

Report Highlights:

- NJDOH is reporting two presumptive positive cases of West Nile virus (WNV) infection in Camden and Bergen counties.
- The number of WNV mosquito pools continues to increase with 59 positive pools in week 32, for a total of 251 mosquito pools this year. The number of positive pools for week 31 is higher than last year and is above the 5-year average (week 32 tests still in progress). Bergen County has the highest total number of positive pools, followed by Hudson County. The vector index is highest this week in Somerset and Bergen counties.
- There are no reported human or animal cases of Eastern equine encephalitis (EEE) or Jamestown Canyon virus (JCV) in 2023. The first EEE positive mosquito pool this year was identified in Cumberland County (collected in week 30). To date, 1 pool has tested positive for JCV also in Cumberland County (week 25).
- The number of tick-related emergency department visits continues to decline and is comparable with the 5-year average.
- The number of Lyme disease cases sharply declined compared to recent weeks, although remains higher than this week last year.
- N.J. vector-borne disease data is available online: https://dashboards.doh.nj.gov/views/public_dashboard/Intro and can be accessed on the "Fight the Bite N.J." 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. "Presumptive positive" cases are pending additional testing. Case counts for 2022 reflect the annual total for that year.

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2023	2022		2023	2022
Chikungunya	8	2	Alpha-gal syndrome	76	234
Dengue	14	35	Anaplasmosis	113	125
Eastern equine encephalitis	-	-	Babesiosis	147	292
Jamestown Canyon	-	-	<i>Borrelia miyamotoi</i>	2	6
Malaria	38	86	Ehrlichiosis (<i>chaffeensis</i> , <i>ewingii</i>)	68	115
West Nile	2	20	Lyme disease*	4,648	5,897
Zika	-	-	Powassan	-	2
			Spotted fever group rickettsioses	15	35
			Tularemia	2	1

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

Mosquito-borne Disease Activity

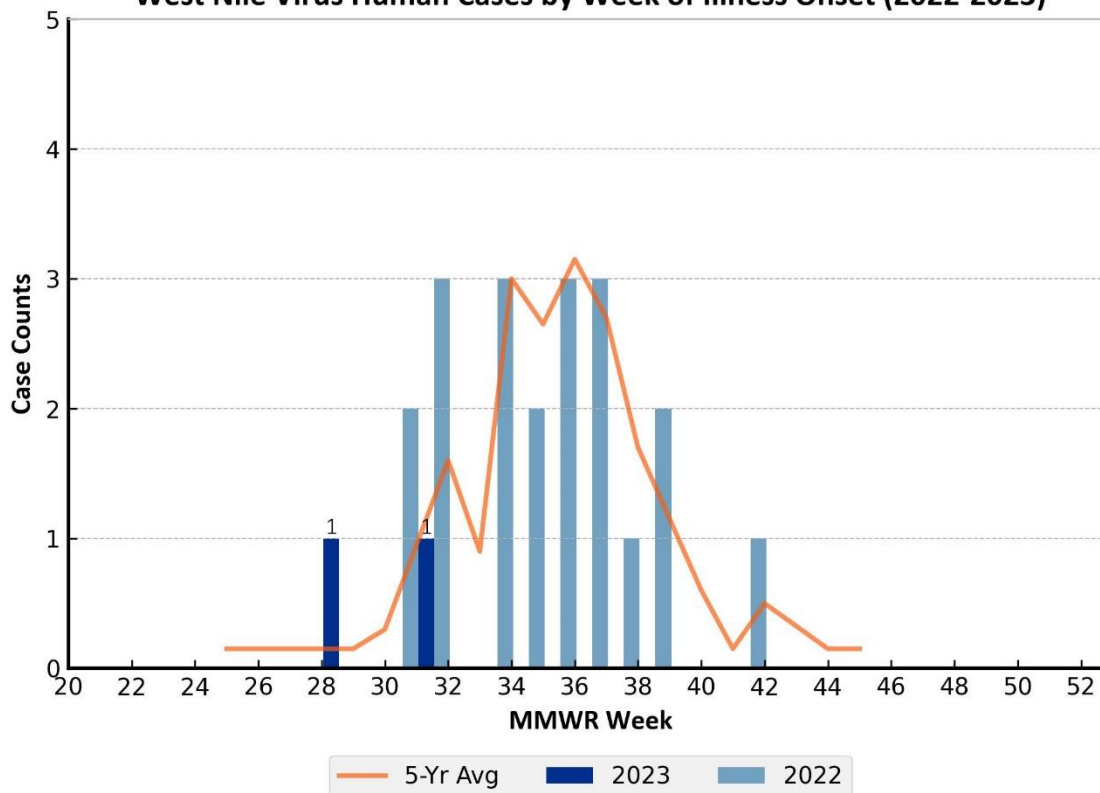
The New Jersey Department of Health Public Health and Environmental Laboratories (PHL) and the Cape May County Department of Mosquito Control Bio-safety Level 3 Laboratory (CMBSL3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.*

*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on August 16, 2023

West Nile Virus

- There are two presumptive positive human WNV cases from week 28 in Camden County and week 31 in Bergen County. There have been no animal cases of WNV reported in New Jersey in 2023.
- 5,447 pools from 21 counties have been tested for WNV. 59 pools tested positive in week 32 in 12 counties and a total of 251 mosquito pools have tested positive for WNV so far this year. The positive pools were found in: *Aedes albopictus* (3), *Aedes japonicus* (1), *Aedes triseriatus* (2), *Culex* (33), *Culex erraticus* (1), *Culex pipiens* (6), *Culex pipiens/quinqüefasciatus/restuans* (8), *Culex pipiens/restuans/salinarius* (196), and *Culex restuans* (1).
- 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.

