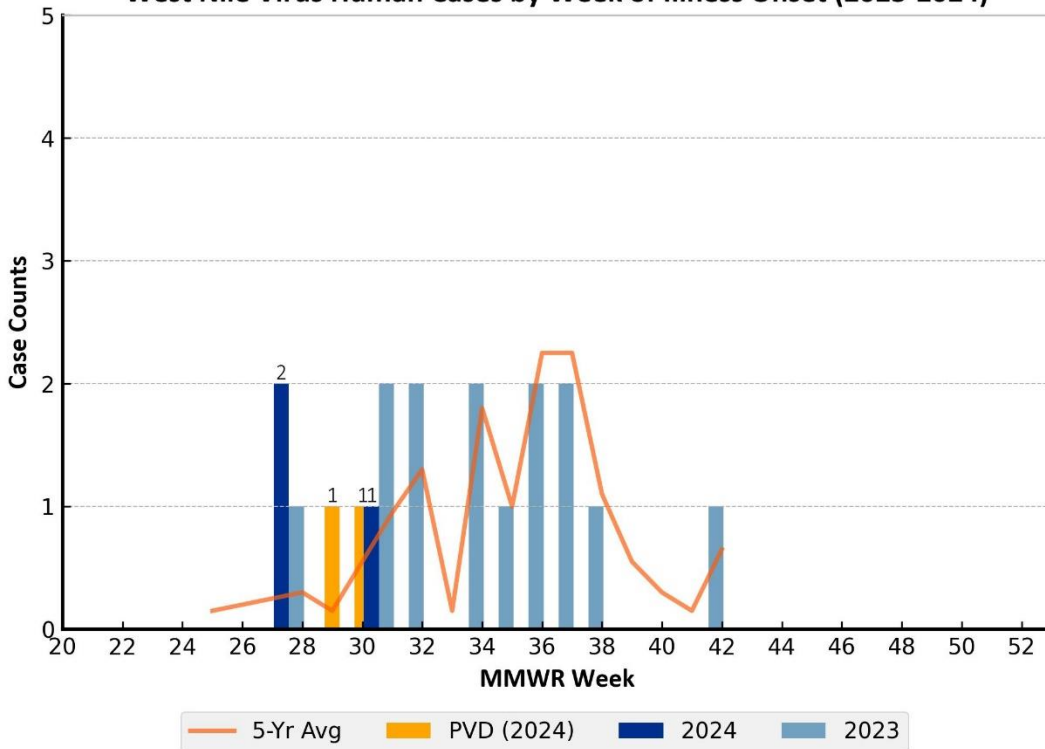
Mosquito-borne Disease Activity*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on August 21, 2024.

West Nile Virus

- Three human cases of WNV have been reported in 2024: 2 in week 27 from Middlesex and Union counties; 1 in week 30 from Bergen County. 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 7,481 mosquito pools submitted for testing, 616 mosquito pools have tested positive for WNV this year with 76 pools positive in week 33 (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (544), *Aedes japonicus* (13), *Cx. pipiens* (25), *Cx. restuans* (5), *Aedes albopictus* (19), *Aedes triseriatus* (3), *Coquillettia perturbans* (1), *Cx. erraticus* (1), *Cx. salinarius* (1), and *Culiseta melanura* (4) 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.

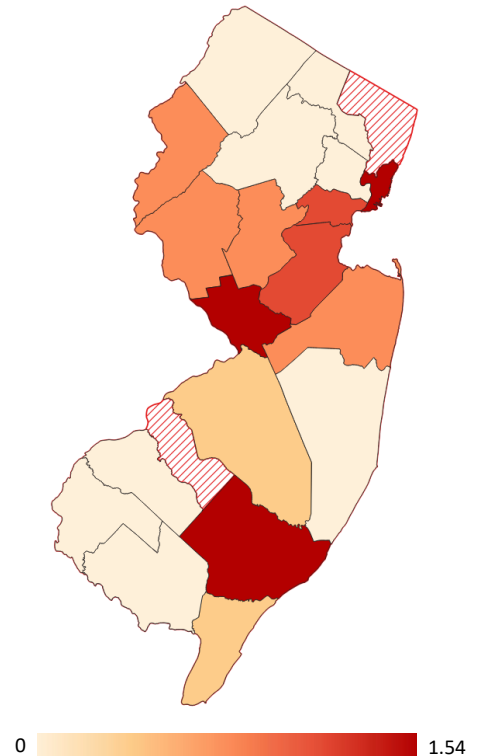
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested*	WEEK 33 Vector Index	
	2024	2023	2024	2023		2024 [†]	
Bergen	21	10	109	69	248	— *	(-)
Middlesex	5	2	69	36	235	0.86	(↓)
Hudson	11	8	62	44	192	1.44	(↓)
Union	6	10	58	26	198	0.98	(↑)
Somerset	4	10	37	27	196	0.56	(↑)
Monmouth	5	3	34	5	296	0.66	(↓)
Hunterdon	5	4	33	13	248	0.64	(↓)
Passaic		1	28	11	165	0.00	(-)
Essex			27		231	0.00	(↓)
Warren	5	4	24	11	280	0.55	(↑)
Mercer	3	10	23	18	265	1.40	(↑)
Cape May	4	3	22	15	2,547	0.04	(↑)
Morris		5	21	19	258	0.00	(↓)
Gloucester			20	16	404	0.00	(-)
Burlington	1	4	13	14	151	0.14	(-)
Atlantic	5	2	12	12	284	1.54	(↑)
Ocean		8	9	13	243	0.00	(-)
Sussex		2	7	10	260	0.00	(-)
Camden	1		5	6	151	— *	(-)
Salem			3	2	286	0.00	(-)
Cumberland					280	0.00	(-)
Total	76	86	616	367	7,481	-	

