

Report Highlights:

- Three mosquito pools have tested positive for West Nile Virus (WNV) so far this year in Bergen, Somerset, and Union Counties.
- NJDOH began testing mosquitoes for arboviruses the week of May 15th and to date has tested mosquitoes submitted from all 21 counties.
- The number of N.J. chikungunya cases reported to date in 2023 is higher than the 2022 total due to an ongoing outbreak in South America.
- The number of tick-related emergency department visits is comparable to this time last year, but below the 5-year average.
- The number of Lyme disease cases reported in 2023 is lower compared to 2022.
- New! Vector-borne disease data is now available on an online dashboard, located here: https://dashboards.doh.nj.gov/views/public_dashboard/Intro and can also be accessed on the Fight the Bite NJ webpage <https://www.nj.gov/health/cd/topics/vectorborne.shtml>.

Vector-borne Disease Case Summary

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2023 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 (with the exception of Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2023 numbers are preliminary and subject to change.

	Mosquito-borne diseases		Tickborne Diseases/Conditions		
	2023	2022		2023	2022
Chikungunya	8	2	Alpha-gal syndrome	48	234
Dengue	9	35	Anaplasmosis	36	125
Eastern equine encephalitis	-	-	Babesiosis	28	292
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	1	6
Malaria	15	86	Ehrlichiosis (<i>chaffeensis</i> , <i>ewingii</i>)	11	115
West Nile	-	20	Lyme disease*	2,827	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	8	35
			Tularemia	1	1

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

Mosquito-borne Disease Activity

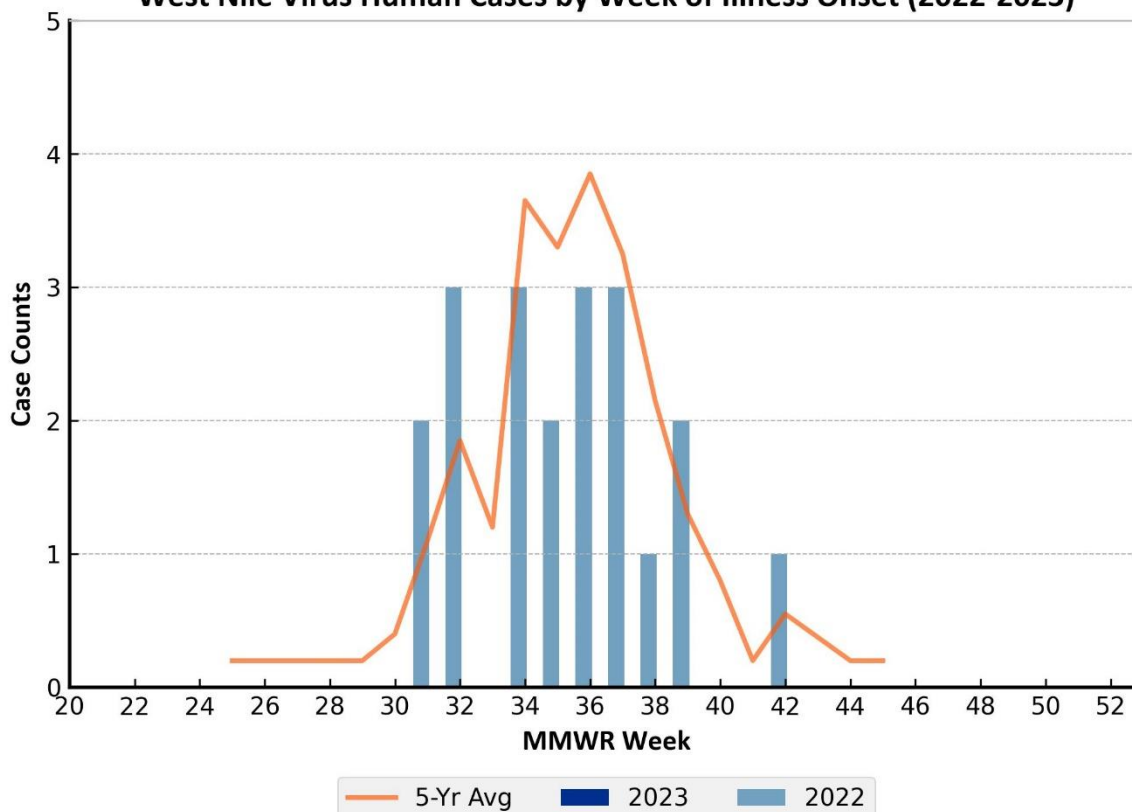
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) performs arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on July 5, 2023

West Nile Virus

- There have been no human cases of WNV reported in New Jersey in 2023.
- A total of 2,536 pools from all 21 counties have been tested for WNV.
- No pools tested positive for WNV in week 26. Three mosquito pools have tested positive so far this year. The positive pools were found in: *Culex pipiens/restuans/salinarius* (3).
- The first WNV positive mosquito pool (*Culex pipiens/restuans/salinarius*) was detected in week 24 from Bergen County. In 2022, the first WNV positive pool was detected in Week 22 from Burlington County.
- No animals have tested positive for WNV in 2023.