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

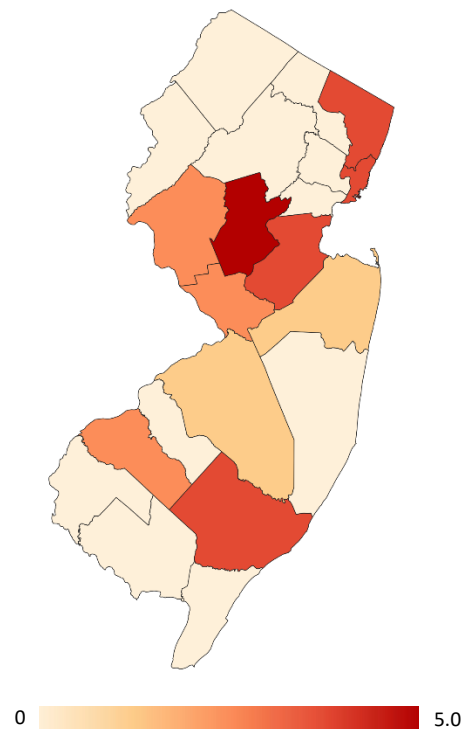


WNV Mosquito Pool Testing

County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested*	WEEK 32 Vector Index 2023 ^t
	2023	2022	2023	2022		
Bergen	11	10	48	53	200	3.175 (↓)
Hudson	13	13	36	42	162	1.263 (↓)
Middlesex	13	7	34	28	209	2.156 (↓)
Somerset	5		17	6	180	5.026 (↑)
Gloucester	2	3	15	11	534	0.536 (↓)
Union			15	25	117	0 (↓)
Morris		3	12	13	278	0 (↓)
Atlantic	4	1	10	1	218	2.146 (↑)
Burlington	2	6	10	17	150	0.222 (↑)
Hunterdon	2	2	9	3	240	0.725 (↑)
Mercer	2	6	8	19	254	0.378 (↑)
Passaic		2	8	16	147	0 (-)
Camden		3	6	9	214	0 (-)
Cape May			6		615	0 (↓)
Ocean	2	1	5	5	246	0 (↓)
Sussex		1	4	1	483	0 (-)
Warren	1	2	4	2	271	0 (-)
Monmouth	2	6	2	12	262	0.153 (↑)
Salem			2	1	279	0 (-)
Cumberland					233	0 (-)
Essex		3		6	155	0 (-)
Total	59	69	251	270	5447	-

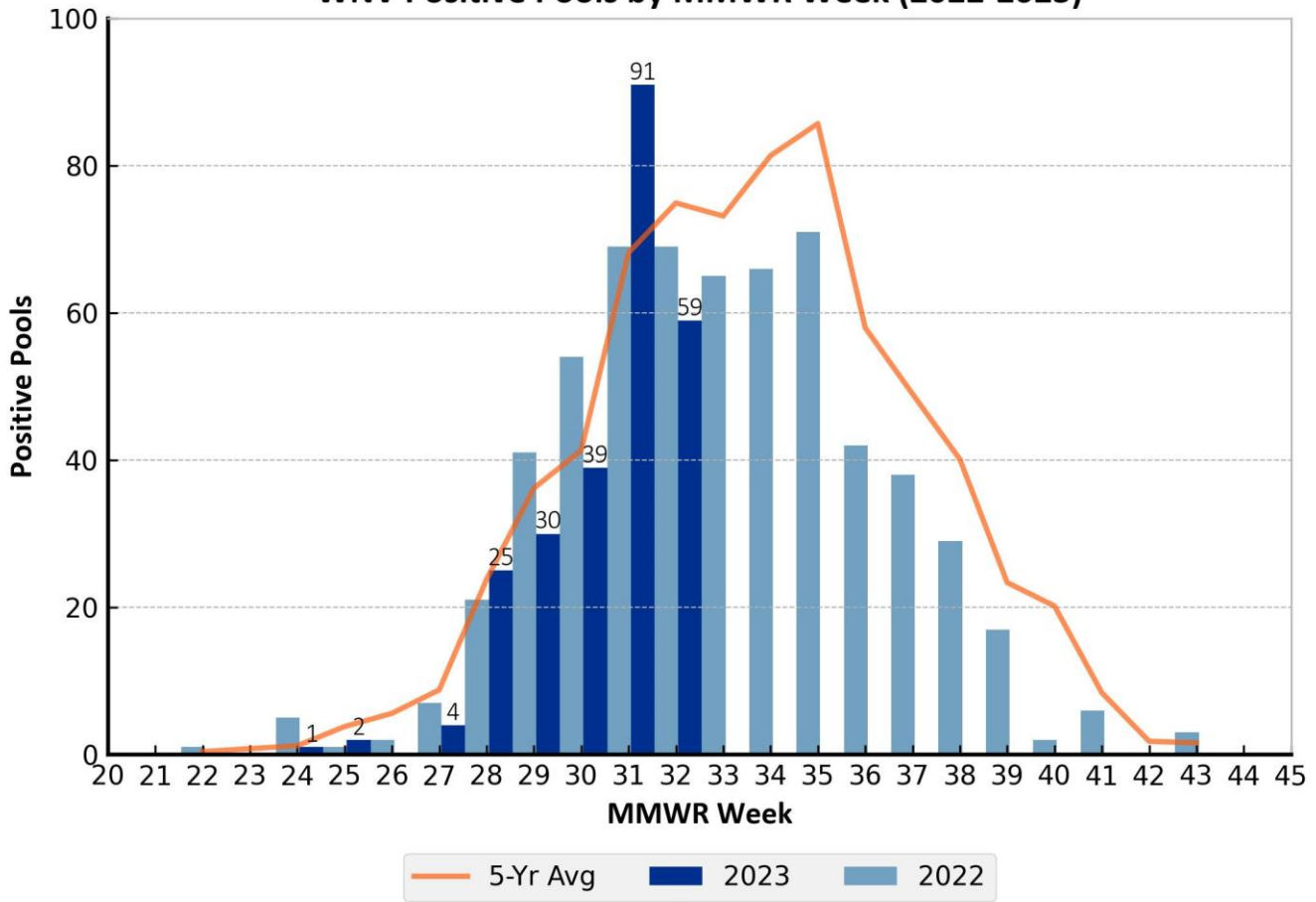
WEEK 32: Aug 7 - 13, 2022; Aug 6 - 12, 2023. *The number of pools tested for 9 counties includes early season collections that were specifically targeting JCV: Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27).

