

Report Highlight:

- NJDOH is reporting the first 3 human cases of WNV for 2022. The cases were in Bergen, Morris, and Ocean counties.
- 32 mosquito pools tested positive for West Nile Virus (WNV) in Week 33 for a total of 293 positive pools this year. The number of positive pools in week 32 was lower than week 31 and below the 5-year average. WNV positive mosquito pools have been detected in 19 counties with the highest number from Hudson and Bergen counties.
- A red-tailed hawk found in Somerset County tested positive for WNV in Week 31.
- The number of tick-related ED visits decreased in week 33. The number remains above 2021 levels and is around the 5-year average.

1. Human Cases

N.J.A.C.8:57 mandates public health reporting of communicable diseases. 2022 data reflect cases that have been approved by NJDOH and do not include cases under investigation. All 2022 numbers are preliminary and subject to change.

Human Cases

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2022	2021		2022	2021
Chikungunya	1	4	Alpha-gal syndrome	63	-
Dengue	6	12	Anaplasmosis	61	202
Eastern equine encephalitis	-	-	Babesiosis	139	258
Jamestown Canyon	-	2	<i>Borrelia miyamotoi</i>	-	16
Malaria	22	71	Ehrlichiosis (<i>chaffeensis, ewingii</i>)	72	77
West Nile	3	36	Lyme disease*	192	3,518
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	13	39
			Tularemia	1	4

* Lyme disease surveillance has transitioned to a laboratory-only surveillance approach in 2022; as such, case reporting is delayed.

2. Mosquito Testing

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

West Nile virus (WNV):

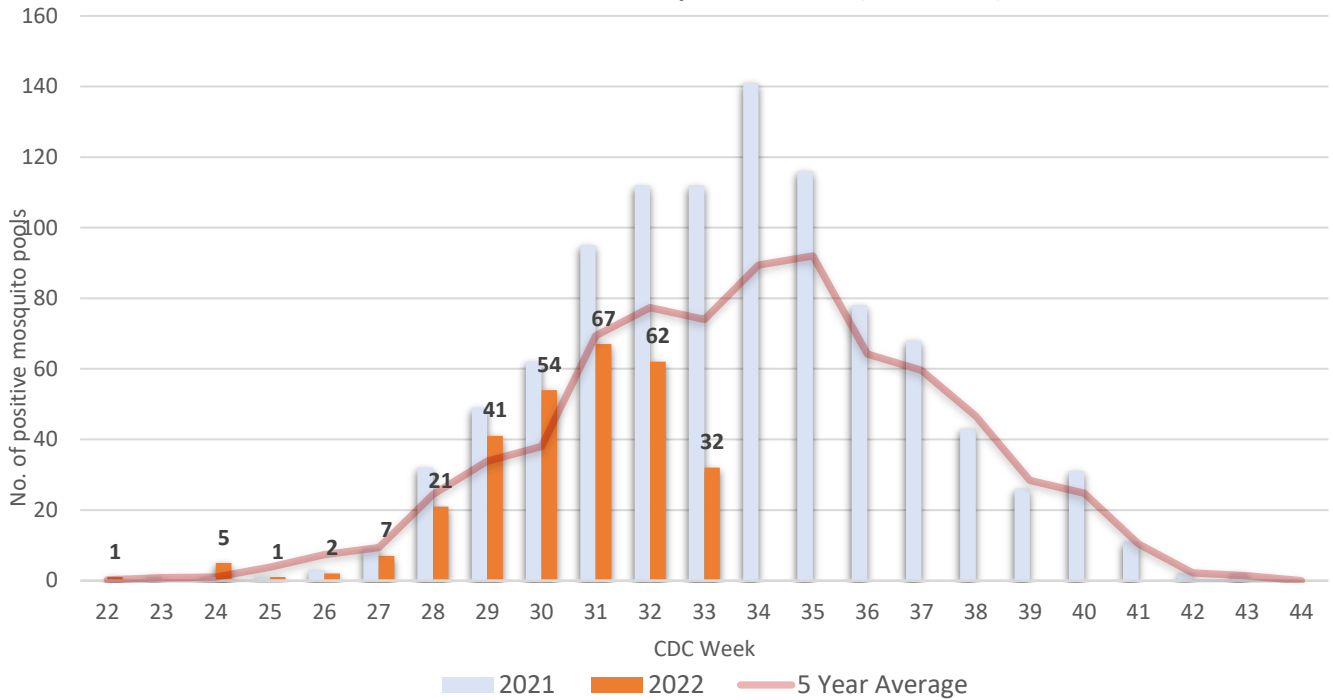
- A total of 4505 mosquito pools from all 21 counties have been tested for WNV.
- 32 pools tested positive for WNV in Week 33, in Hudson(14), Middlesex(5), Union(5), Monmouth(4), Hunterdon(3), and Ocean(1). There have been 293 positive WNV pools so far this year.
- The positive pools were detected in *Aedes albopictus* (7), *Ae. canadensis* (1), *Ae. cantator* (1), *Ae. triseriatus* (1), *Ae. vexans* (1), *Culex sp.* (37), *Cx. pipiens* (8), *Cx. pipiens/quinqüefasciatus/restuans species mix* (14) and *Cx. pipiens/restuans/salinarius species mix* (223).
- The first WNV positive mosquito pool (*Ae. cantator*) was detected in week 22 from Burlington County.