West Nile Virus Human Cases by Week of Illness Onset (2022-2023)



WNV Mosquito Pool Testing

County	WEEK 26 Positive Pools		Cumulative Pos. Total (WEEK 26)		# Pools Tested	WEEK 26 Vector Index
	2023	2022	2023	2022	2023	2023 ^t
Bergen			1	2	80	
Somerset			1	1	75	
Union			1		23	
Atlantic					100	
Burlington				1	27	
Camden					84	
Cape May					144	
Cumberland					92	
Essex					68	
Gloucester		1		2	368	
Hudson					73	
Hunterdon					104	
Mercer					120	
Middlesex					101	
Monmouth					111	
Morris		1		2	138	
Ocean					106	
Passaic					92	
Salem				1	129	
Sussex					356	
Warren					145	
Total	-	2	3	9	2536	-

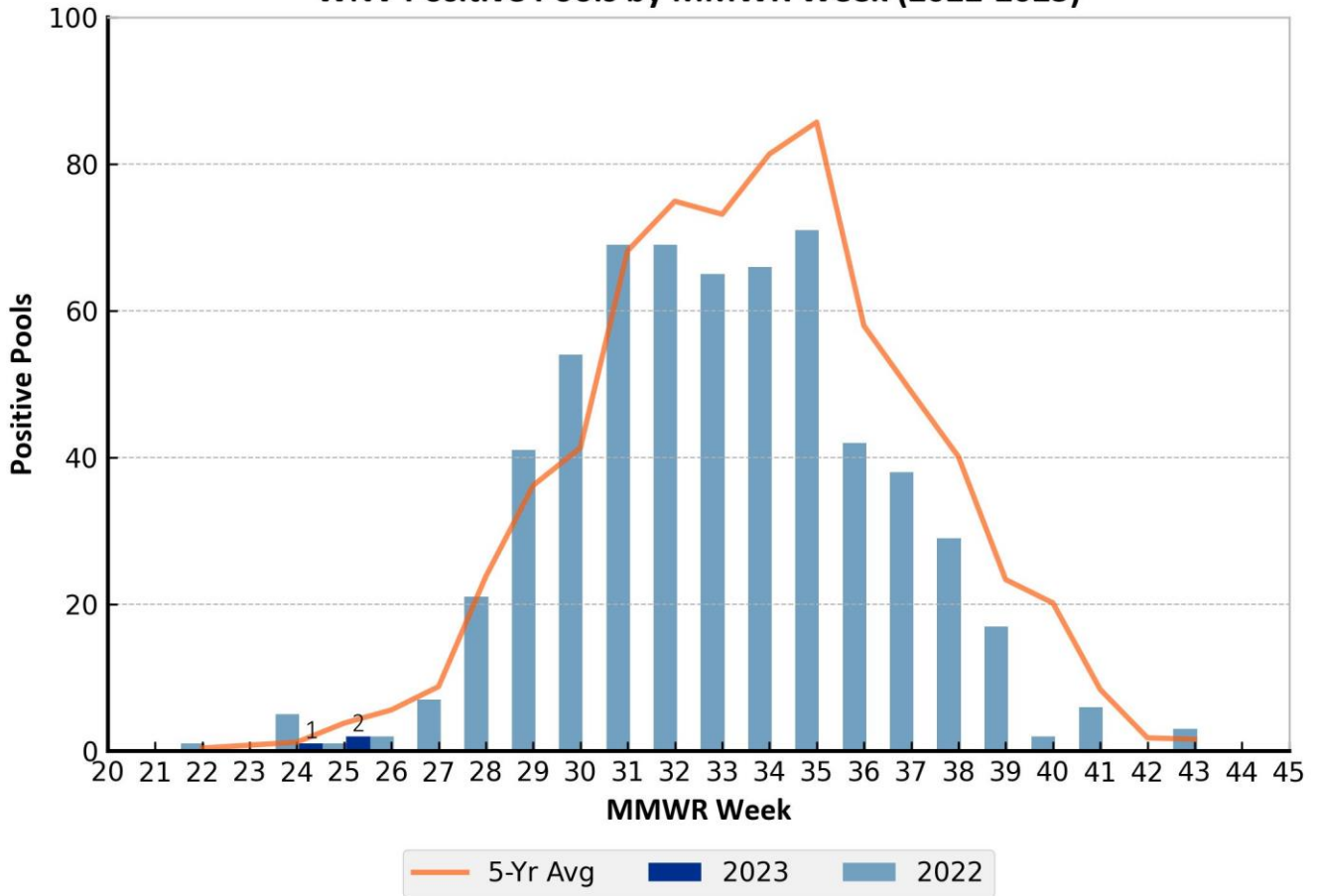
WEEK 26: June 26- July 2, 2022; June 25 - July 1, 2023