WNV Vector Index, WEEK 33[†]



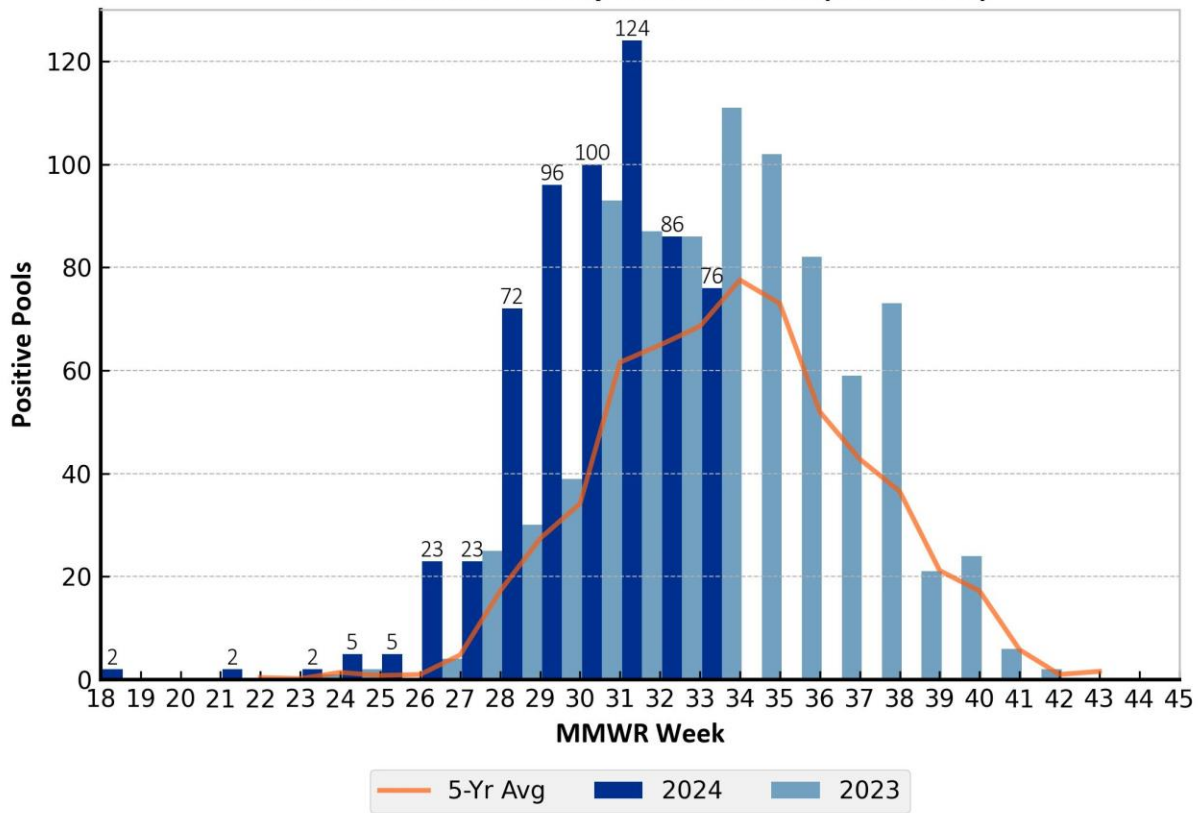
WEEK 33: Aug 13 - 19, 2023; Aug 11 - 17, 2024.

