

Report Highlights:

- There have been no detections of West Nile virus (WNV), Eastern equine encephalitis (EEE), or Jamestown Canyon virus (JCV) in humans, mosquitoes, or animals this year.
- NJDOH began testing mosquitoes for arboviruses the week of May 15th and to date has tested mosquitoes submitted from 6 counties. No mosquito pools have tested positive.
- 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 has been slightly higher this spring compared to the 5-year average, although the number of Lyme disease cases reported in 2023 is consistent with 2022.

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	4	2	Alpha-gal syndrome	30	234
Dengue	8	35	Anaplasmosis	3	125
Eastern equine encephalitis	-	-	Babesiosis	10	292
Jamestown Canyon	-	1	<i>Borrelia miyamotoi</i>	-	6
Malaria	11	86	Ehrlichiosis (<i>chaffeensis</i> , <i>ewingii</i>)	2	115
West Nile	-	20	Lyme disease*	1,746	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	4	35
			Tularemia	-	1

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

Mosquito-borne Disease Activity

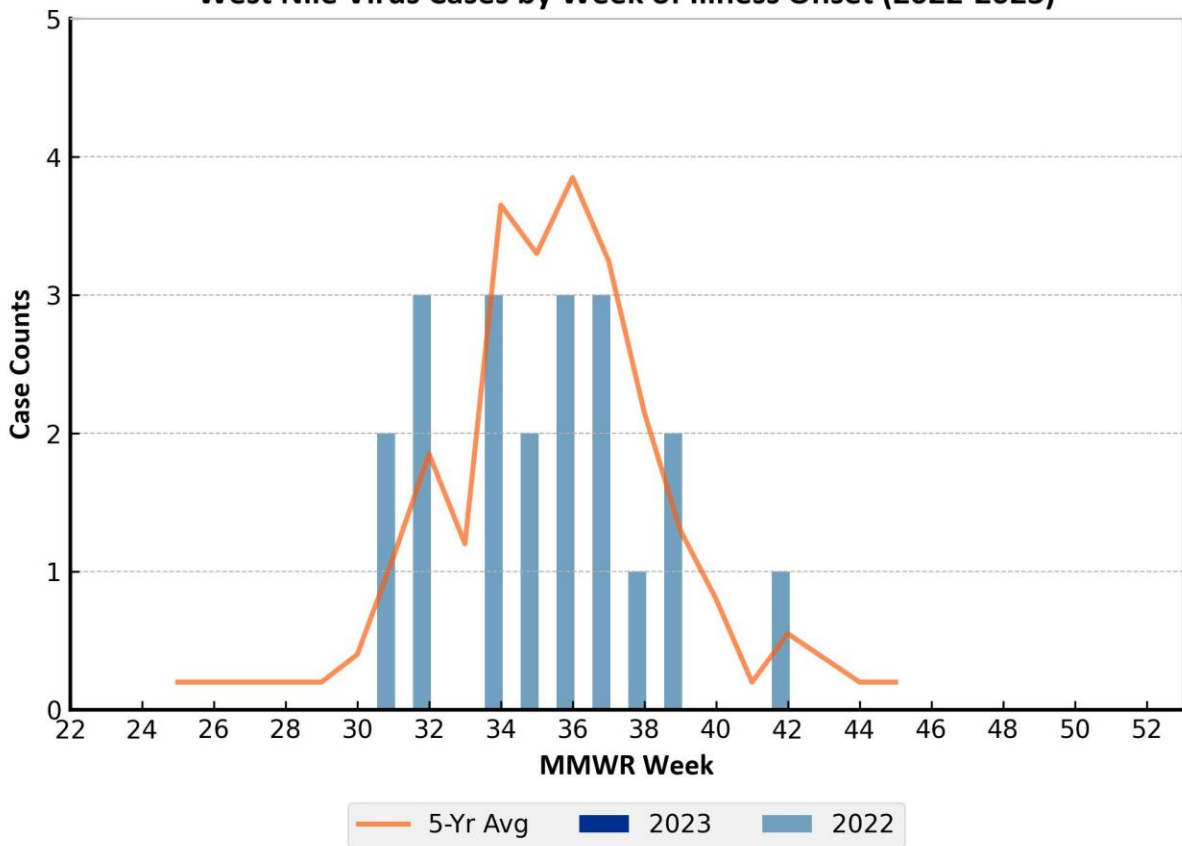
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) performs arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on May 23, 2023