WNV Vector Index, WEEK 26^t

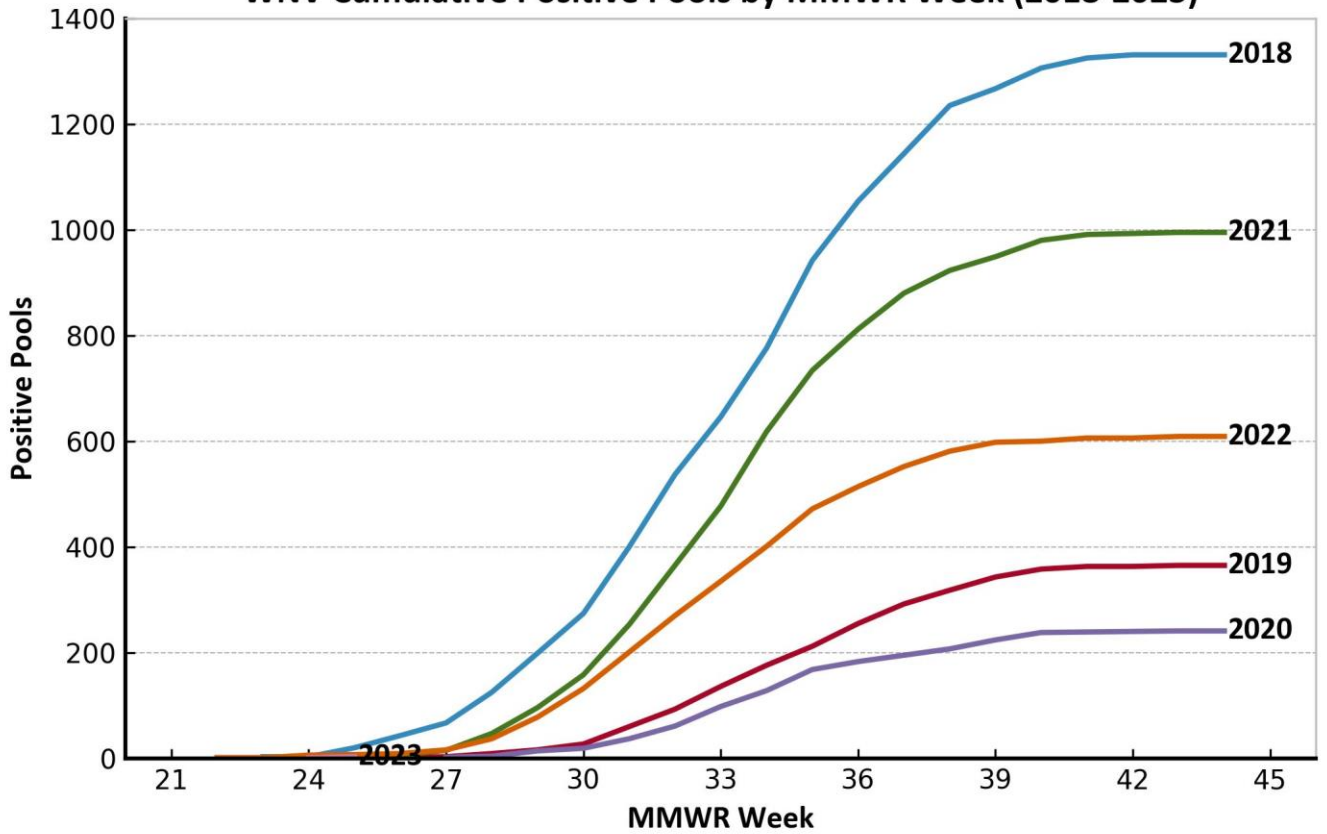


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

WNV Positive Pools by MMWR Week (2022-2023)