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

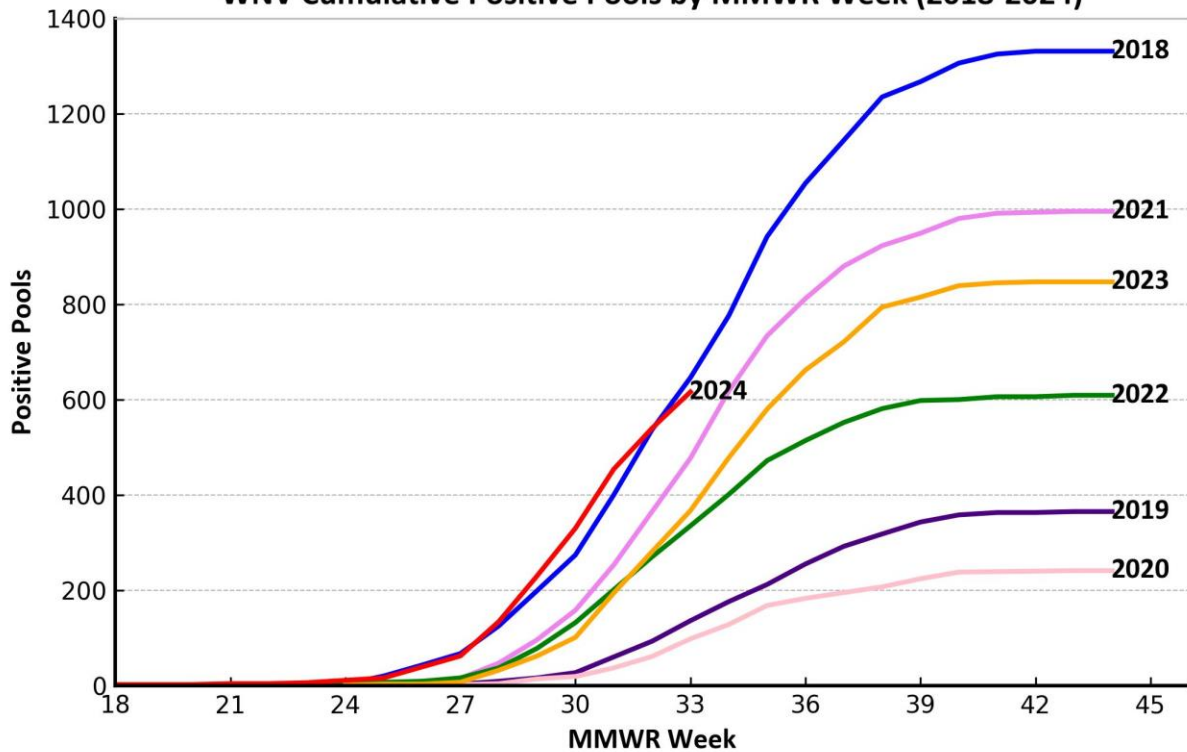
***Vector Index cannot be calculated because all tested pools were positive. In these situations, the county is shown on the map with red stripes to indicate elevated activity.**

[†]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)

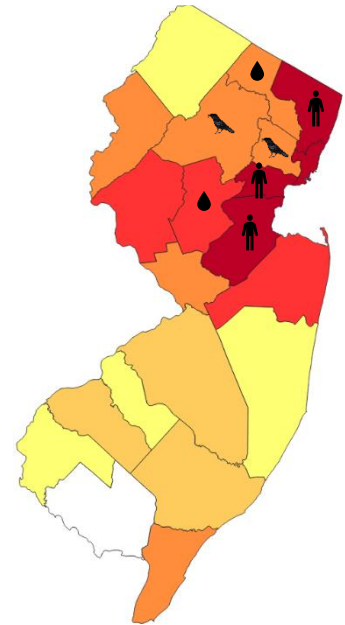
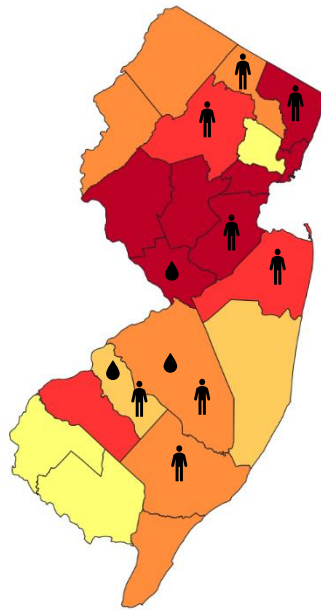


2023 WNV Activity

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



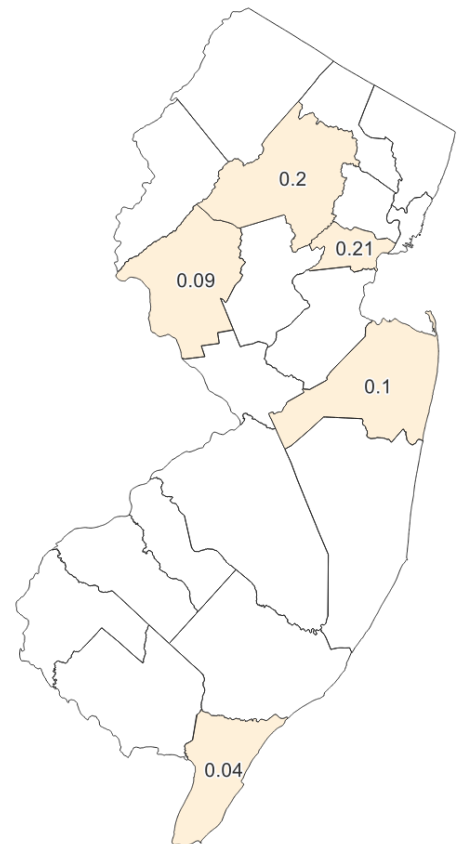
Eastern Equine Encephalitis (EEE)

- 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 7,337 mosquito pools tested for EEE, 7 pools have tested positive in 2024, including one additional pool in week 33 in Monmouth County. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (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