West Nile Virus

- There have been no human cases of WNV in New Jersey in 2023.
- A total of 272 pools from 6 counties (Cumberland, Gloucester, Mercer, Morris, Sussex, Warren) have been tested for WNV.
- No positive WNV pools have been identified in 2023. 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 Cases by Week of Illness Onset (2022-2023)



WNV Mosquito Pool Testing

County	Week 20 Positive Pools		Cumulative Pos. Total (Week 20)		# Pools Tested	Week 20 Vector Index
	2023	2022	2023	2022	2023	2023 ^t
Atlantic						
Bergen						
Burlington						
Camden						
Cape May						
Cumberland					13	
Essex						
Gloucester					130	
Hudson						
Hunterdon						
Mercer					7	
Middlesex						
Monmouth						
Morris					18	
Ocean						
Passaic						
Salem						
Somerset						
Sussex					79	
Union						
Warren					25	
Total	-	-	-	-	272	-

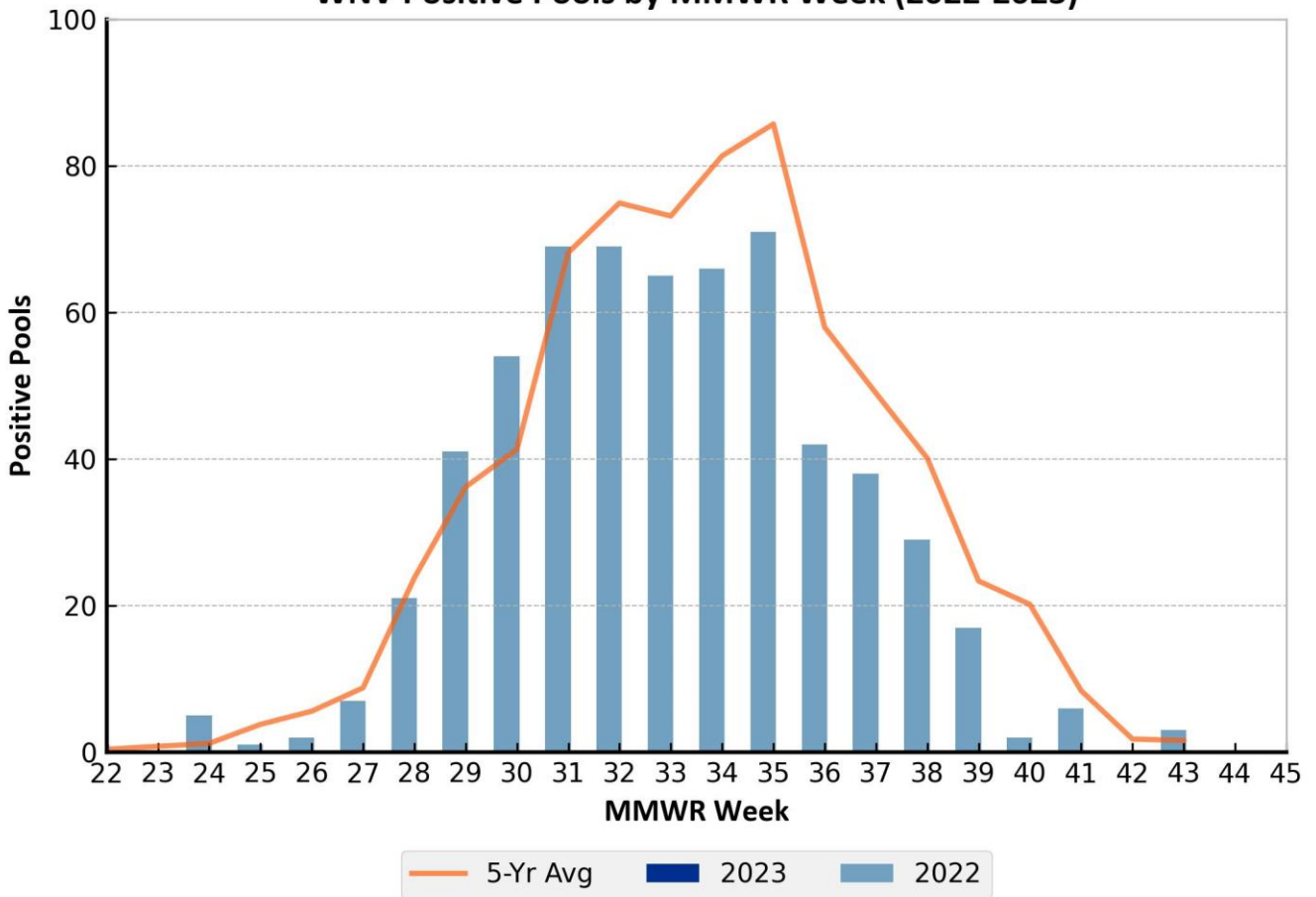
Week 20: May 15-21, 2022; May 14-20, 2023