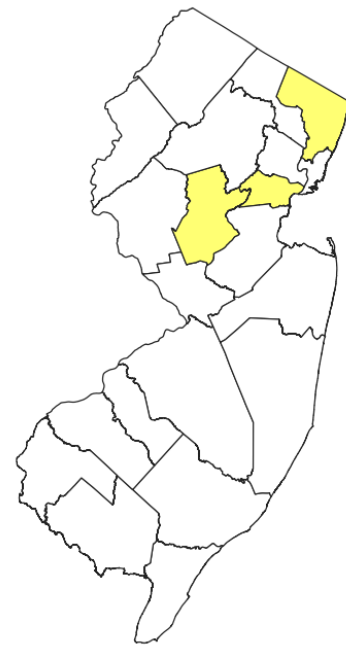
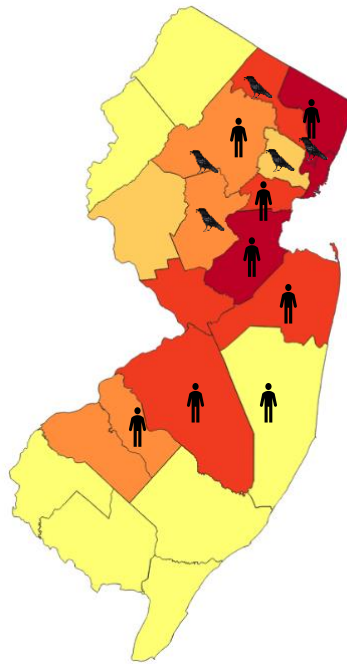
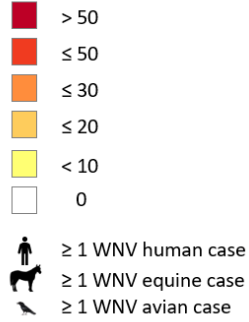
WNV Cumulative Positive Pools by MMWR Week (2018-2023)



2022 WNV Activity

Cumulative WNV Activity, 2023

WNV Positive Pools



Eastern Equine Encephalitis

- There have been no human cases of EEE in New Jersey in 2023. EEE cases were last reported in 2019 (4 cases).
- A total of 2,512 pools from all 21 counties have been tested for EEE.
- No positive EEE pools have been identified in 2023. In 2022, the first EEE positive pool was detected in Week 33 from Morris County.
- No animals have tested positive for EEE in 2023.