*Test results may be incomplete; counties submit pools for testing on specific weekdays. Mosquito testing data reflects test results received from PHEL and CMBSL3 as of August 25, 2022

WNV Mosquito Pool Testing

County	Week 33 Positive Pools		Cumulative Pos. Total (Week 33)		# Pools Tested 2022*
	2022*	2021	2022*	2021	
Hudson	14	10	56	29	206
Bergen		8	52	65	238
Middlesex	5	10	33	51	202
Union	5	17	30	73	117
Mercer		1	19	9	295
Burlington		15	17	35	140
Monmouth	4	3	15	21	305
Passaic		3	14	7	146
Morris		9	12	27	322
Camden		5	9	57	113
Gloucester			7	4	244
Essex		1	6	2	98
Hunterdon	3	10	6	17	209
Ocean	1	3	6	10	200
Somerset		9	6	44	183
Warren		3	2	14	329
Atlantic		3	1	6	214
Salem			1		267
Sussex		1	1	2	284
Cape May				3	147
Cumberland		1		1	246
Total	32	112	293	477	4505

West Nile Virus Positive Mosquito Pools, NJ (2021-2022)



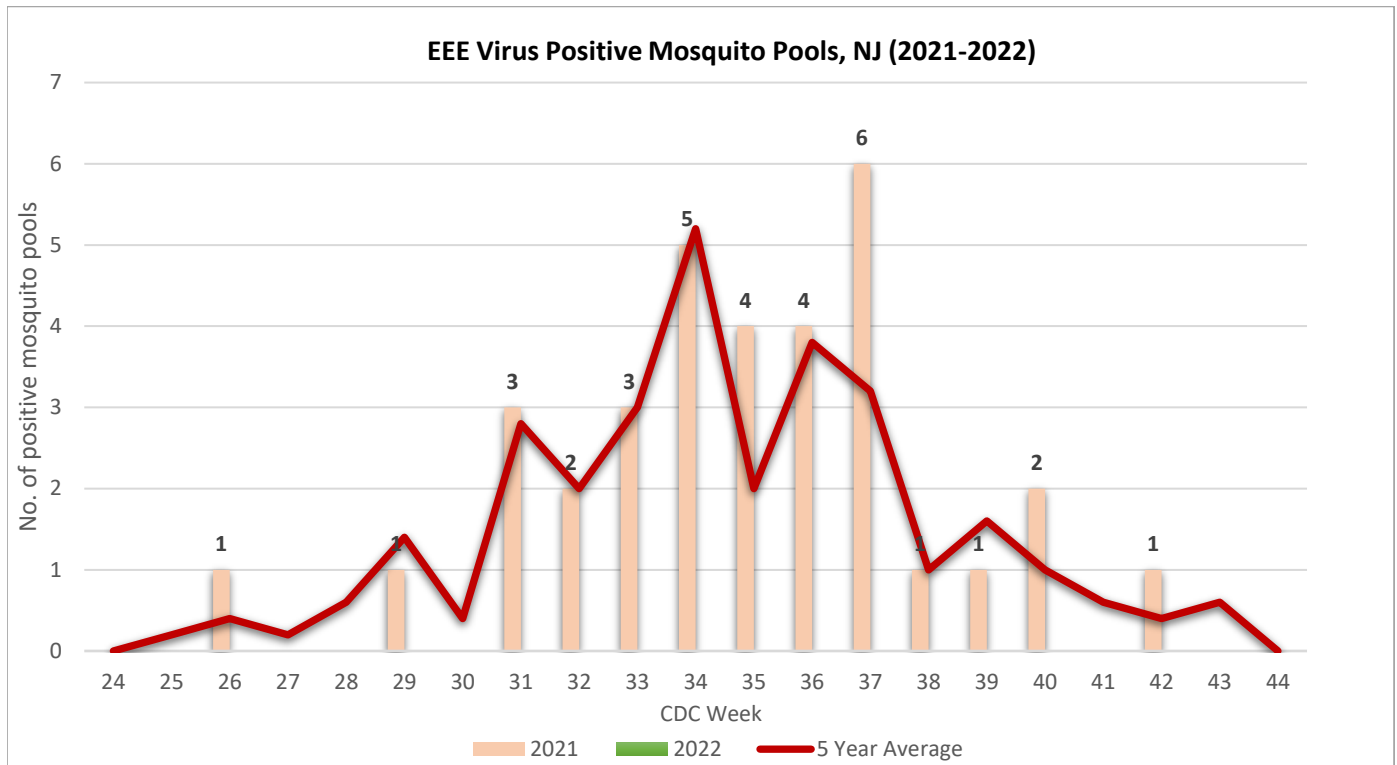
Eastern equine encephalitis virus (EEE)

- A total of 4424 mosquito pools from all 21 counties have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2022. In 2021, the first positive mosquito pool was detected in Week 26 from Gloucester County.

EEE Mosquito Pool Testing

County	Week 33 Positive Pools		Cumulative Pos. Total (Week 33)		# Pools Tested
	2022*	2021	2022*	2021	