WNV Vector Index, Week 20^t

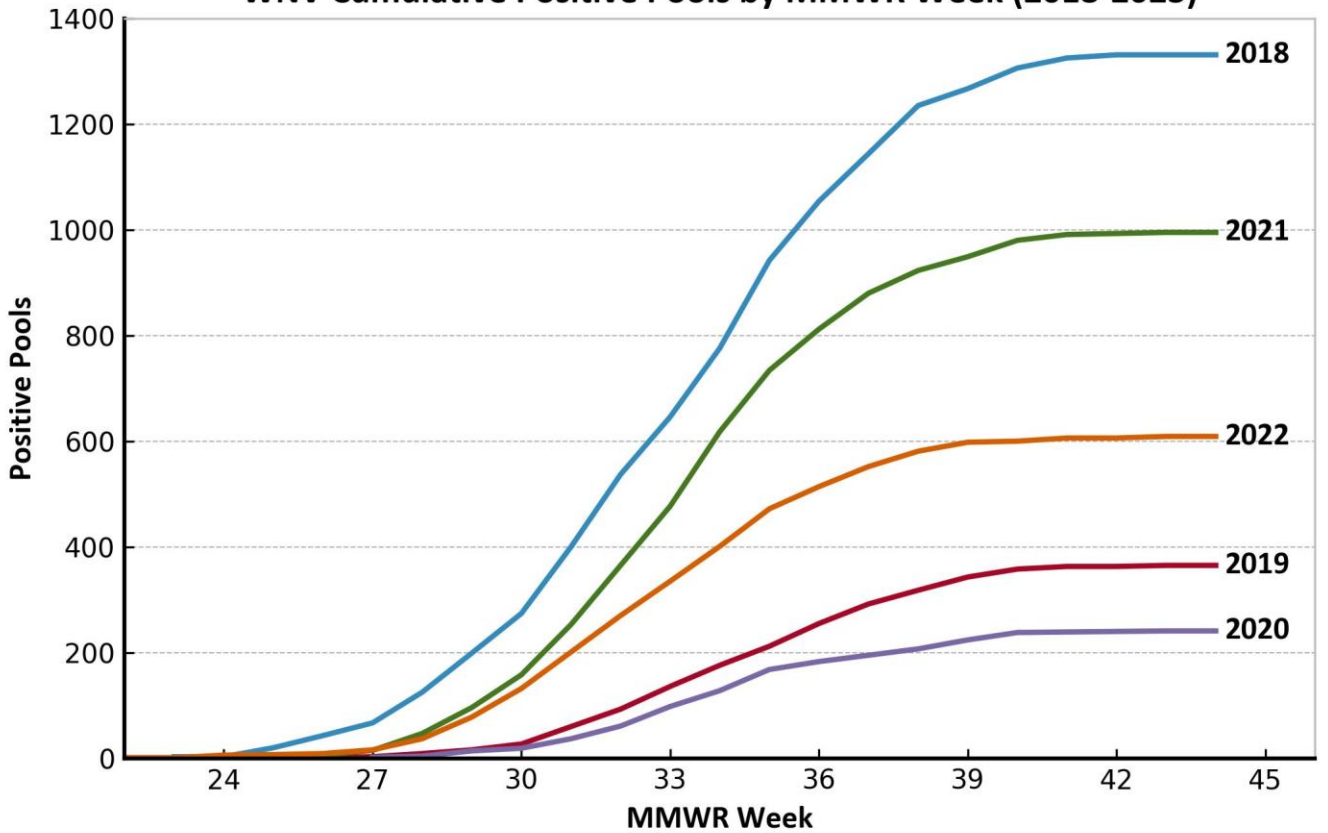


^t Vector Index is calculated based on *Cx. pipiens*, *Cx. restuans*, *Cx. salinarius*, *Ae. taeniorhynchus*, and *An. quadrimaculatus* species caught in gravid traps