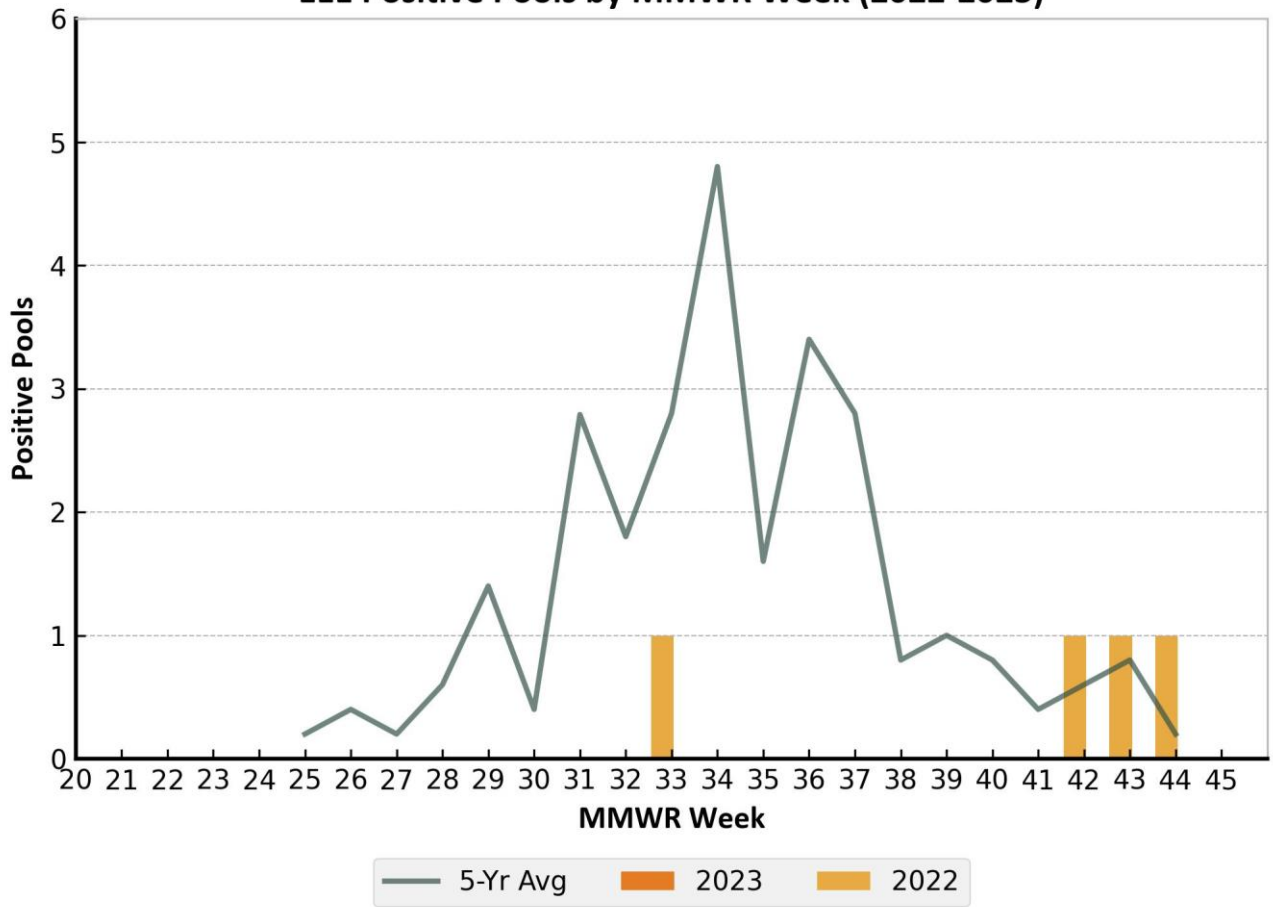
EEE Mosquito Pool Testing

County	WEEK 26 Positive Pools		Cumulative Pos. Total (WEEK 26)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					96	
Bergen					80	
Burlington					27	
Camden					84	
Cape May					144	
Cumberland					92	
Essex					68	
Gloucester					368	
Hudson					73	
Hunterdon					104	
Mercer					111	
Middlesex					101	
Monmouth					111	
Morris					138	
Ocean					106	
Passaic					89	
Salem					124	
Somerset					75	
Sussex					354	
Union					23	
Warren					144	
Total	-	-	-	-	2512	-

Cumulative EEE MFIR, 2023



EEE Positive Pools by MMWR Week (2022-2023)



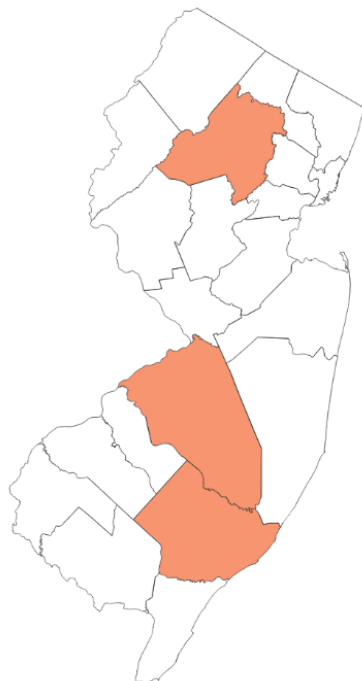
2022 EEE Activity

Cumulative EEE Activity, 2023

EEE Positive Pools

- > 10
- ≤ 10
- ≤ 6
- ≤ 2
- No EEE activity

- Human case
- Equine case
- Alpaca case
- Deer case



Jamestown Canyon Virus

- There have been no human cases of JCV in New Jersey in 2023.
- JCV can be detected in early-season mosquitoes. Nine counties submitted early season mosquito pools for JCV testing, with collection dates starting the 1st week of April. A total of 2,512 pools from all 21 counties have been tested for JCV.
- No positive JCV pools have been identified in 2023. In 2022, the first JCV positive pool was detected in Week 22 (Bergen County).