WNV Vector Index, WEEK 32^t

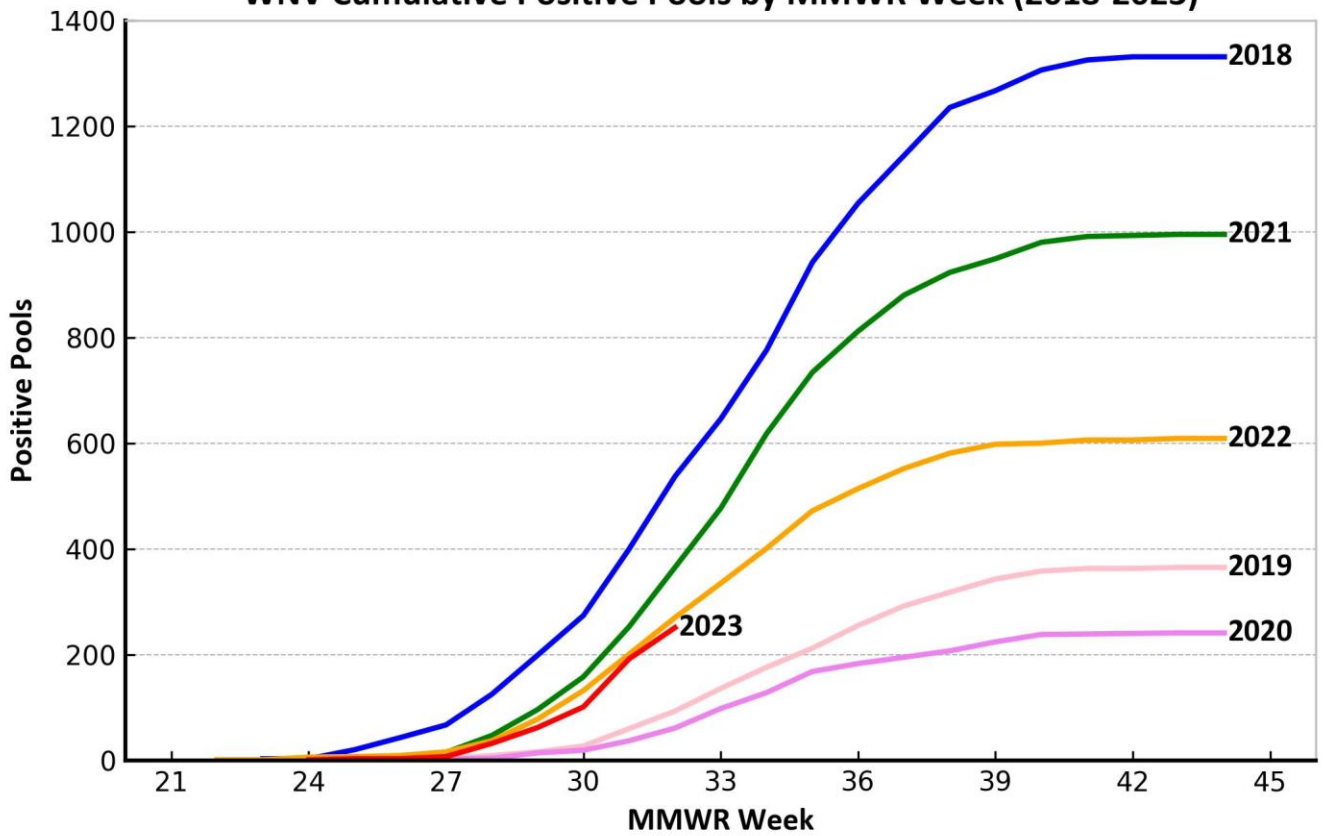


^t Vector Index is calculated based on *Ae. taeniorhynchus*, *An. quadrimaculatus*, and all *Culex* species caught in gravid traps only.