WNV Positive Pools by MMWR Week (2022-2023)



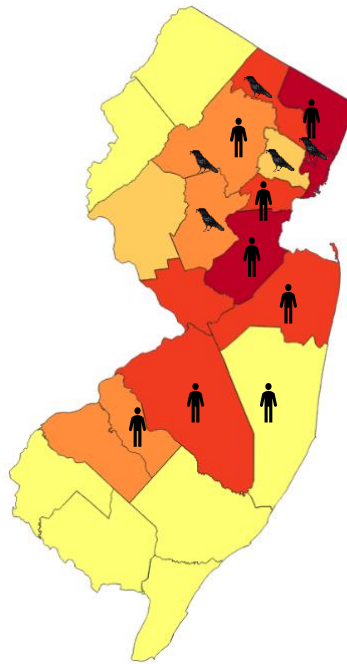
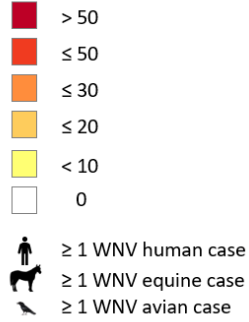
WNV Cumulative Positive Pools by MMWR Week (2018-2023)



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 and there were no human cases of EEE in 2022.
- A total of 272 pools from 6 counties (Cumberland, Gloucester, Mercer, Morris, Sussex, Warren) 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.

