

## Report Highlight:

- 46 mosquito pools tested positive for West Nile Virus (WNV) in Week 32 for a total of 245 positive pools this year. The number of positive pools in prior weeks is similar to the 5-year average. WNV positive mosquito pools have been detected in 18 counties with the highest number from Bergen and Hudson counties.
- A red-tailed hawk found in Somerset County tested positive for WNV in Week 31.
- The number of tick-related ED visits increased in week 31 and remains at elevated levels in week 32 and is higher than 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	57	-
Dengue	6	12	Anaplasmosis	57	202
Eastern equine encephalitis	-	-	Babesiosis	110	258
Jamestown Canyon	-	2	<i>Borrelia miyamotoi</i>	-	16
Malaria	21	71	Ehrlichiosis ( <i>chaffeensis</i> , <i>ewingii</i> )	67	77
West Nile	-	36	Lyme disease*	185	3,518
Zika	-	-	Powassan	-	-
			Spotted fever group rickettsioses	10	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 (CMBLS3) perform arboviral testing on mosquito pools collected by county mosquito control agencies throughout New Jersey.

### West Nile virus (WNV):

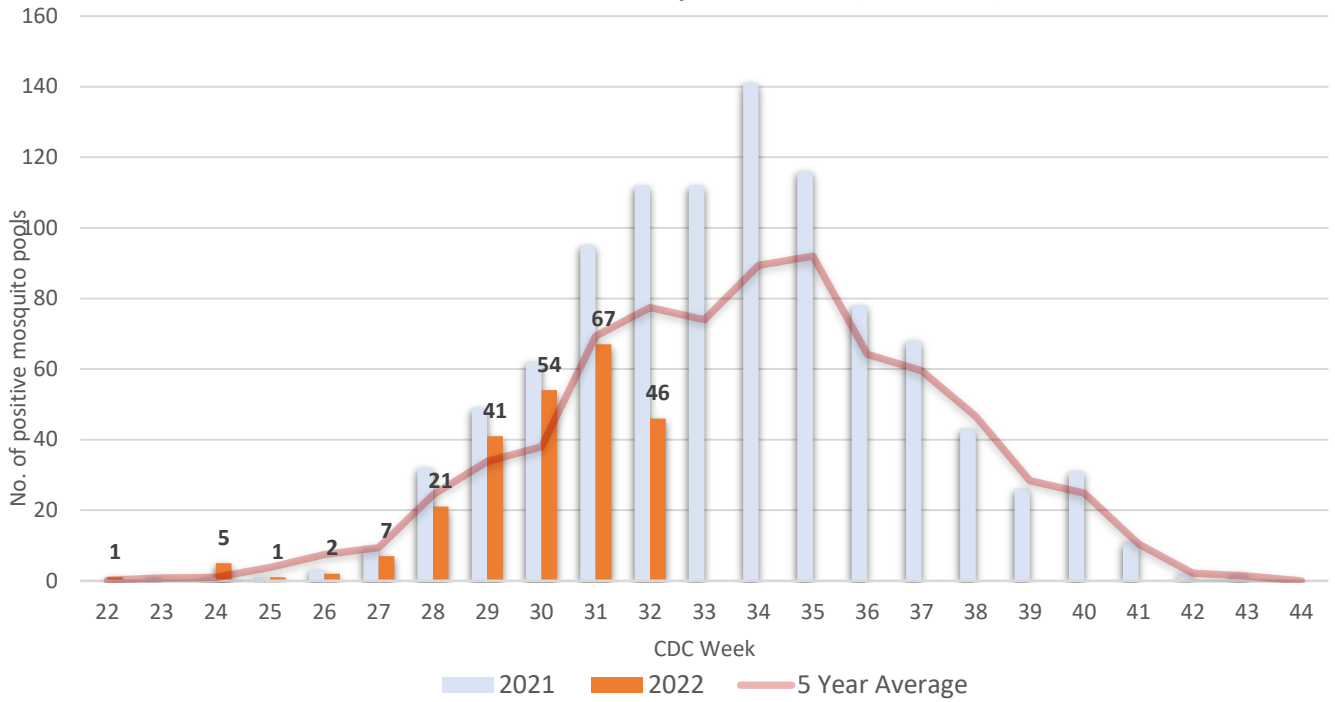
- A total of 4314 mosquito pools from all 21 counties have been tested for WNV.
- 46 pools tested positive for WNV in Week 32, in Hudson(13), Middlesex(7), Burlington(6), Monmouth(6), Mercer(5), Hunterdon(2), Morris(2), Warren(2), Atlantic(1), Camden(1), and Ocean(1). There have been 245 positive WNV pools so far this year.
- The positive pools were detected in *Aedes albopictus* (5), *Ae. canadensis* (1), *Ae. cantator* (1), *Ae. triseriatus* (1), *Ae. vexans* (1), *Culex sp.* (31), *Cx. pipiens* (8), *Cx. pipiens/quinqüefasciatus/restuans species mix* (14) and *Cx. pipiens/restuans/salinarius species mix* (183).
- 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 CMBLS3 as of August 18, 2022