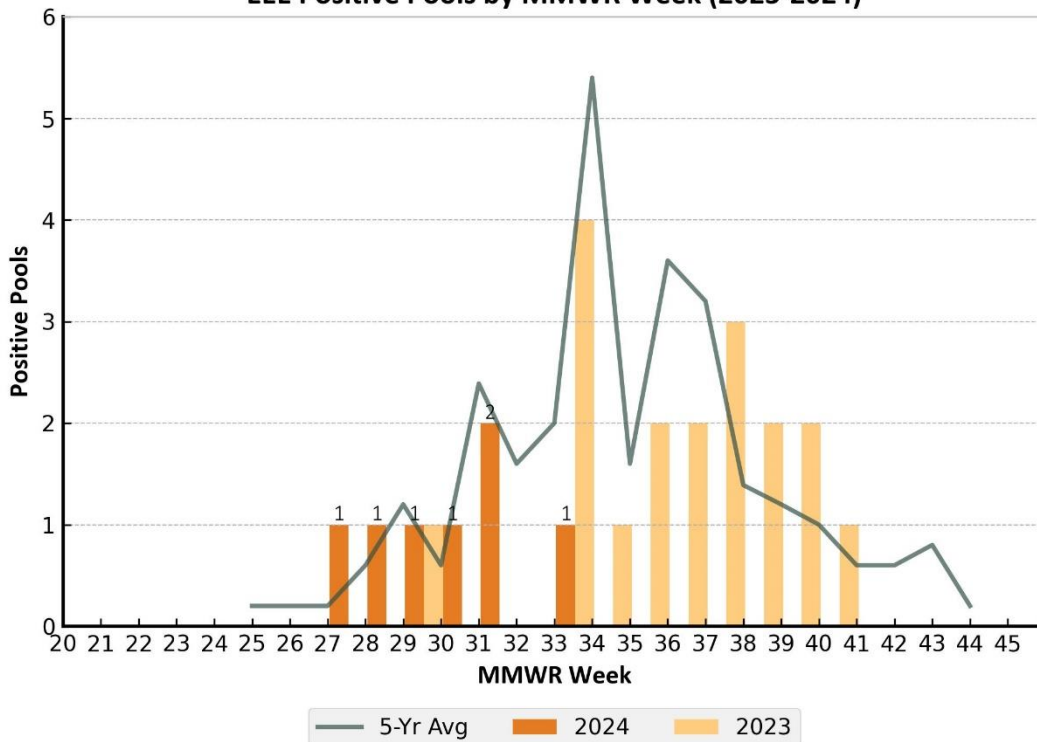
County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested 2024	Cumulative MFIR 2024
	2024	2023	2024	2023		
Morris			2		258	0.20
Union			2		198	0.21
Cape May			1		2,547	0.04
Hunterdon			1		245	0.09
Monmouth	1		1		296	0.10
Atlantic					284	
Bergen					227	
Burlington					150	
Camden					142	
Cumberland				1	280	
Essex					231	
Gloucester					404	
Hudson					192	
Mercer					263	
Middlesex					229	
Ocean					241	
Passaic					165	
Salem					286	
Somerset					196	
Sussex					236	
Warren					267	
Total	1	0	7	1	7,337	-

Cumulative EEE MFIR, 2024



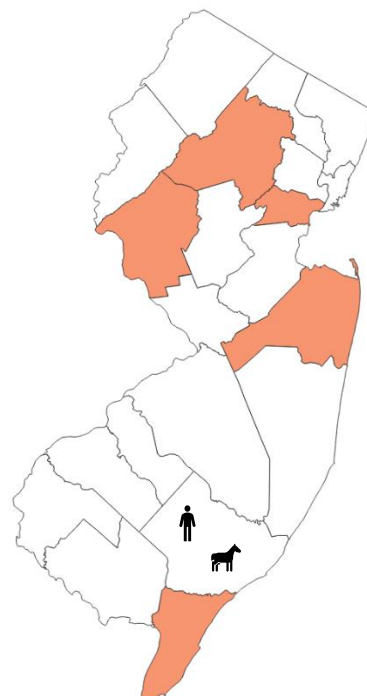
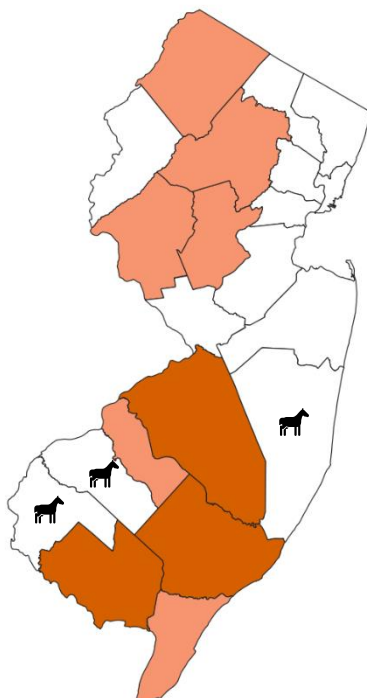
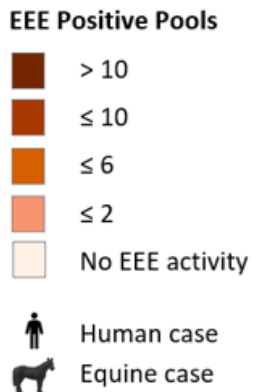
WEEK 33: Aug 13 - 19, 2023; Aug 11 - 17, 2024

EEE Positive Pools by MMWR Week (2023-2024)