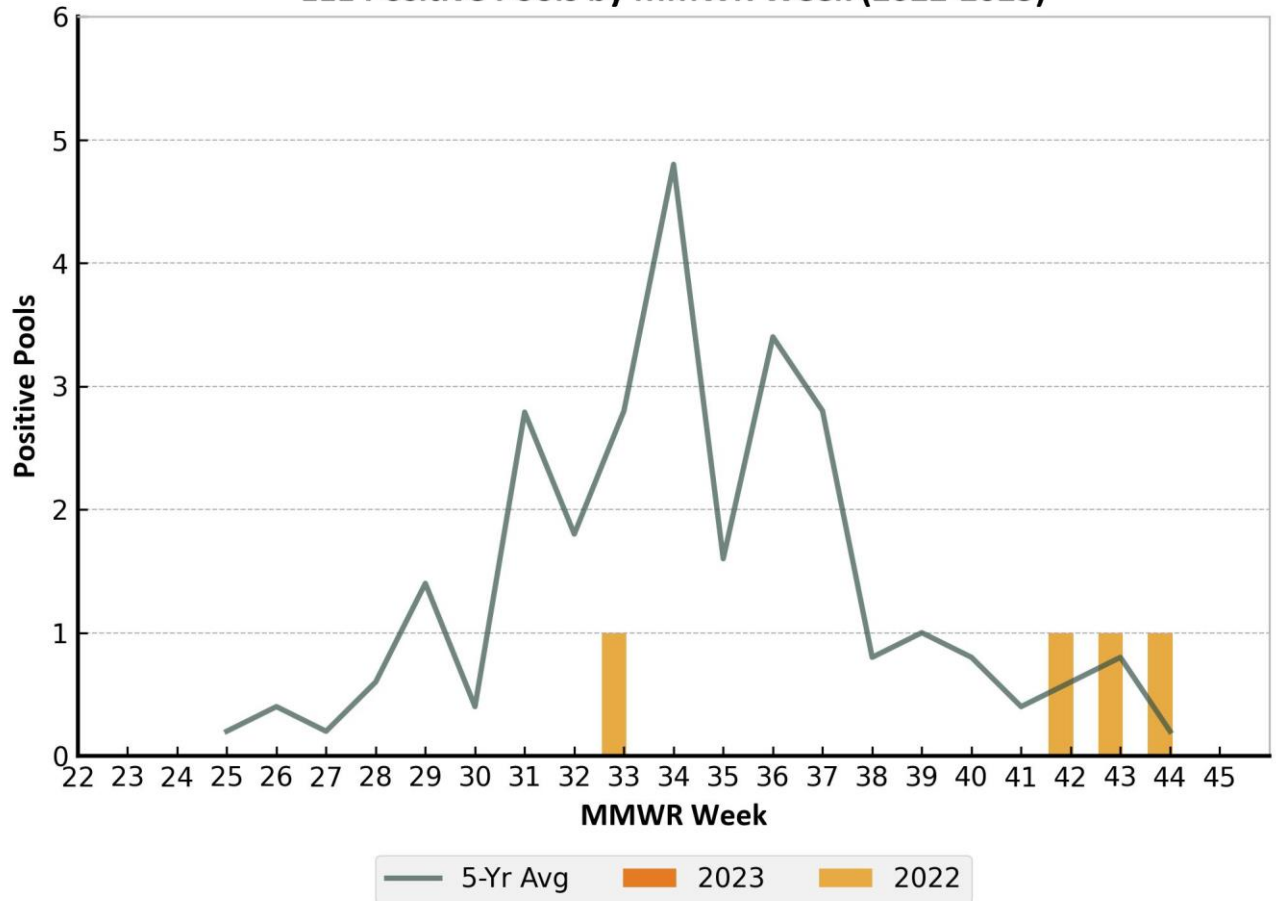
EEE Mosquito Pool Testing

County	Week 20 Positive Pools		Cumulative Pos. Total (Week 20)		# Pools Tested 2023	Cumulative MFIR 2023
	2023	2022	2023	2022		
Atlantic						
Bergen						
Burlington						
Camden						
Cape May						
Cumberland					13	
Essex						
Gloucester					130	
Hudson						
Hunterdon						
Mercer					7	
Middlesex						
Monmouth						
Morris					18	
Ocean						
Passaic						
Salem						
Somerset						
Sussex					79	
Union						
Warren					25	
Total	-	-	-	-	272	-

Cumulative EEE MFIR, 2023



EEE Positive Pools by MMWR Week (2022-2023)

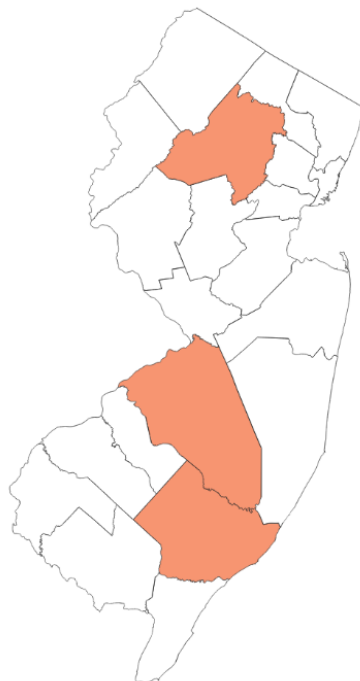


2022 EEE Activity

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. There was one human case of JCV in 2022 in Sussex County.
