

## Report Highlights:

- NJDOH is reporting one new human cases of West Nile virus (WNV) from Ocean County. To date, there have been 16 human WNV cases, including 3 deaths and four PVDs. An additional 78 mosquito pools tested positive for WNV since last report, including 46 this week (additional tests pending) for a total of 856 WNV positive pools in 2024.
- There is one new Eastern Equine Encephalitis (EEE) positive horse reported this week from Salem County. To date, there has been one human case from Atlantic County and two horses from Atlantic and Salem counties that tested positive for EEE. One additional mosquito pool tested positive for EEE since last report from Bergen County, for a total of 13 EEE positive pools in 2024.
- No new human cases of Jamestown Canyon virus (JCV) or mosquito detections are reported this week. To date, there has been one human case of JCV in Sussex County and detections in three mosquito pools in Cumberland and Monmouth counties.
- Eleven new travel-associated dengue cases are reported this week, for a total of 85 cases in 2024 compared to 51 cases in the same timeframe in 2023. Cases are associated with outbreaks in several Latin American countries.
- The number of Lyme disease cases this week continued to decrease and remains below average. Several other tickborne disease cases are lower this year than in 2023.
- In Week 36, the number of tick-related ED visits decreased and is lower than the 5-year average.

## Human Vector-borne Disease Cases

N.J.A.C. 8:57 mandates public health reporting of communicable diseases. 2024 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 (except for Lyme disease) may be significantly lower than actual counts and should be interpreted with caution. All 2024 numbers are preliminary and subject to change. Some cases considered “presumptive positive” are pending additional testing. Case counts for 2023 reflect the annual total for that year.

Mosquito-borne diseases			Tickborne Diseases/Conditions		
	2024	2023		2024	2023
Chikungunya	3	13	Alpha-gal syndrome	153	360
Dengue	85	98	Anaplasmosis	102	195
Eastern equine encephalitis	1	-	Babesiosis	191	407
Jamestown Canyon	1	1	<i>Borrelia miyamotoi</i>	12	18
Malaria	49	102	Ehrlichiosis	63	109
West Nile	16	14	Lyme disease*	4,692	7,225
Zika	-	-	Powassan	1	-
			Spotted fever group rickettsioses	8	24
			Tularemia	2	2

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

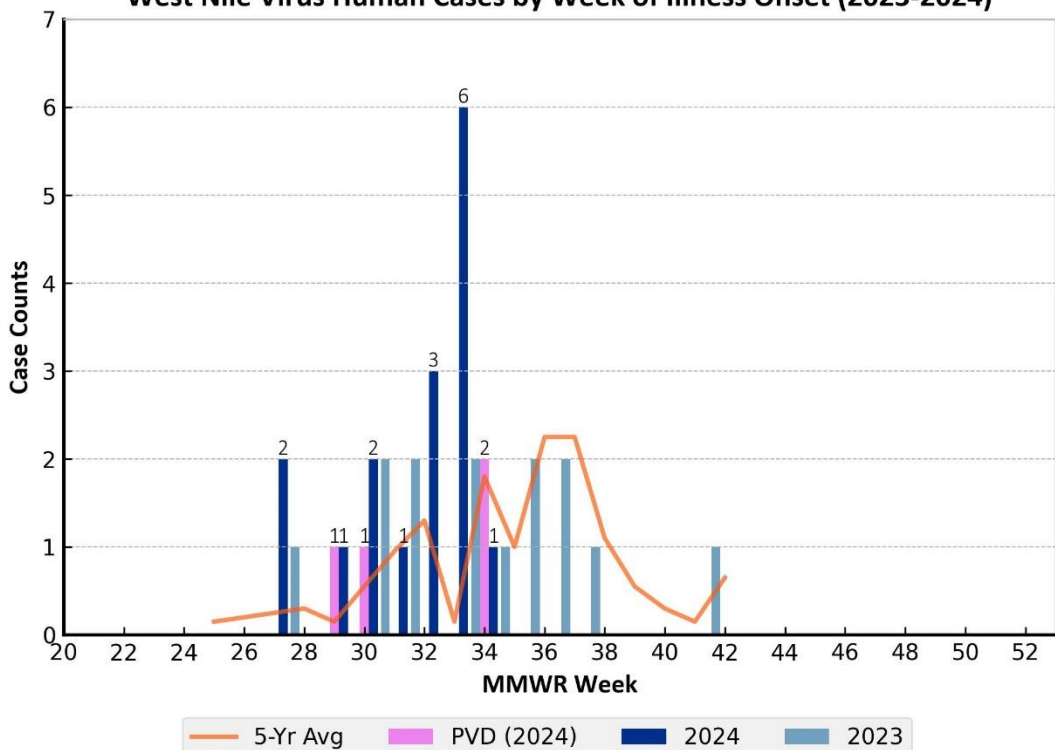
## Mosquito-borne Disease Activity\*

\*Test results may be incomplete as counties submit pools for testing on specific weekdays. Data reflects test results downloaded from JerseySurv on September 12, 2024.