WNV Positive Pools by MMWR Week (2022-2023)



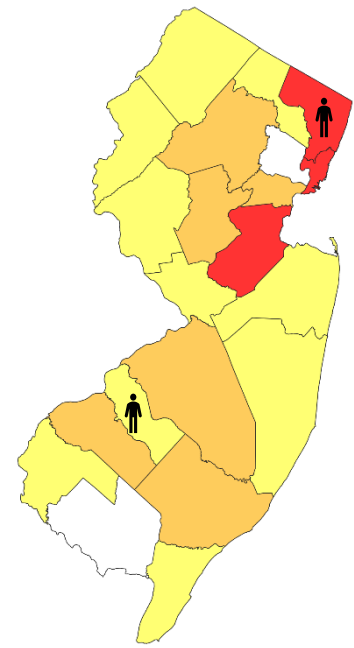
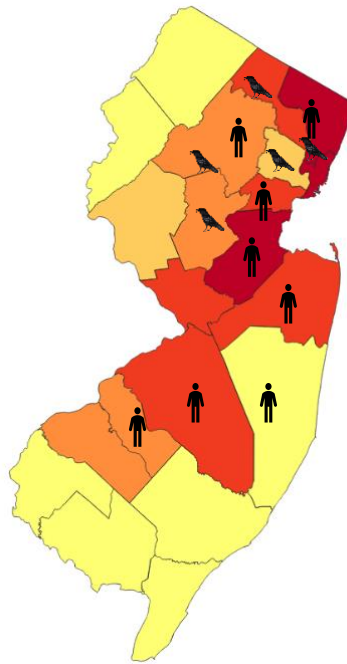
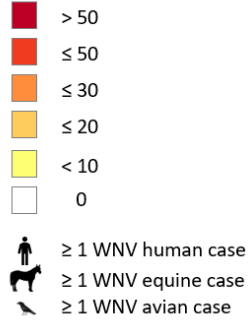
WNV Cumulative Positive Pools by MMWR Week (2018-2023)



2022 WNV Activity

Cumulative WNV Activity, 2023

WNV Positive Pools



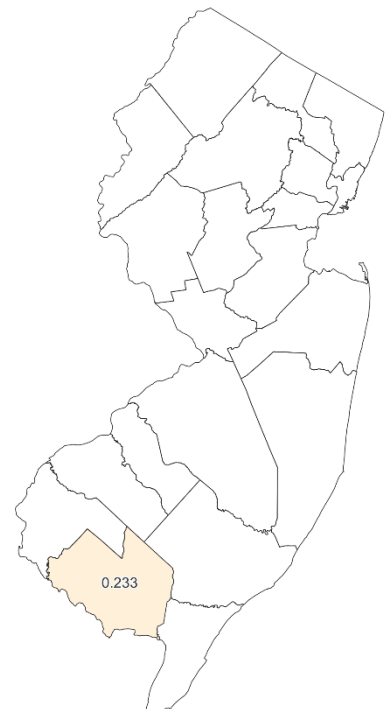
Eastern Equine Encephalitis

- There have been no human or animal cases of EEE in New Jersey in 2023. EEE human cases were last reported in 2019 (4 cases).
- A total of 5,347 pools from 21 counties have been tested for EEE. One positive EEE pool (*Culiseta melanura*) was identified in Cumberland County in week 30. In 2022, the first EEE positive pool was detected in Week 33 from Morris County.