- JCV can be detected in early-season mosquitoes. Six counties submitted early season mosquito pools for JCV testing, with collection dates starting the 1st week of April. A total of 272 pools from 6 counties (Cumberland, Gloucester, Mercer, Morris, Sussex, Warren) 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 Cty).

JCV Mosquito Pool Testing

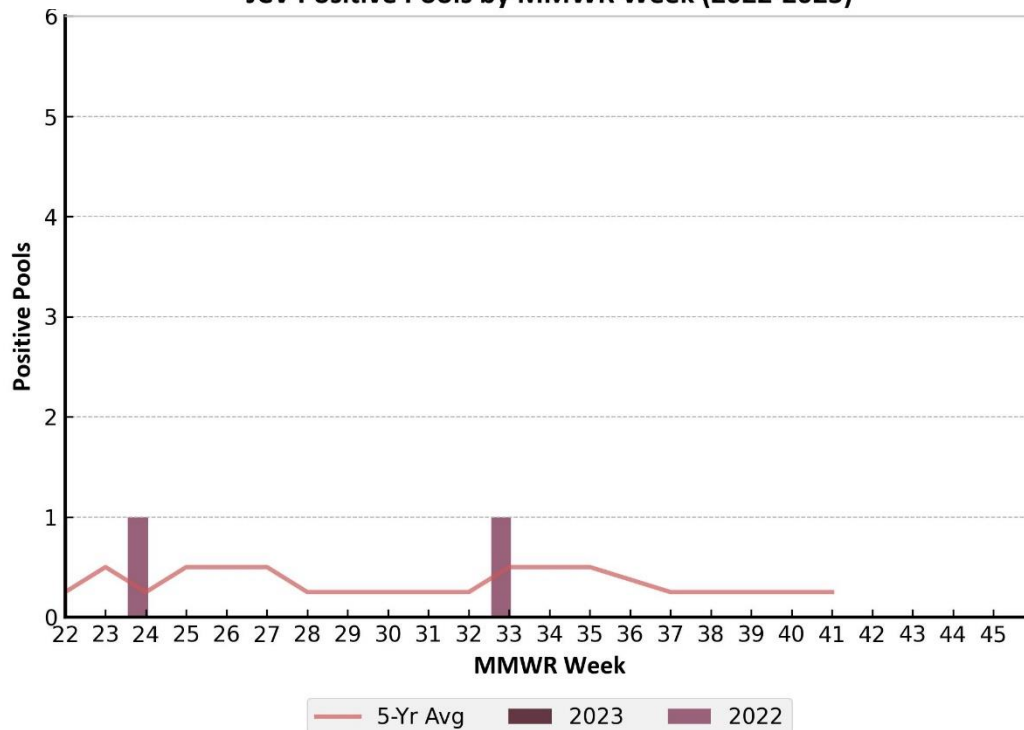
County	Week 20 Positive Pools		Cumulative Pos. Total (Week 20)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Atlantic						
Bergen						
Burlington						
Camden						
Cape May						
Cumberland					13	
Essex						
Gloucester					130	
Hudson						
Hunterdon						
Mercer					7	
Middlesex						
Monmouth						
Morris					18	
Ocean						
Passaic						
Salem						
Somerset						
Sussex					79	
Union						
Warren					25	
Total	-	-	-	-	272	-