2023 EEE Activity

Cumulative EEE Activity, 2024



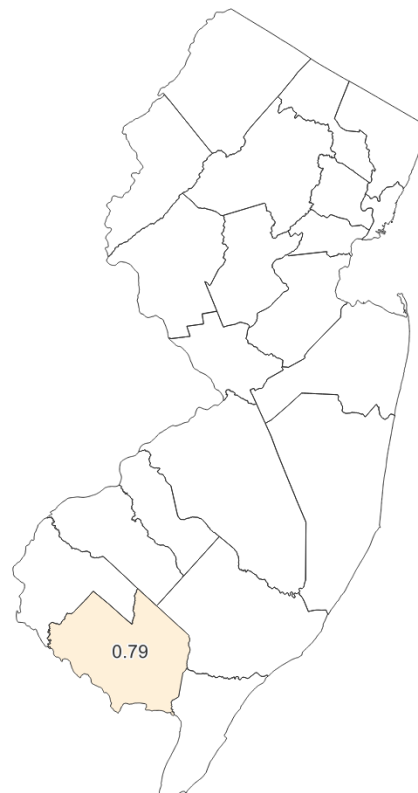
Jamestown Canyon Virus (JCV)

- 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 7,337 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

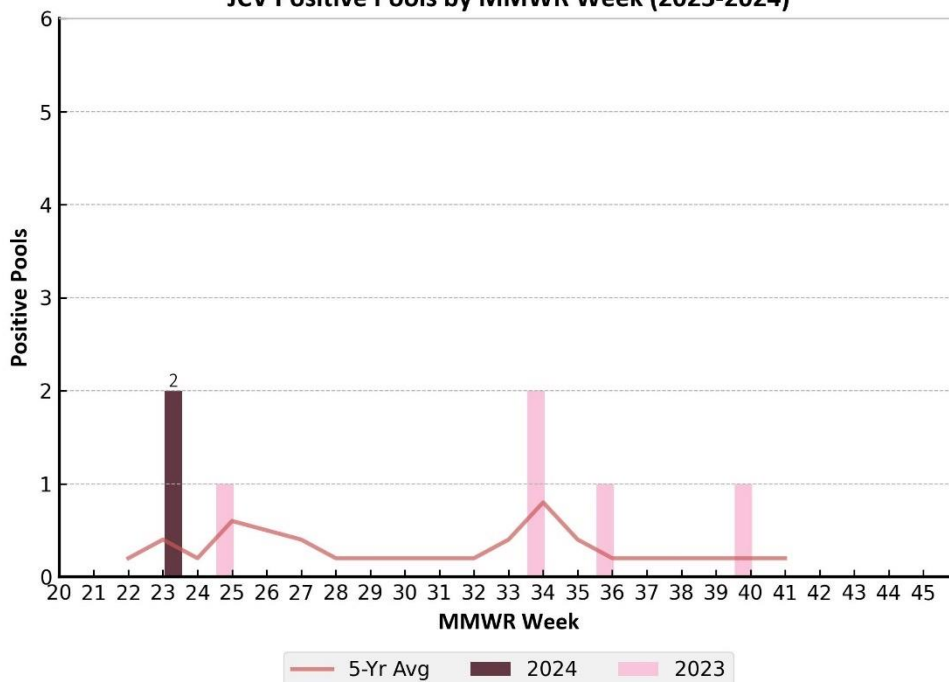
County	WEEK 33 Positive Pools		Cumulative Pos. Total* (WEEK 33)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	280	0.79
Atlantic					284	
Bergen					227	
Burlington					150	
Camden					142	
Cape May					2,547	
Essex					231	
Gloucester					404	
Hudson					192	
Hunterdon					245	
Mercer					263	
Middlesex					229	
Monmouth					296	
Morris					258	
Ocean					241	
Passaic					165	
Salem					286	
Somerset					196	
Sussex					236	
Union					198	
Warren					267	
Total	0	0	2	1	7,337	-

Cumulative JCV MFIR, 2024



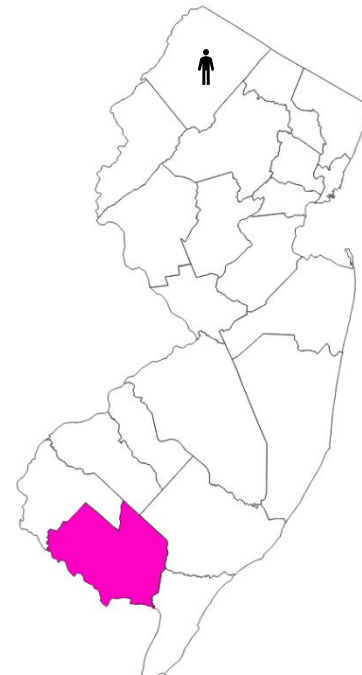
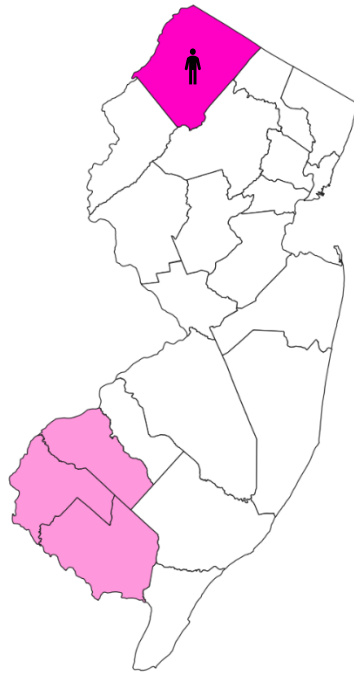
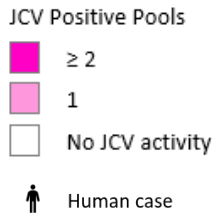
WEEK 33: Aug 13 - 19, 2023; Aug 11 - 17, 2024