EEE Mosquito Pool Testing

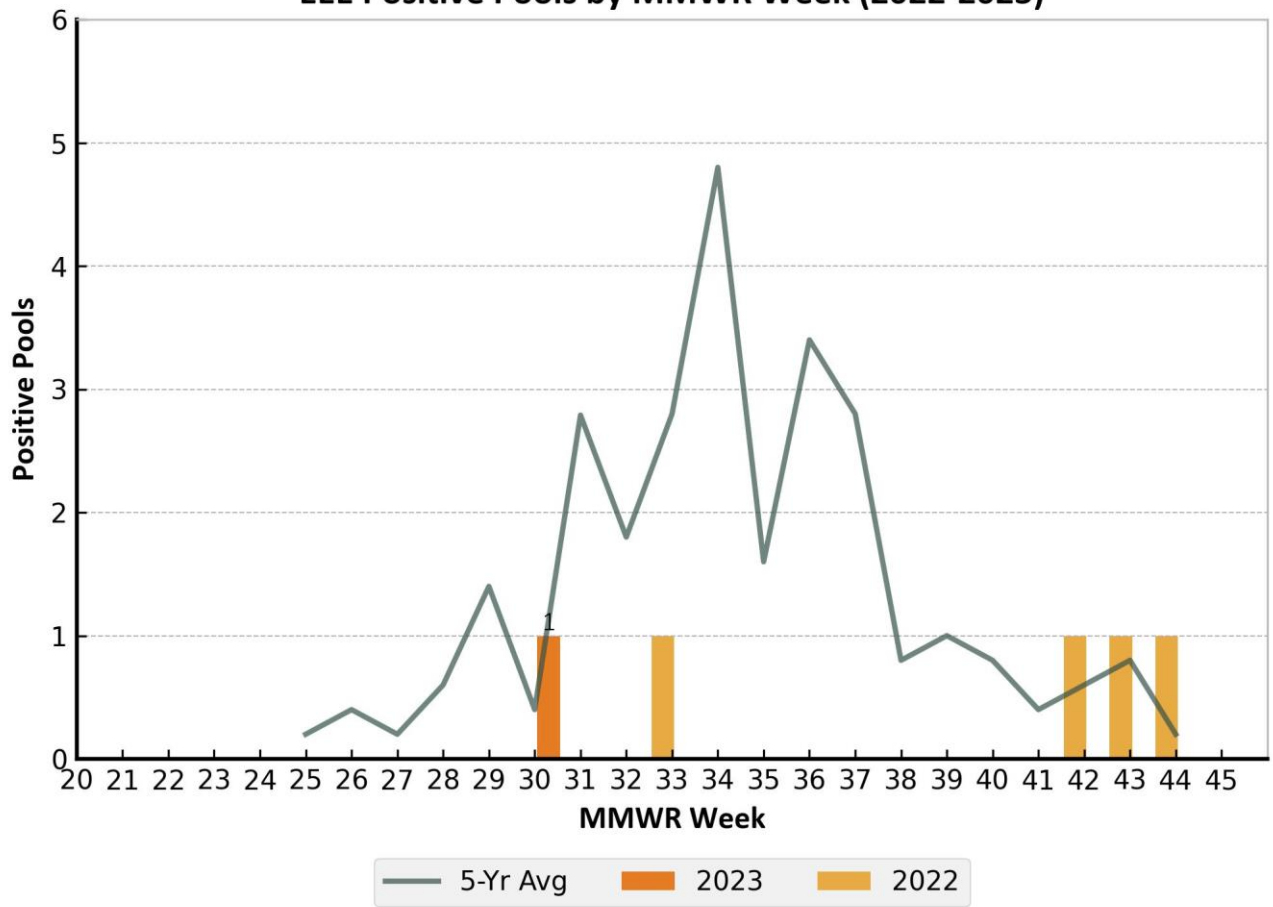
County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022		
Cumberland			1		233	0.233
Atlantic					218	
Bergen					200	
Burlington					145	
Camden					201	
Cape May					593	
Essex					155	
Gloucester					534	
Hudson					162	
Hunterdon					237	
Mercer					242	
Middlesex					209	
Monmouth					262	
Morris					278	
Ocean					241	
Passaic					147	
Salem					263	
Somerset					180	
Sussex					474	
Union					117	
Warren					256	
Total	-	-	1	-	5347	-

Cumulative EEE MFIR, 2023



WEEK 32: Aug 7 - 13, 2022; Aug 6 - 12, 2023 *includes early season pools from 9 counties: Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27).

EEE Positive Pools by MMWR Week (2022-2023)



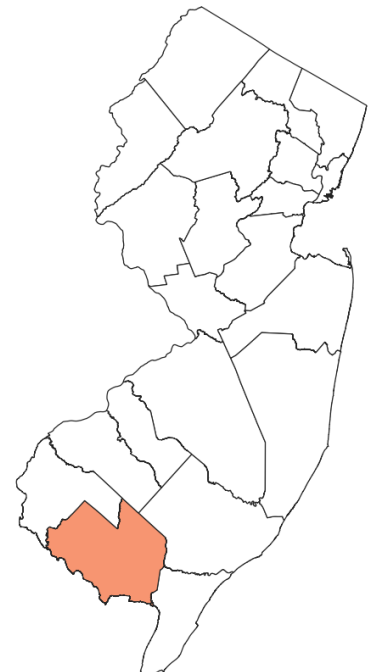
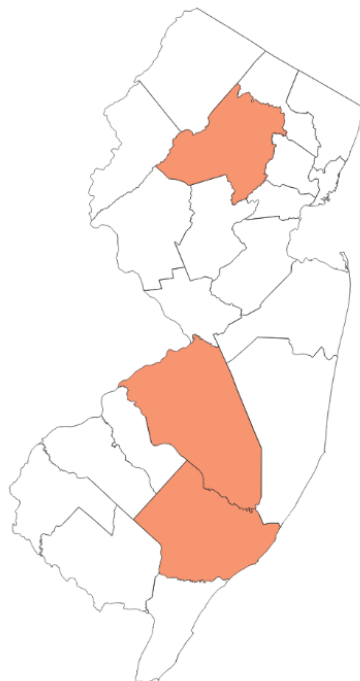
2022 EEE Activity