Cumulative JCV MFIR, 2023



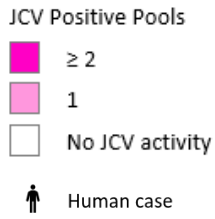
Week 20: May 15-21, 2022; May 14-20, 2023

JCV Positive Pools by MMWR Week (2022-2023)



2022 JCV Activity

Cumulative JCV Activity, 2023



Other Mosquito-borne Viruses

- Mosquito pools from 6 counties have been tested for other arboviruses with no positives.

Cumulative 2023 Mosquito Pool Testing (Other Viruses^a)

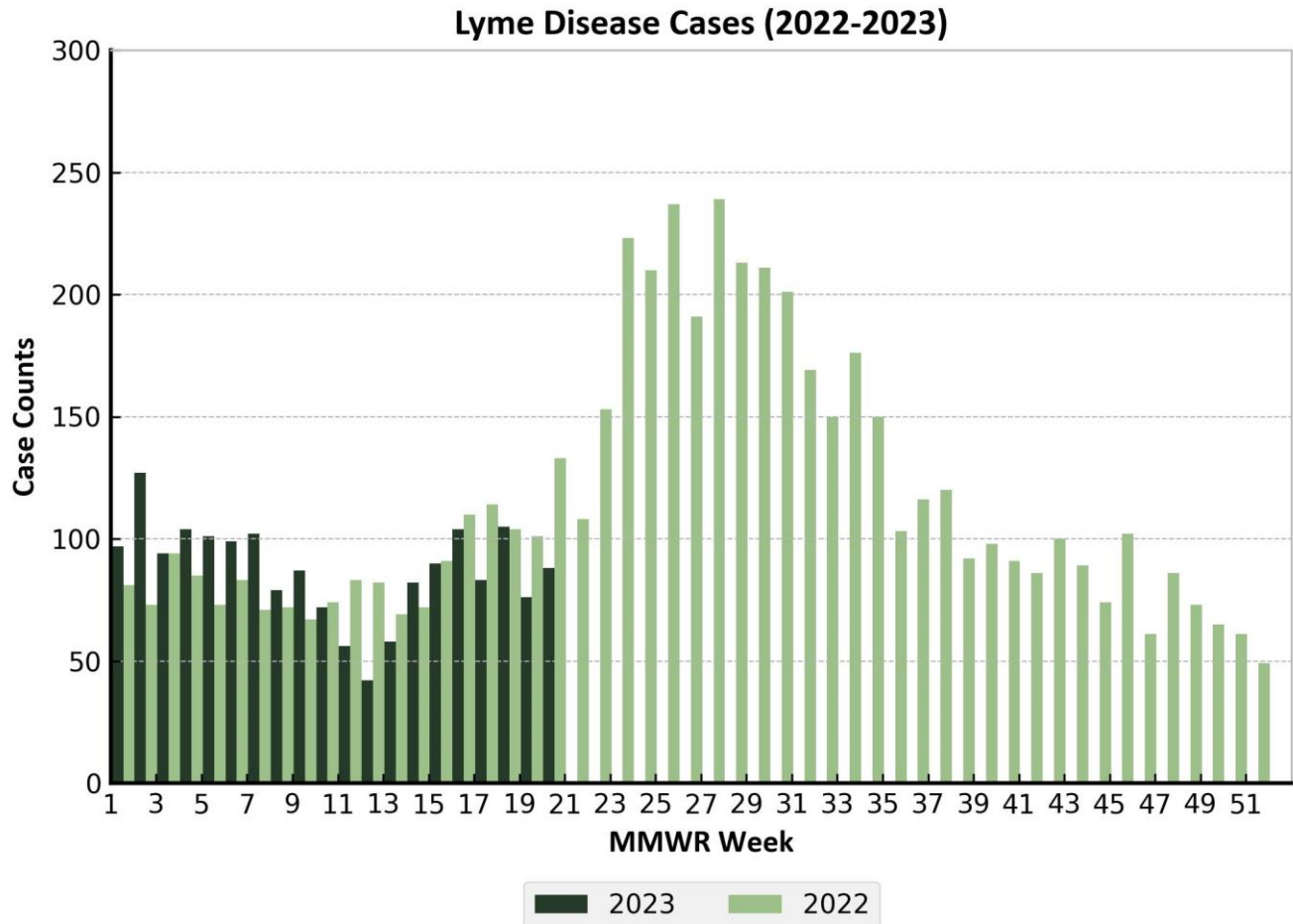
County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic										
Bergen										
Burlington										
Camden										
Cape May										
Cumberland	13									
Essex										
Gloucester	130									
Hudson										
Hunterdon										
Mercer	7									
Middlesex										
Monmouth										
Morris	18									
Ocean										
Passaic										
Salem										
Somerset										
Sussex	79									
Union										
Warren	25									
Total	272	-	-	-	-	-	-	-	-	-