Atlantic		1		4	214
Bergen					221
Burlington					139
Camden		1		2	112
Cape May		1		2	147
Cumberland					246
Essex					98
Gloucester				2	244
Hudson					206
Hunterdon					209
Mercer					282
Middlesex					202
Monmouth					305
Morris					322
Ocean					200
Passaic					139
Salem					258
Somerset					183
Sussex					275
Union					116
Warren					306
Total	-	3	-	10	4424

Week 33: August 15-21, 2021; August 14-20, 2022



Other viruses:

Mosquito pools from 21 counties have been tested for other arboviruses. Two pools tested positive for JCV.

Cumulative 2022 Mosquito Pool Testing (Other Viruses^a)

County	SLE		JCV		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	214		214				4		4		4	
Bergen	221		221	2	17		1		1		1	
Burlington	139		139		1							
Camden	112		101		1		7		7		7	
Cape May	147											
Cumberland	246		246									
Essex	98		98									
Gloucester	244		234									
Hudson	206		206									
Hunterdon	209		209									
Mercer	282		282		13							
Middlesex	202		202									
Monmouth	305		305									
Morris	322		322									
Ocean	200		200									
Passaic	139		139		7							
Salem	258		248		9							
Somerset	183		183									
Sussex	275		275		8							
Union	116		116		1							
Warren	306		306		23							
Total	4424	-	4246	2	80	-	12	-	12	-	12	-