### WNV Mosquito Pool Testing

County	Week 32 Positive Pools		Cumulative Pos. Total (Week 32)		# Pools Tested
	2022*	2021	2022*	2021	2022*
Bergen		11	43	57	214
Hudson	13	7	42	19	186
Middlesex	7	11	28	41	180
Union		30	25	56	112
Mercer	5	3	18	8	275
Burlington	6	4	17	20	139
Passaic		1	14	4	146
Morris	2	5	12	18	322
Monmouth	6	2	11	18	283
Camden	1	15	7	52	102
Gloucester		1	7	4	243
Somerset		10	6	35	180
Ocean	1	1	5	7	186
Essex			3	1	89
Hunterdon	2	3	3	7	197
Warren	2	6	2	11	328
Atlantic	1		1	3	214
Salem			1		262
Cape May		2		3	146
Cumberland					246
Sussex				1	264
<b>Total</b>	<b>46</b>	<b>112</b>	<b>245</b>	<b>365</b>	<b>4314</b>

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



### Eastern equine encephalitis virus (EEE)

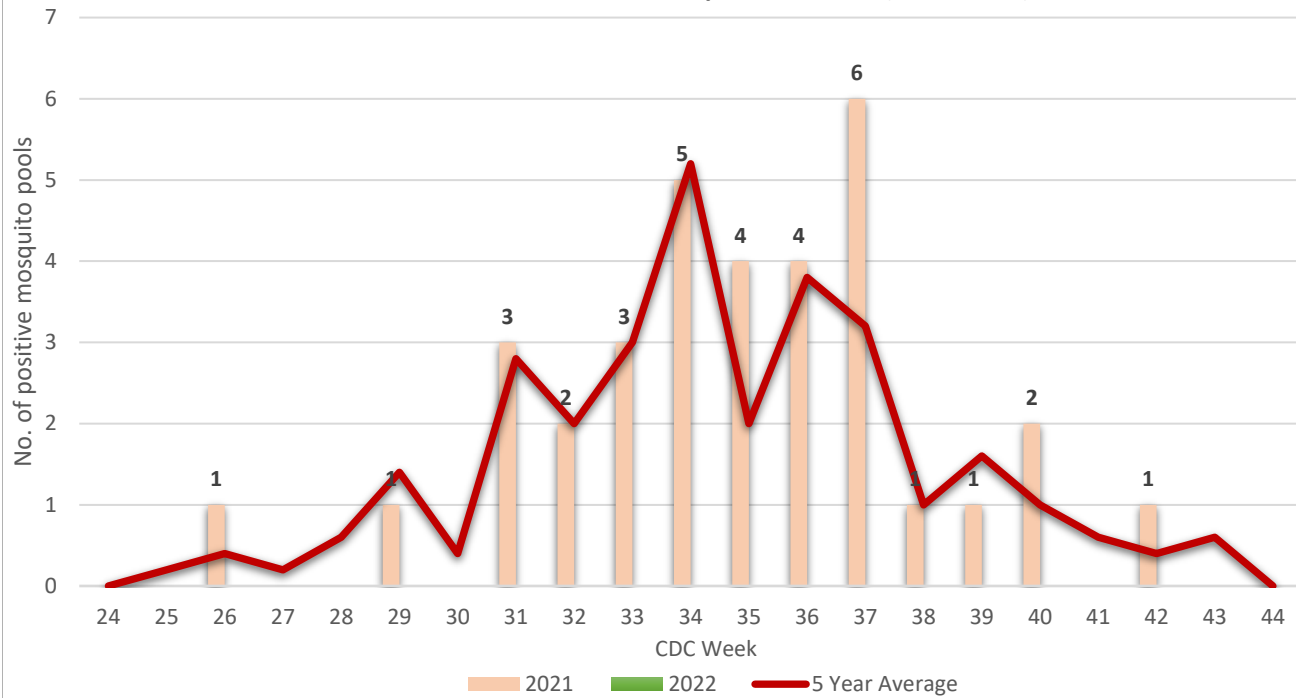
- A total of 4237 mosquito pools from all 21 counties have been tested for EEE.
- No EEE positive mosquito pools have been identified in 2022. In 2021, the first positive mosquito pool was detected in Week 26 from Gloucester County.