JCV Mosquito Pool Testing

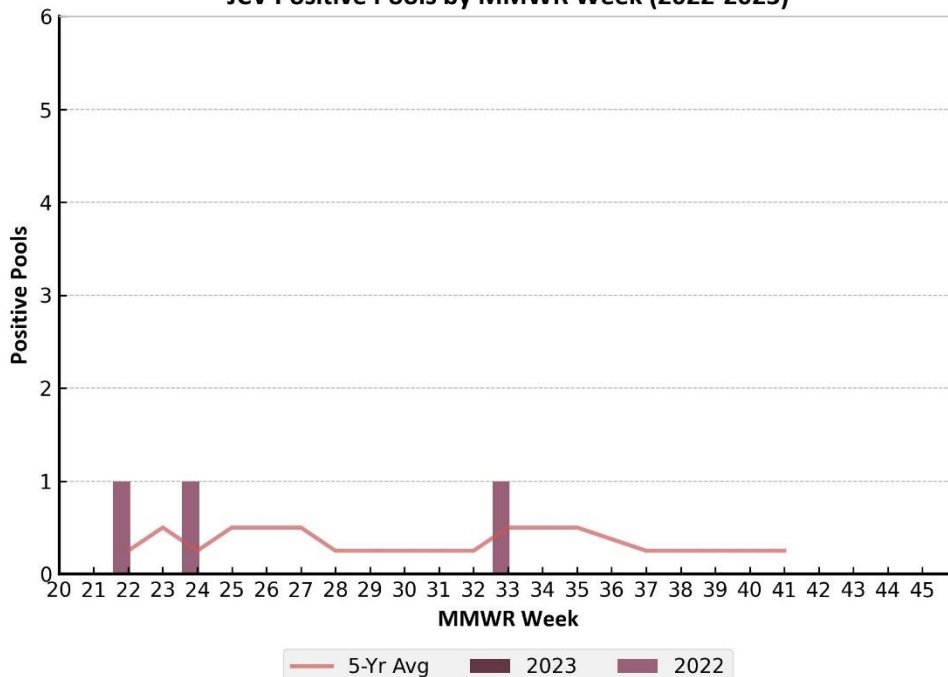
County	WEEK 26 Positive Pools		Cumulative Pos. Total (WEEK 26)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic					96	
Bergen				2	80	
Burlington					27	
Camden					84	
Cape May					144	
Cumberland					92	
Essex					68	
Gloucester					368	
Hudson					73	
Hunterdon					104	
Mercer					111	
Middlesex					101	
Monmouth					111	
Morris					138	
Ocean					106	
Passaic					89	
Salem					124	
Somerset					75	
Sussex					354	
Union					23	
Warren					144	
Total	-	-	-	2	2512	-

Cumulative JCV MFIR, 2023



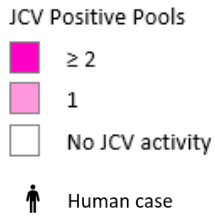
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JCV Positive Pools by MMWR Week (2022-2023)



2022 JCV Activity

Cumulative JCV Activity, 2023



Other Mosquito-borne Viruses

- Mosquito pools from all 21 counties have been tested for other arboviruses with no positives.

Cumulative 2023 Mosquito Pool Testing (Other Viruses^a)