Cumulative EEE Activity, 2023

EEE Positive Pools

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

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



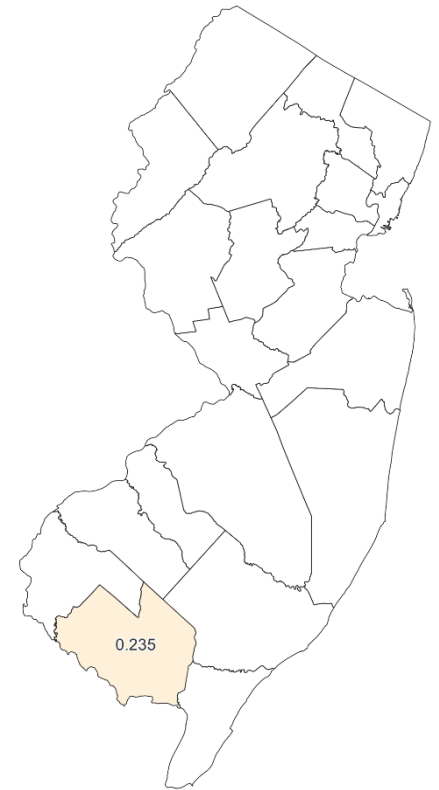
Jamestown Canyon Virus

- There have been no human cases of JCV in New Jersey in 2023.
- 5,021 pools from 21 counties have been tested for JCV. One positive JCV mosquito pool (*Anopheles quadrimaculatus s.l.*) was identified in Cumberland County in week 25. In 2022, the first JCV positive pool was detected in Week 22 (Bergen County).
- 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. These are Camden (9), Cape May (15), Cumberland (13), Essex (3), Gloucester (100), Mercer (7), Morris (18), Salem (8), Sussex (92), and Warren (27). None of the early-season pools was positive for JCV.

JCV Mosquito Pool Testing

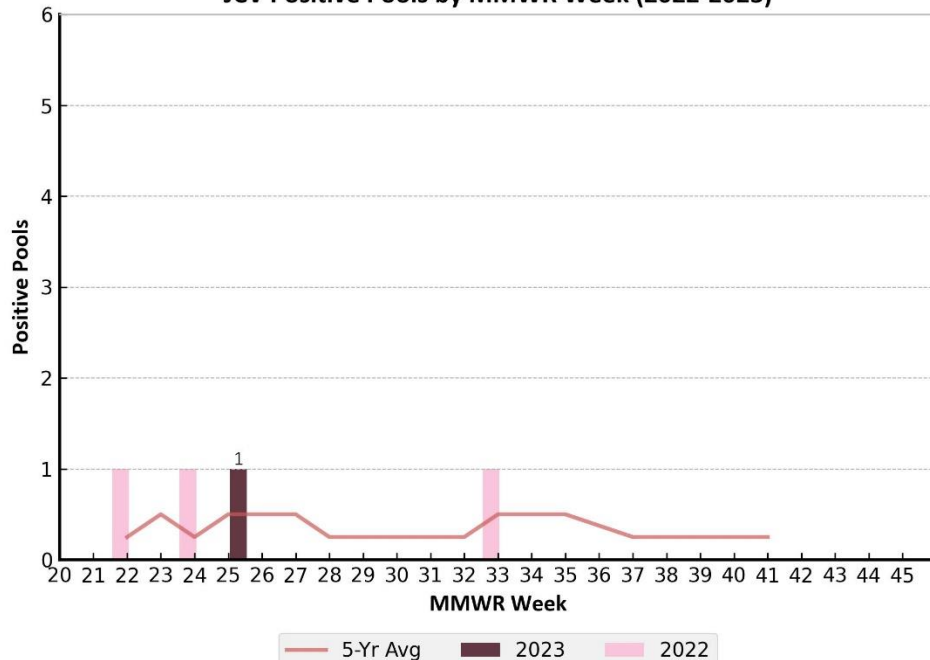
County	WEEK 32 Positive Pools		Cumulative Pos. Total* (WEEK 32)		# Pools Tested	Cumulative MFIR
	2023	2022	2023	2022	2023	2023
Cumberland			1		233	0.235
Atlantic					218	
Bergen				2	200	
Burlington					145	
Camden					189	
Cape May					283	
Essex					155	
Gloucester					533	
Hudson					162	
Hunterdon					237	
Mercer					242	
Middlesex					209	
Monmouth					262	
Morris					278	
Ocean					241	
Passaic					147	
Salem					260	
Somerset					180	
Sussex					474	
Union					117	
Warren					256	
Total	-	-	1	2	5021	-

Cumulative JCV MFIR, 2023



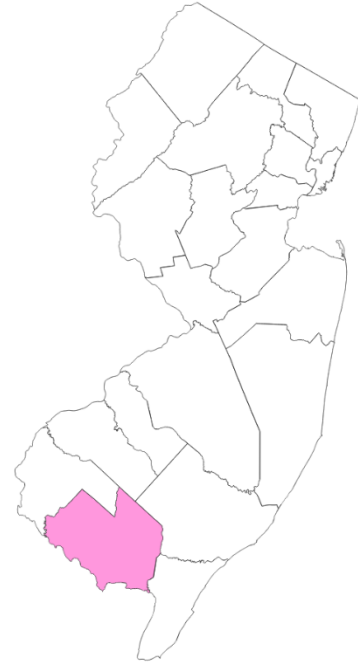
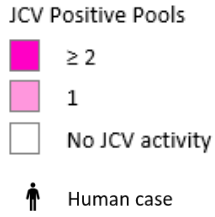
WEEK 32: Aug 7 - 13, 2022; Aug 6 - 12, 2023 *includes early season pools from 9 counties

JCV Positive Pools by MMWR Week (2022-2023)



2022 JCV Activity

Cumulative JCV Activity, 2023



Other Mosquito-borne Viruses

- Mosquito pools from 21 counties have been tested for other arboviruses with no positive results.