#### EEE Mosquito Pool Testing

County	Week 32 Positive Pools		Cumulative Pos. Total (Week 32)		# Pools Tested
	2022*	2021	2022*	2021	
Atlantic		1		3	214
Bergen					197
Burlington					138
Camden				1	101
Cape May		1		1	146
Cumberland					246
Essex					89
Gloucester				2	243
Hudson					186
Hunterdon					197
Mercer					262
Middlesex					180
Monmouth					283
Morris					322
Ocean					186
Passaic					139
Salem					254
Somerset					180
Sussex					257
Union					111
Warren					306
<b>Total</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>7</b>	<b>4237</b>

Week 32: August 8-14, 2021; August 7-13, 2022

**EEE Virus Positive Mosquito Pools, NJ (2021-2022)**



**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<sup>a</sup>)**

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	197		197	2	17		1		1		1	
Burlington	138		138		1							
Camden	101		91		1		3		3		3	
Cape May	146											
Cumberland	246		246									
Essex	89		89									
Gloucester	243		234									
Hudson	186		186									
Hunterdon	197		197									
Mercer	262		262		13							
Middlesex	180		180									
Monmouth	283		283									
Morris	322		322									
Ocean	186		186									
Passaic	139		139		7							
Salem	254		244		8							
Somerset	180		180									
Sussex	257		257		6							
Union	111		111		1							
Warren	306		306		22							
<b>Total</b>	<b>4237</b>	<b>-</b>	<b>4062</b>	<b>2</b>	<b>76</b>	<b>-</b>	<b>8</b>	<b>-</b>	<b>8</b>	<b>-</b>	<b>8</b>	<b>-</b>

<sup>a</sup> 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 32		Cum. Total (Year)	
	2022*	2021	2022*	2021
Equine (EEE)				
Equine (WNV)				
Avian (WNV)			1	
Other				

Week 32: August 8-14, 2021; August 7-13, 2022

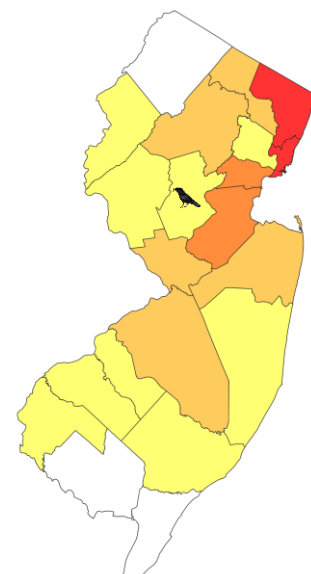
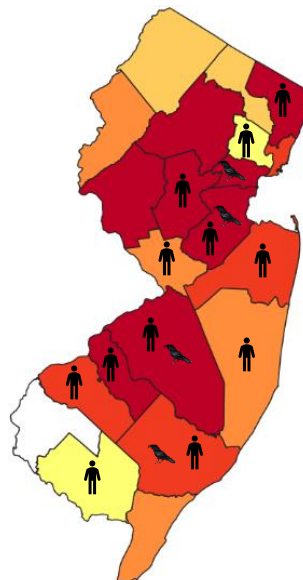
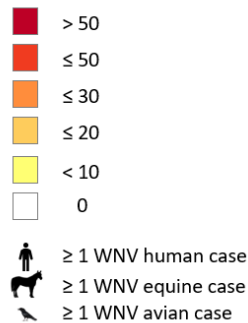
**4. Surveillance Maps**