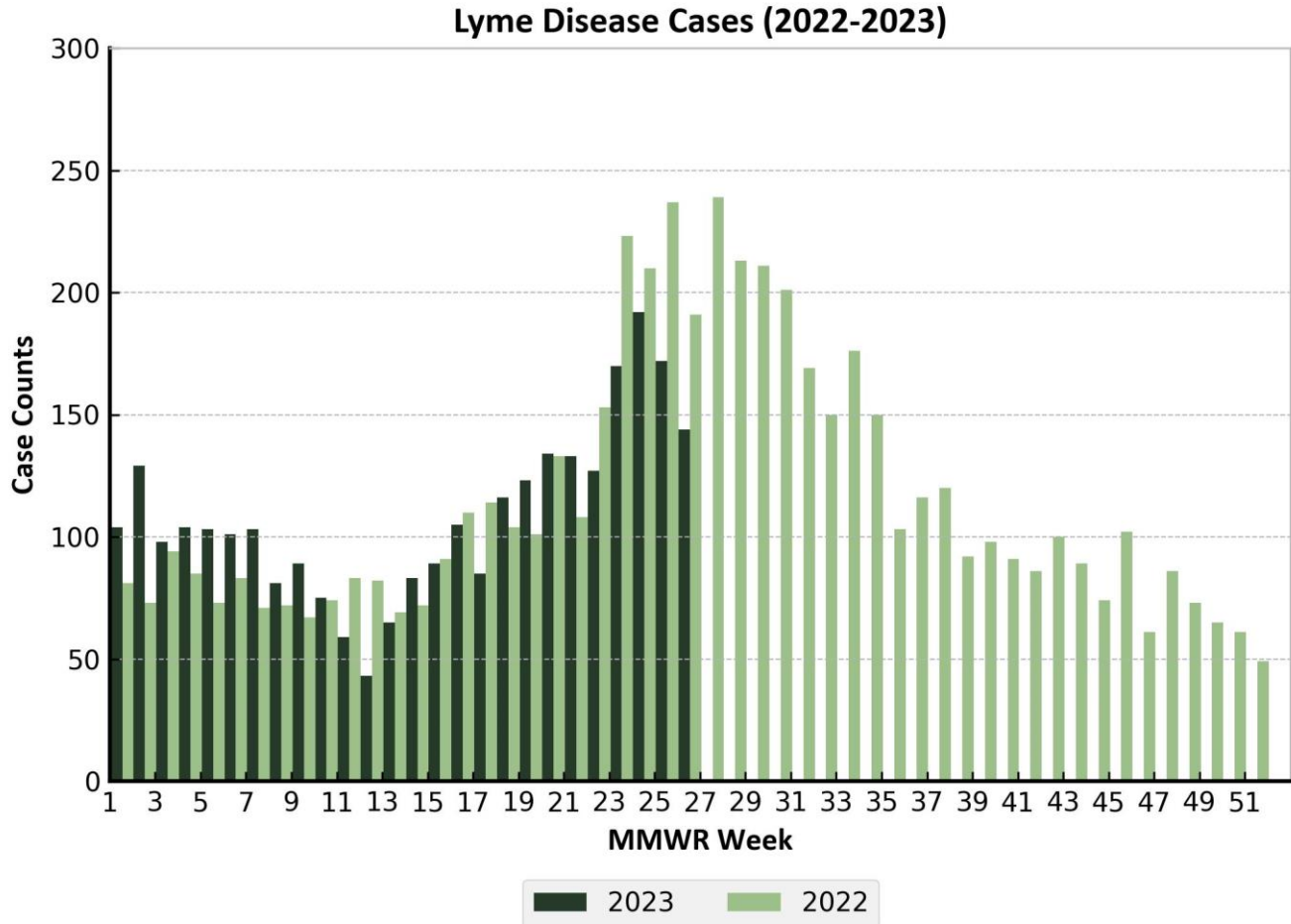
County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	96		4							
Bergen	80									
Burlington	27									
Camden	84									
Cape May	144									
Cumberland	92									
Essex	68									
Gloucester	368									
Hudson	73									
Hunterdon	104									
Mercer	111		9							
Middlesex	101									
Monmouth	111				2		2		2	
Morris	138									
Ocean	106									
Passaic	89		3							
Salem	124		5							
Somerset	75									
Sussex	354		2							
Union	23									
Warren	144		1							
Total	2512	-	24	-	2	-	2	-	2	-

^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 2023
 Number in blue shaded columns represent positive pools in 2023

Tick-borne Disease Activity

Lyme Disease

- There have been 2,827 cases of Lyme disease reported in New Jersey in 2023, including cases in all 21 counties.
- The number of cases in Week 26 this year is lower than the number of cases reported in 2022.