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	284									
Bergen	227		4		6		6		6	
Burlington	150		1							
Camden	142		9		1		1		1	
Cape May	2,547		144		152		152		152	
Cumberland	280									
Essex	231				1		1		1	
Gloucester	404									
Hudson	192									
Hunterdon	245		3		3		3		3	
Mercer	263		2		2		2		2	
Middlesex	229		6		3		3		3	
Monmouth	296									
Morris	258				2		2		2	
Ocean	241		2							
Passaic	165		3							
Salem	286		13							
Somerset	196									
Sussex	236		24							
Union	198									
Warren	267		13		1		1		1	
Total	7,337	-	224	-	171	-	171	-	171	-

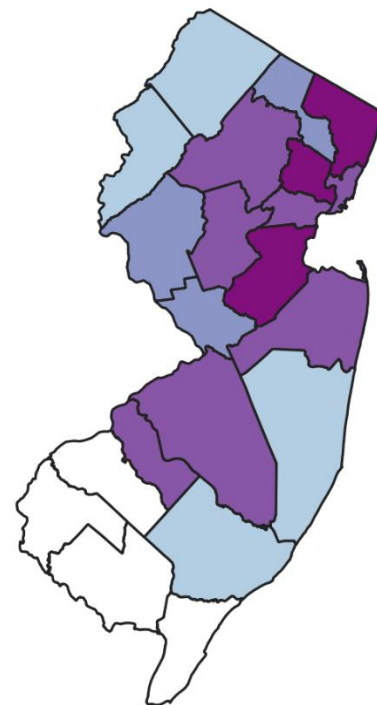
^a St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2024
 Number in green shaded columns represent positive pools in 2024

Human Dengue Virus Cases

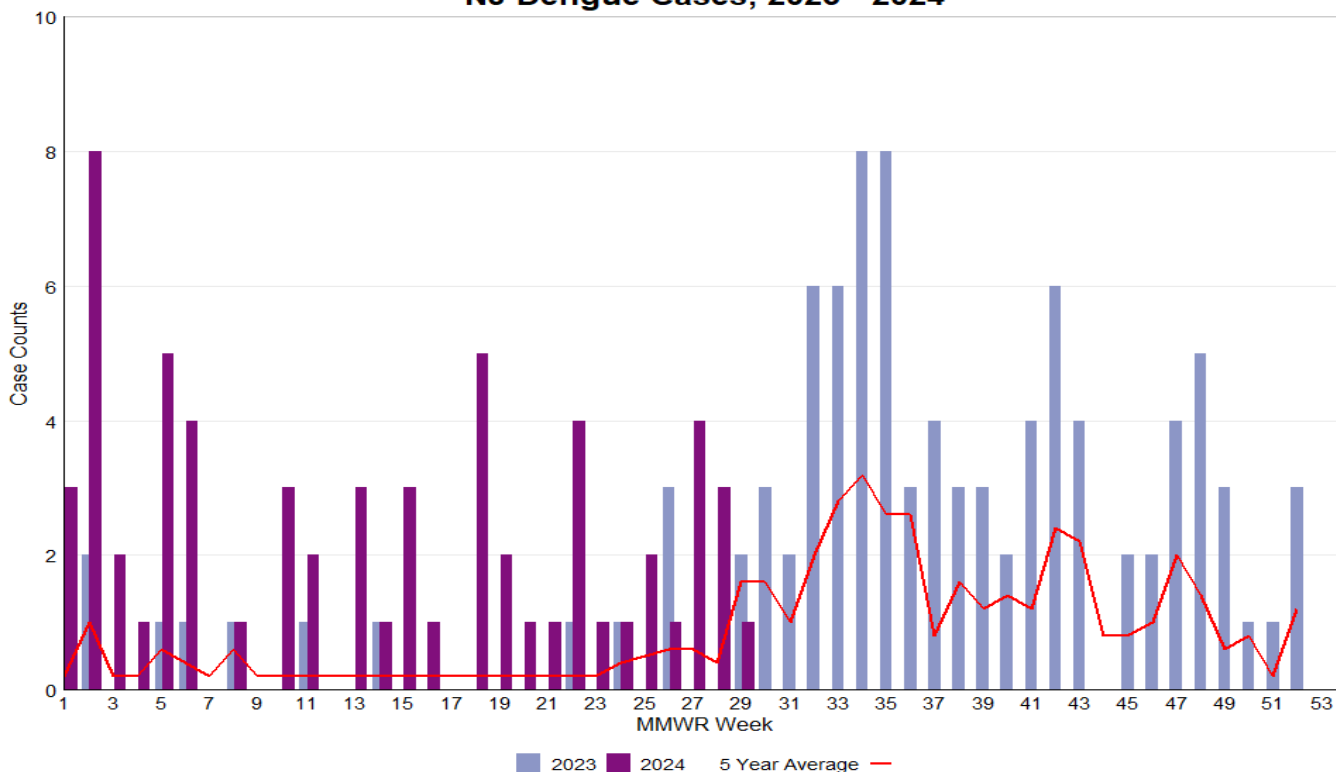
- There have been 63 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (32).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (60) cases have 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	9
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