^a St. Louis encephalitis virus (SLE), Jamestown Canyon Virus (JCV), La Crosse encephalitis virus (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)
 Numbers in white columns represent number of pools tested to date in 2022

Numbers in green shaded columns represent positive pools in 2022

Jamestown Canyon virus (JCV):

- Two mosquito pools (*Ae. cantator*) from Bergen County tested positive for JCV on Week 22 and Week 24. In 2021, the first positive pool was detected on Week 27 from Sussex County.
- Jamestown Canyon virus has not been detected in humans in 2022.
- NJ reported 2 human JCV cases last year in Sussex County (week 18) and in Essex County (week 36). The first NJ JCV case was reported in 2015 in Sussex County.
- In 2021, eight positive JCV pools were reported in Atlantic, Camden, Essex, Gloucester, and Sussex counties.

3. Equine/Avian /Other Animal Testing

Equine testing for WNV and EEE is conducted at the New Jersey Department of Agriculture's Animal Health and Diagnostic Laboratory.

- A red-tailed hawk tested positive for WNV on Week 31 in Somerset County.
- No animals have tested positive for EEE in 2022.
- Routine avian testing has been discontinued but is available upon request at PHEL.

WNV/EEE Positive Test Results

	WEEK 33		Cum. Total (Year)	
	2022*	2021	2022*	2021
Equine (EEE)				
Equine (WNV)				
Avian (WNV)			1	
Other				

Week 33: August 8-14, 2021; August 14-20, 2022

4. Surveillance Maps

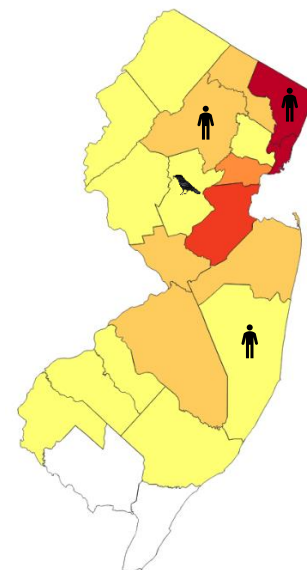
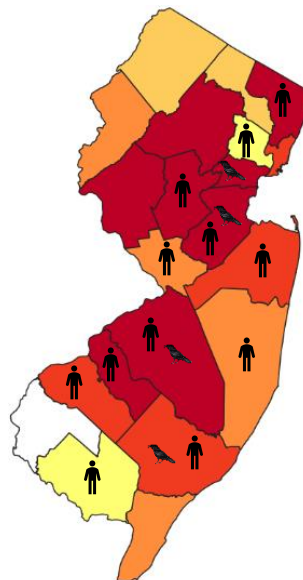
West Nile Virus (WNV)

2021 WNV Activity

Cumulative WNV Activity 2022

WNV Positive Pools

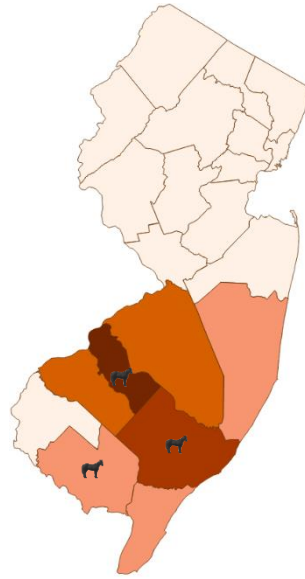
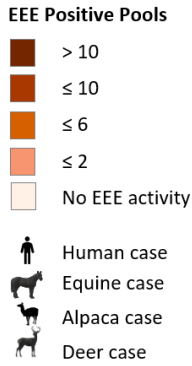
- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- ≥ 1 WNV human case
- ≥ 1 WNV equine case
- ≥ 1 WNV avian case



Eastern equine encephalitis (EEE)