**West Nile Virus (WNV)**

2021 WNV Activity

Cumulative WNV Activity 2022

**WNV Positive Pools**



**Eastern equine encephalitis (EEE)**

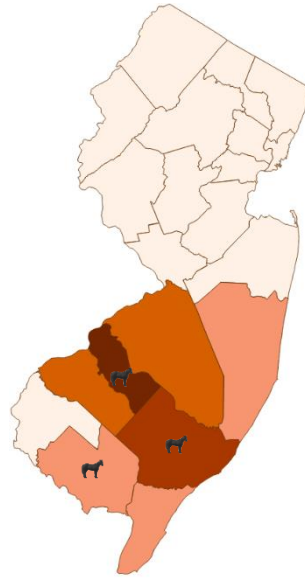
2021 EEE Activity

Cumulative EEE Activity 2022

**EEE Positive Pools**

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

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



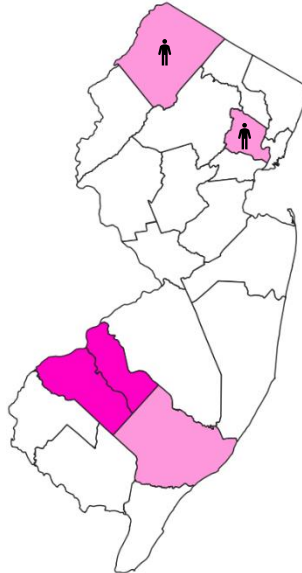
**Jamestown Canyon Virus**

2021 JCV Activity

Cummulative JCV Activity 2022

**JCV Positive Pools**

- ≥ 2
- 1
- No JCV activity



**La Crosse Virus Activity 2022**

2021 LAC Activity

Cummulative LAC Activity 2022

**LAC Positive Pools**

- ≥ 1
- No LAC activity

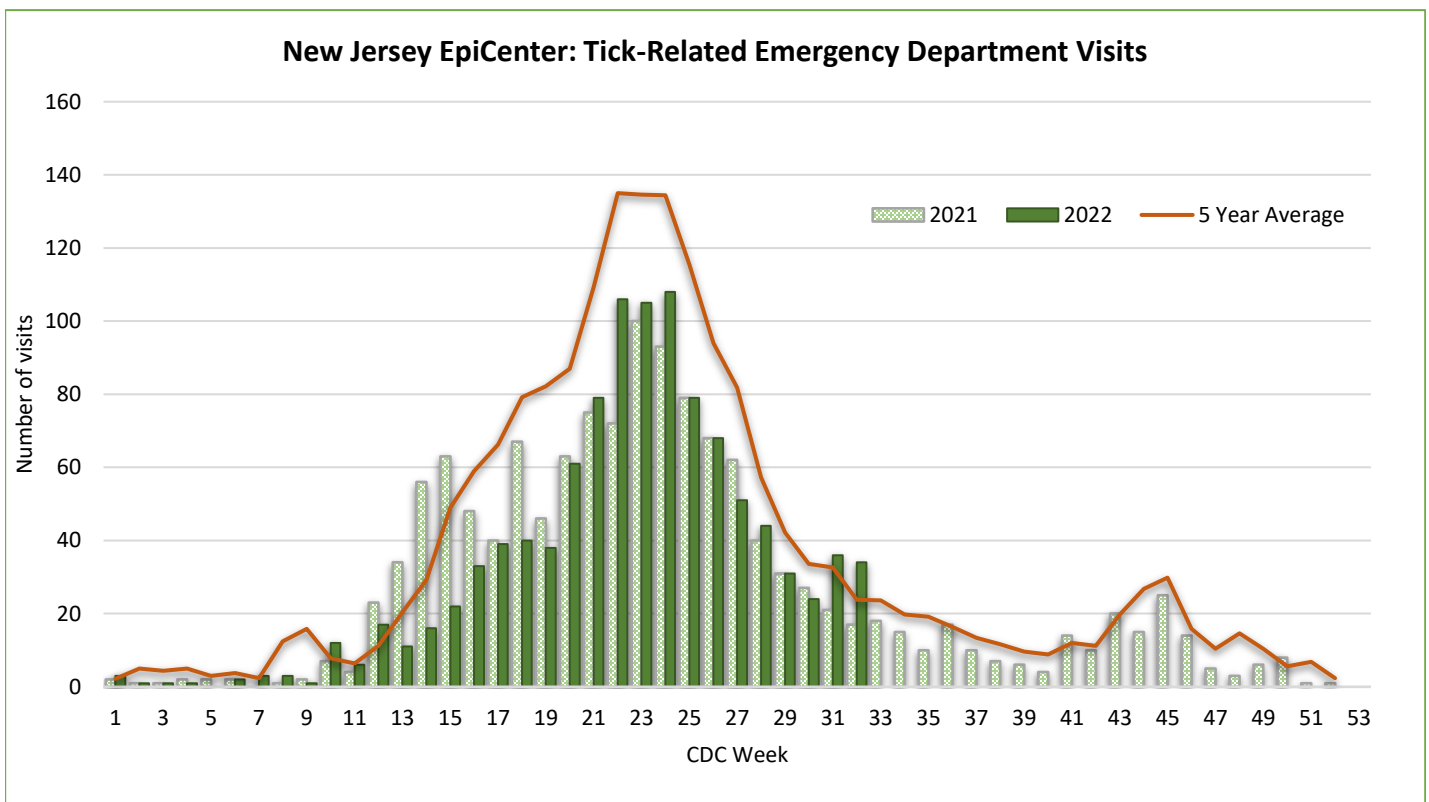


## 5. Syndromic Surveillance for Tick-related Emergency Department Visits

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 32, the number of tick-related ED visits continues at higher than expected levels.



Data reflects ED visits downloaded from EpiCenter as of August 18, 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/>