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	218		4							
Bergen	200									
Burlington	145		5							
Camden	200		10		3		3		3	
Cape May	560				60				60	
Cumberland	233									
Essex	155									
Gloucester	534									
Hudson	162									
Hunterdon	237		3							
Mercer	242		12		2		2		2	
Middlesex	209									
Monmouth	262				2		2		2	
Morris	278				3		3		3	
Ocean	241		5							
Passaic	147		6							
Salem	262		18							
Somerset	180									
Sussex	474		11							
Union	117									
Warren	256		16							
Total	5312	-	90	-	70	-	10	-	70	-

^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

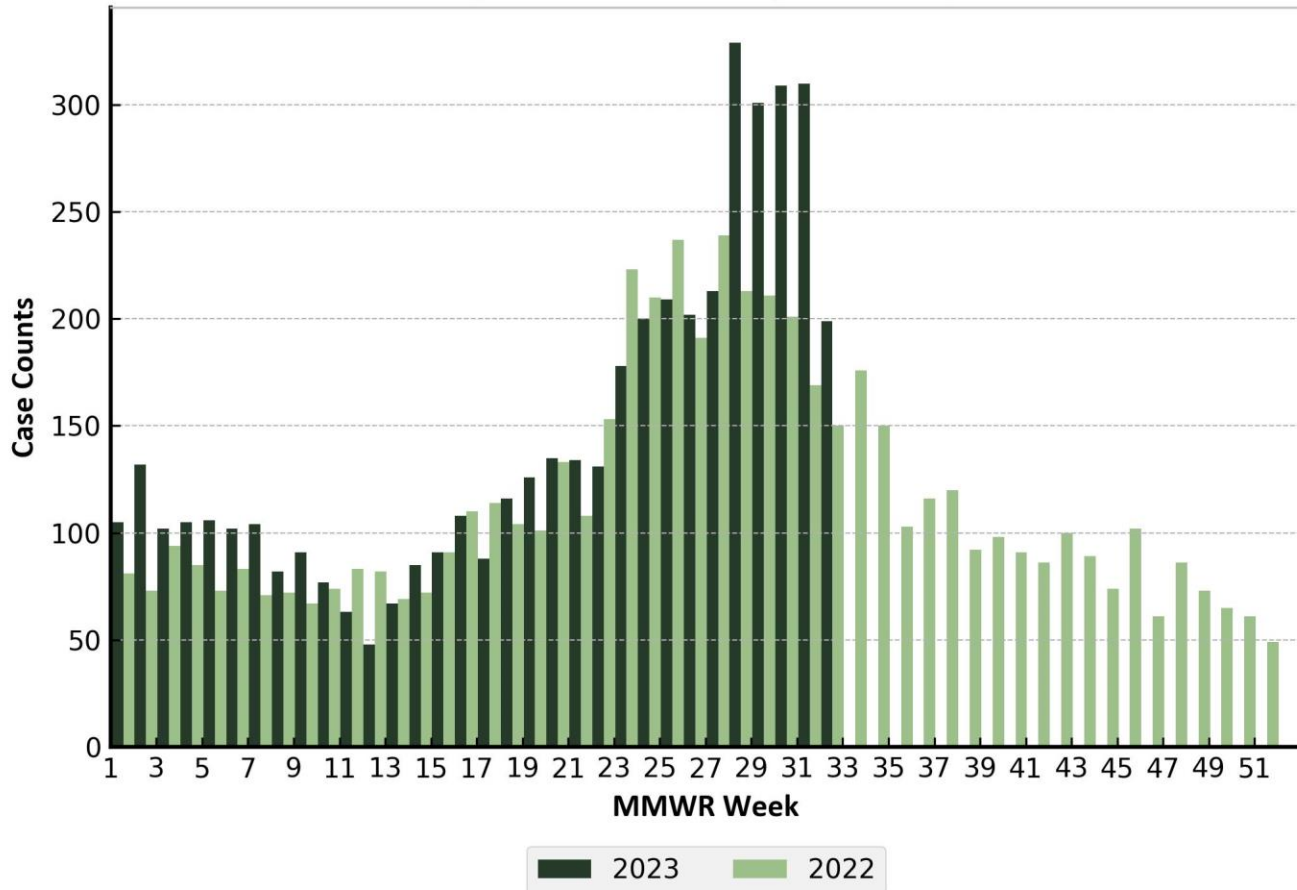
Number in blue shaded columns represent positive pools in 2023

Tick-borne Disease Activity

Lyme Disease

- There have been 4,648 cases of Lyme disease reported in New Jersey in 2023 in 21 counties.
- The number of cases in Week 32 sharply declined compared to recent weeks, although remains higher than this week last year.