2021 EEE Activity

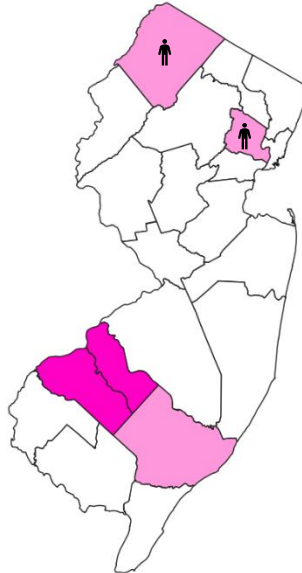
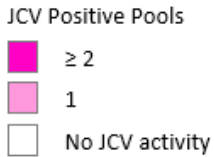
Cumulative EEE Activity 2022



Jamestown Canyon Virus

2021 JCV Activity

Cummulative JCV Activity 2022



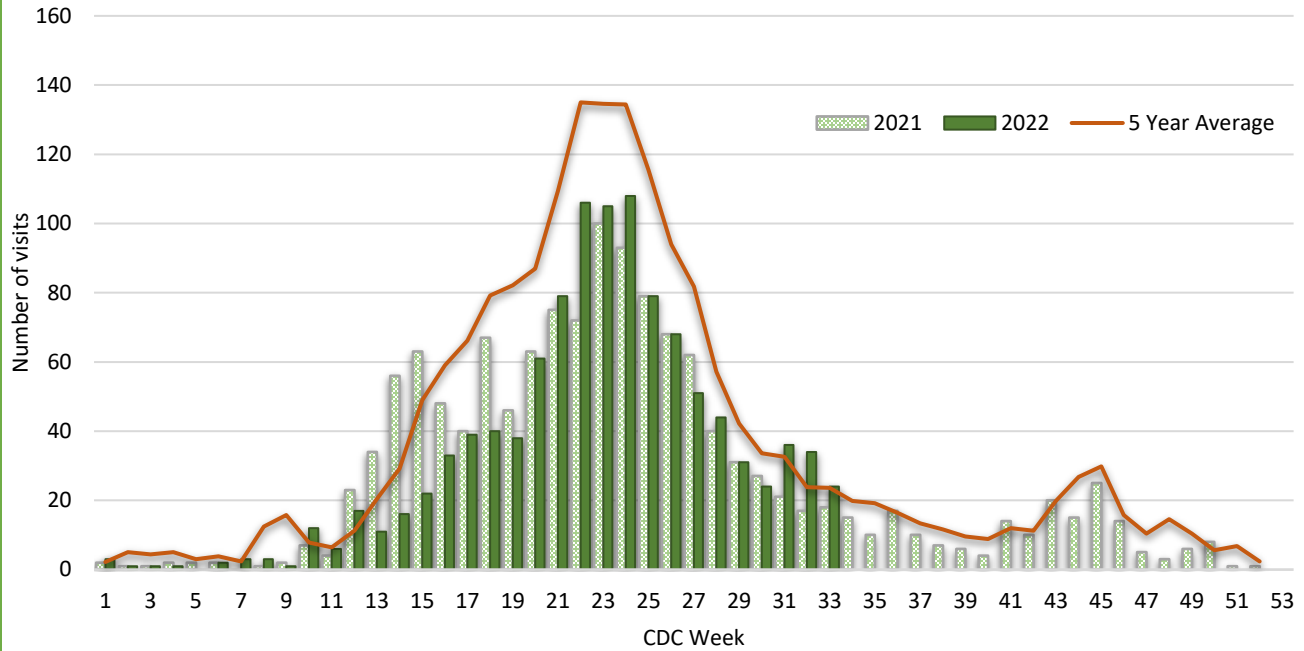
5. Syndromic Surveillance for Tick-related Emergency Department Visits

EpiCenter is a syndromic surveillance system developed and maintained by Health Monitoring Systems, Inc, for monitoring by health departments in the United States. New Jersey’s 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 NJ 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 was equal to the 5-year average.

New Jersey EpiCenter: Tick-Related Emergency Department Visits



Data reflects ED visits downloaded from EpiCenter as of August 25, 2022

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/>
- Rutgers Center for Vector Biology: <http://vectorbio.rutgers.edu/>