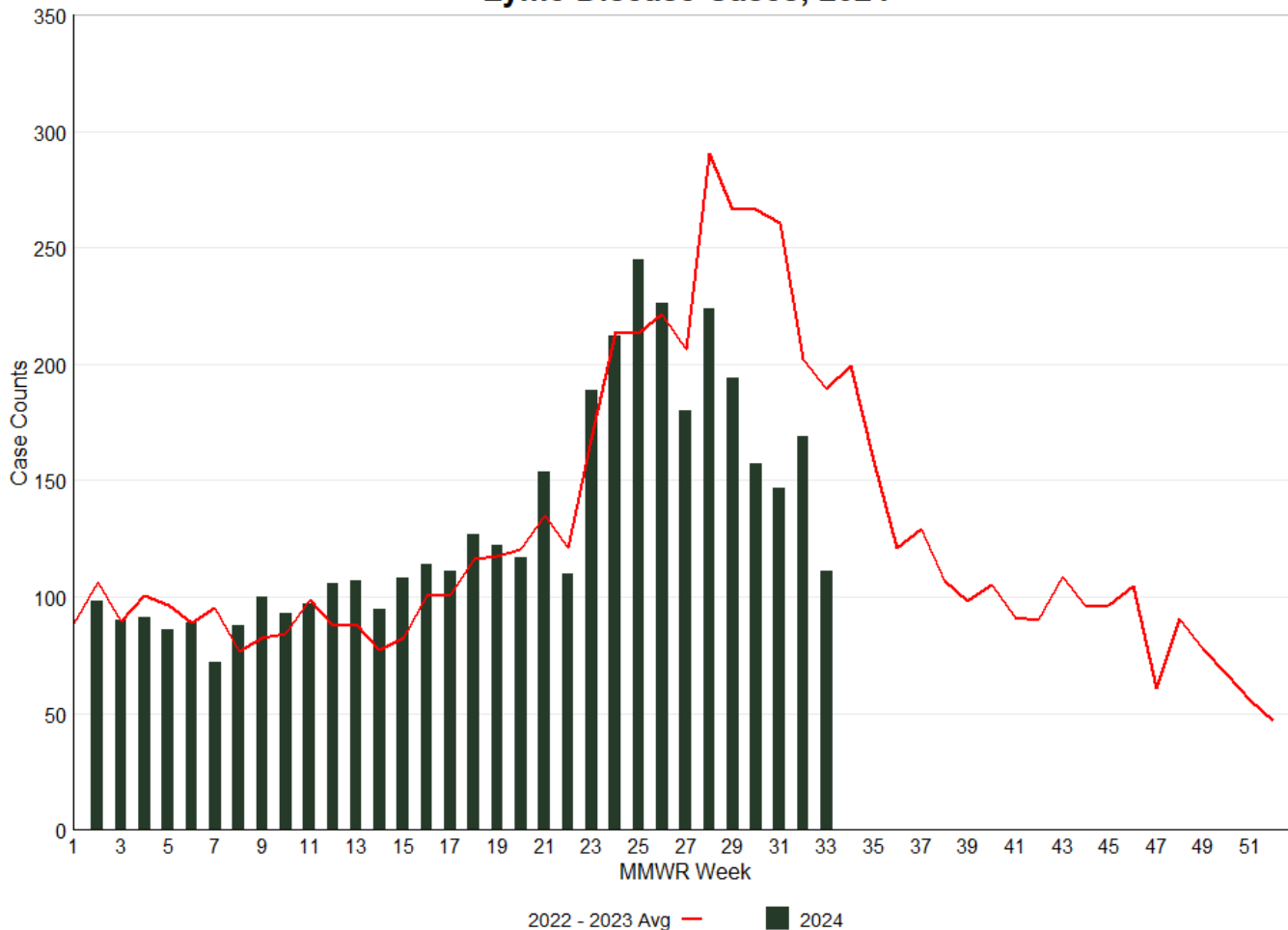


Tickborne Disease Activity

Lyme Disease

- There have been 4,319 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in week 33 decreased and remains below the average number of cases reported this week.