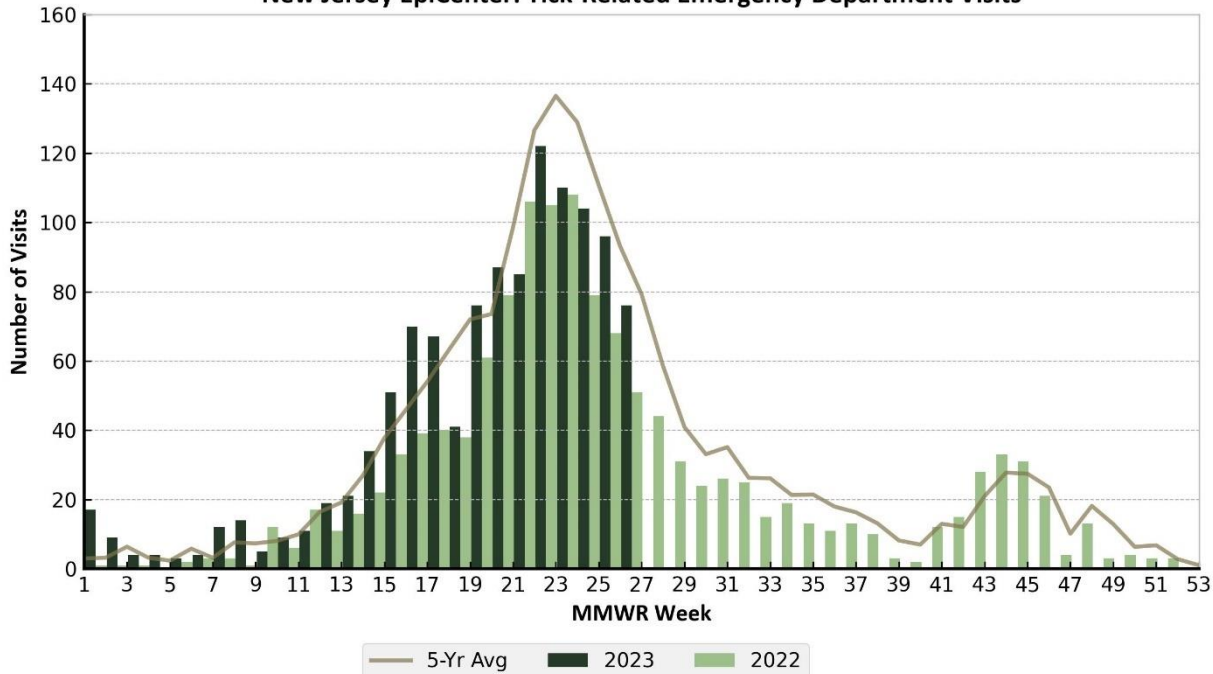


Tick-related Emergency Department Visits

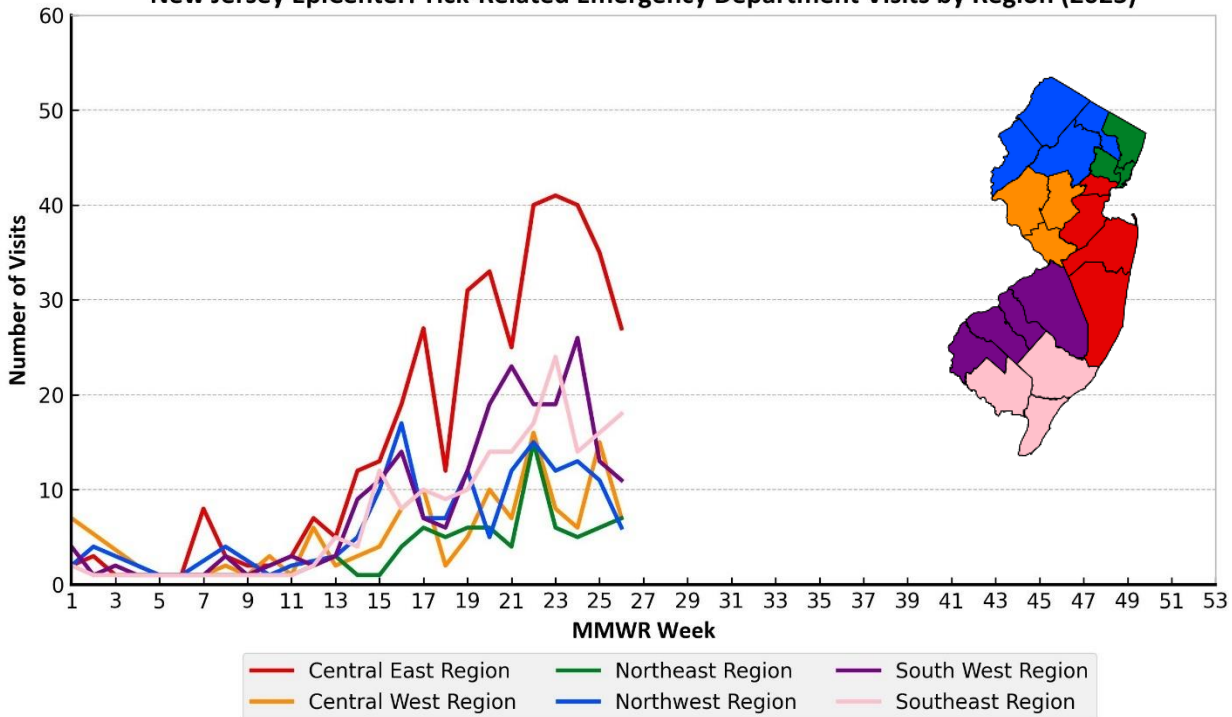
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 26, the number of tick-related ED visits is higher than in 2022 but below the 5-year average.

New Jersey EpiCenter: Tick-Related Emergency Department Visits



New Jersey EpiCenter: Tick-Related Emergency Department Visits by Region (2023)



Data reflects ED visits downloaded from EpiCenter as of July 5, 2023

For more information

- NJDOH Communicable Disease Service: <http://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: <http://www.nj.gov/dep/mosquito/>
- NJDA Division of Animal Health: <http://www.nj.gov/agriculture/divisions/ah/>
- New Jersey Vector-borne Disease Dashboard: https://dashboards.doh.nj.gov/views/public_dashboard/Intro