Lyme Disease Cases (2022-2023)

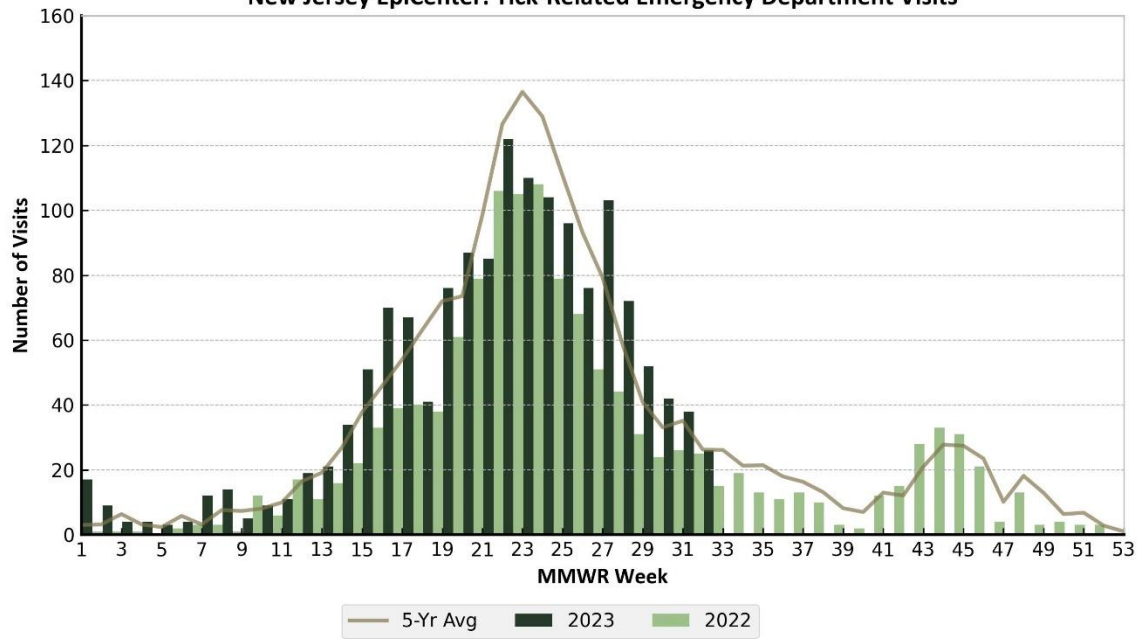


Tick-related Emergency Department Visits

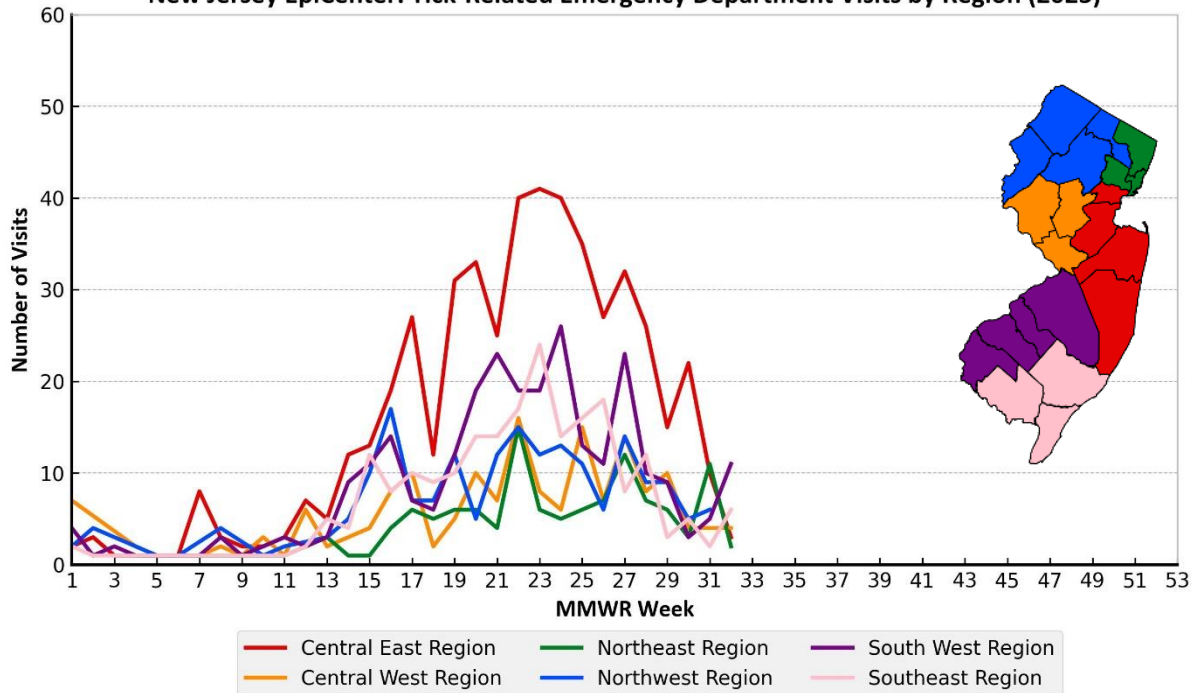
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 32, the number of tick-related ED visits continued to decline, and is comparable to 2022 and 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 August 16, 2023

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/>