Lyme Disease Cases, 2024

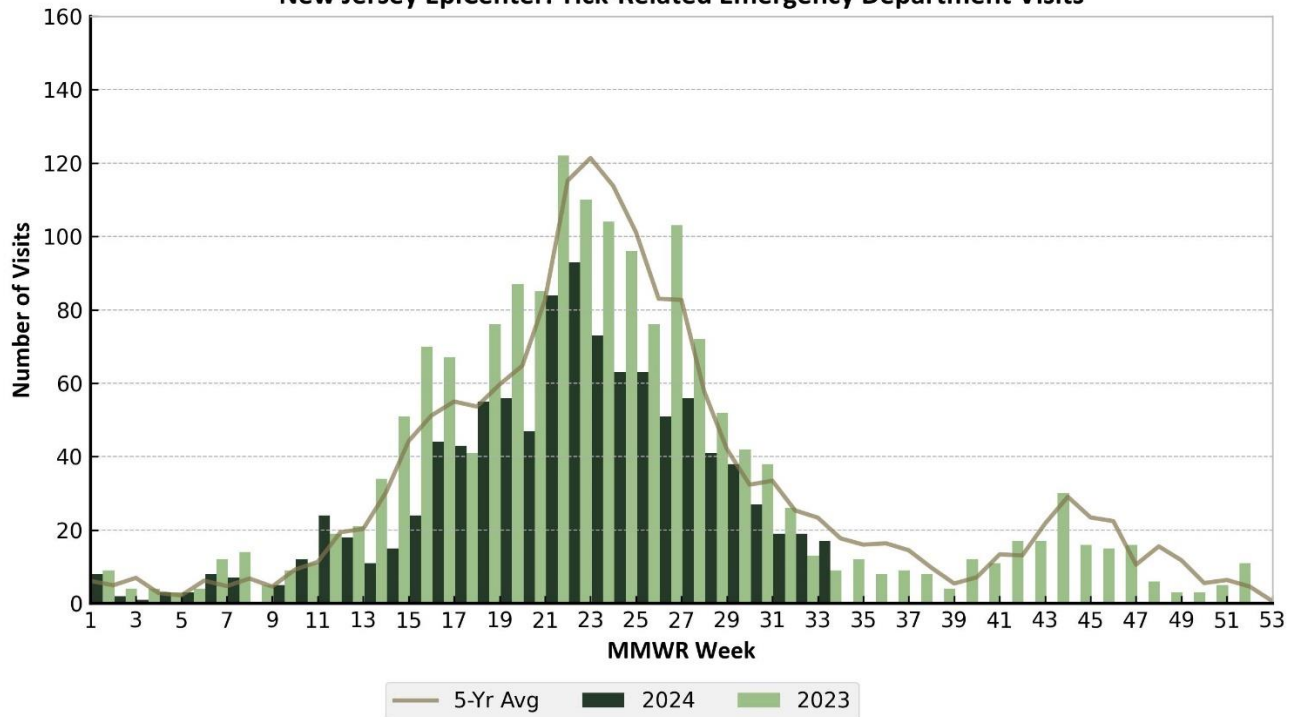


Tick-related Emergency Department Visits

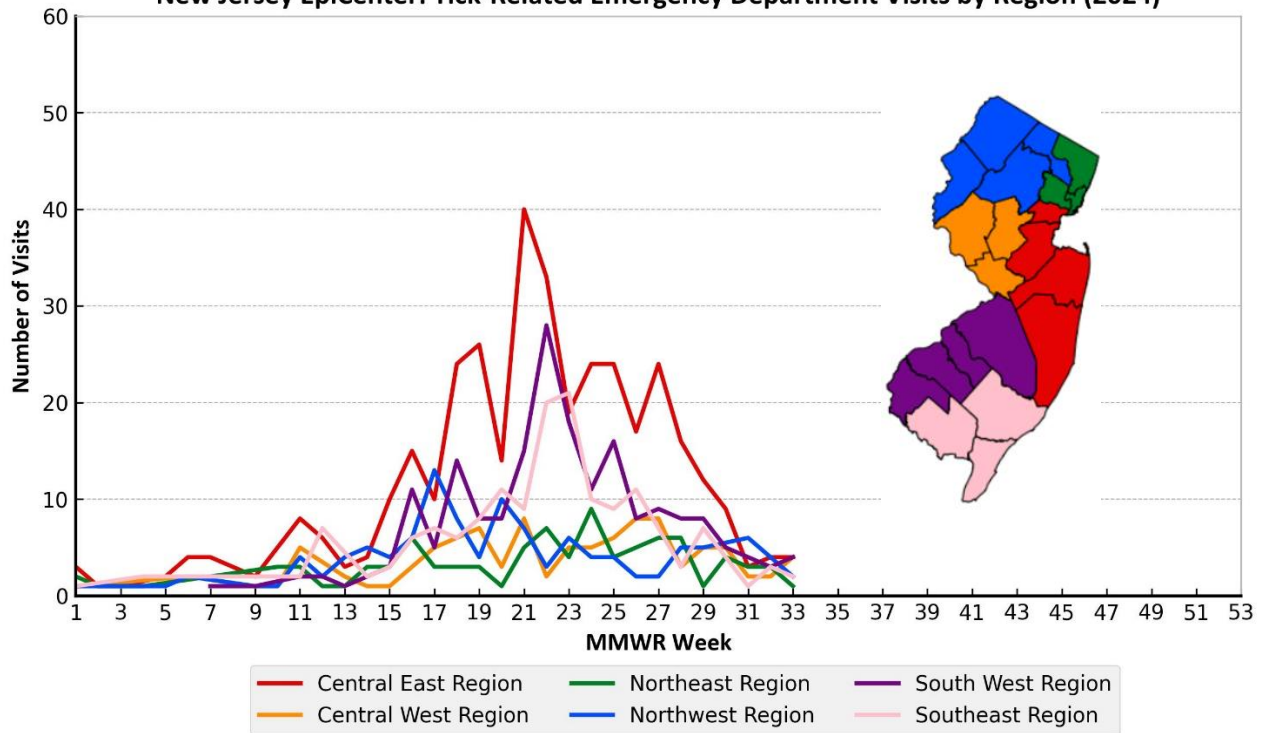
New Jersey’s syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects “chief complaint” information and limited patient registration data from existing 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 33, 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/>