^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 1,746 cases of Lyme disease reported in New Jersey in 2023, including cases in all 21 counties.
- The number of cases in 2023 is similar to the number of cases reported at this time in 2022.

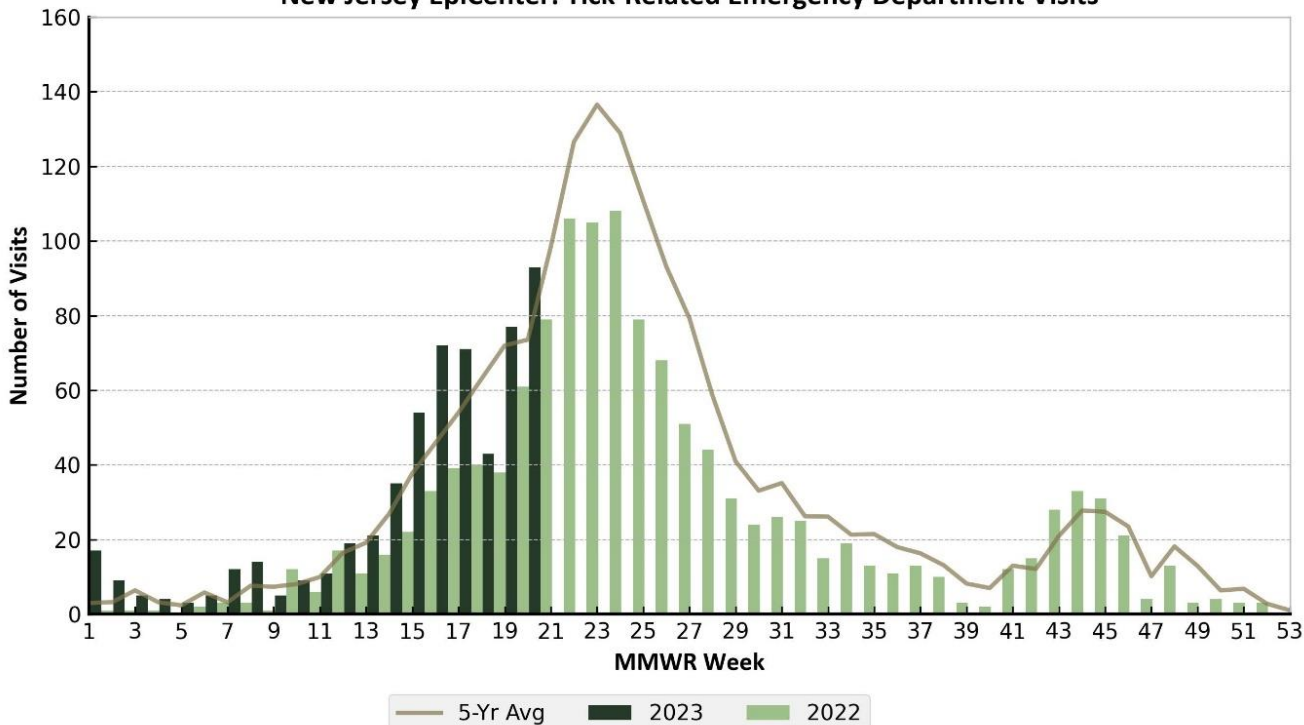


Tick-related Emergency Department Visits

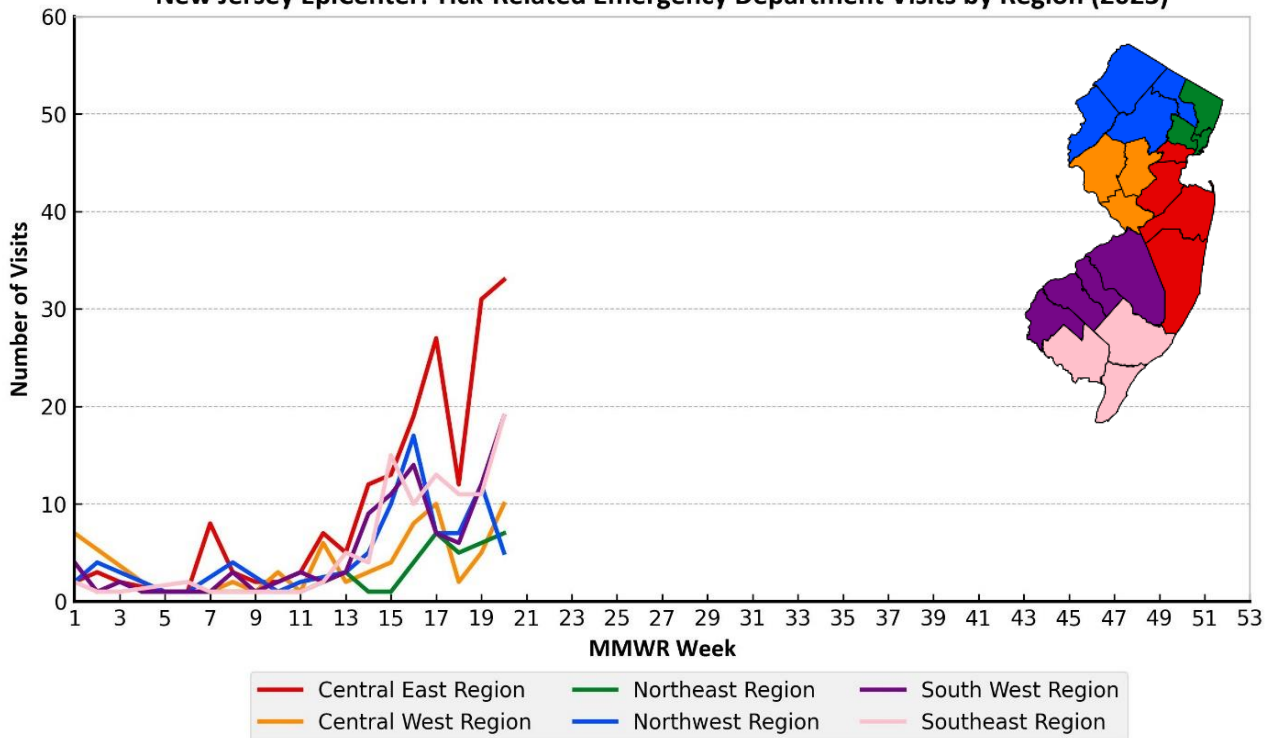
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 20, the number of tick-related ED visits is slightly higher than in 2022 and the 5-year average. Activity this spring was higher than last year and often above 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 May 23, 2023

For more information

- NJDOH Communicable Disease Service: <http://nj.gov/health/cd/topics/vectorborne.shtml>
- 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/>