### West Nile Virus

- Sixteen human cases of WNV have been reported in 2024 from Bergen (3), Burlington, Camden, Cumberland (2), Hudson, Mercer, Middlesex (3), Ocean, Union (2), and Warren counties. There were three deaths in Cumberland, Mercer, and Middlesex counties. There have been four PVDs in Bergen, Essex, Passaic, and Somerset counties.
- Three red-tailed hawks tested positive for WNV in week 28 in Essex and Morris counties.
- Out of 9,385 mosquito pools submitted for testing, 856 mosquito pools have tested positive for WNV this year with 46 pools positive in week 36 (additional tests pending). WNV has been detected in *Culex pipiens/restuans/salinarius* (730), *Aedes japonicus* (13), *Cx. pipiens* (48), *Cx. restuans* (10), *Aedes albopictus* (37), *Aedes triseriatus* (3), *Aedes vexans* (3), *Coquillettia perturbans* (1), *Cx. erraticus* (2), *Cx. salinarius* (2), and *Culiseta melanura* (8) mosquitoes.
- The earliest WNV positive mosquito pools (*Culex pipiens/restuans/salinarius*) were detected in week 18 from Gloucester County (2), considerably earlier than 2023, when WNV was initially detected in week 24 from Bergen County.

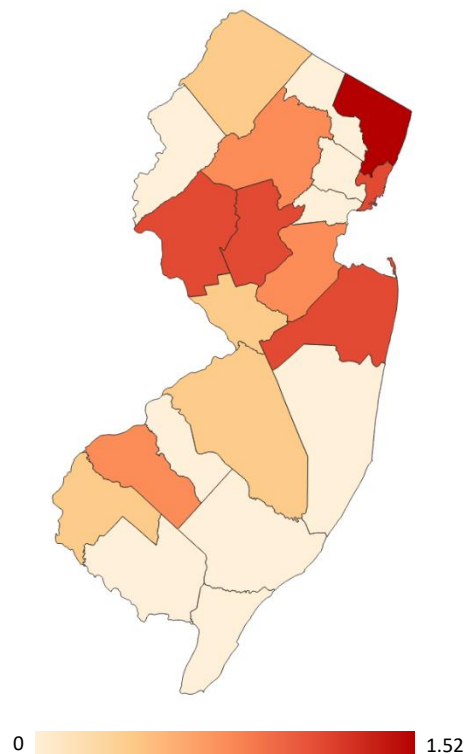
West Nile Virus Human Cases by Week of Illness Onset (2023-2024)



WNV Mosquito Pool Testing

County	WEEK 36 Positive Pools		Cumulative Pos. Total* (WEEK 36)		# Pools Tested*	WEEK 36 Vector Index	
	2024	2023	2024	2023		2024	2024 <sup>†</sup>
Bergen	9		134	100	320	1.52	(↑)
Middlesex	3	4	81	56	293	0.37	(↓)
Union		7	80	48	239	0.00	(-)
Hudson	6	7	78	71	245	0.60	(↑)
Somerset	5	3	52	42	241	1.25	(↑)
Cape May	3	1	47	20	3,178	0.05	(↑)
Morris	3	6	46	33	336	0.35	(↓)
Monmouth	1	11	44	28	364	0.60	(↓)
Passaic		8	43	19	205	0.00	(-)
Hunterdon	4	6	42	40	298	0.62	(↑)
Mercer	1	6	34	43	336	0.16	(↓)
Essex		2	32	4	312	0.00	(↓)
Gloucester	3	3	30	32	538	0.30	(↓)
Warren		7	28	28	346	0.00	(↓)
Sussex	3	3	23	21	335	0.25	(↓)
Burlington	3		21	21	215	0.24	(↑)
Atlantic		1	16	21	328	0.00	(↓)
Ocean		2	11	20	308	0.00	(↓)
Camden		2	6	9	188	0.00	(↓)
Salem	1	3	6	6	420	0.25	(↑)
Cumberland	1		2		340	0.00	(-)
<b>Total</b>	<b>46</b>	<b>82</b>	<b>856</b>	<b>662</b>	<b>9,385</b>	-	

WNV Vector Index, WEEK 36<sup>†</sup>



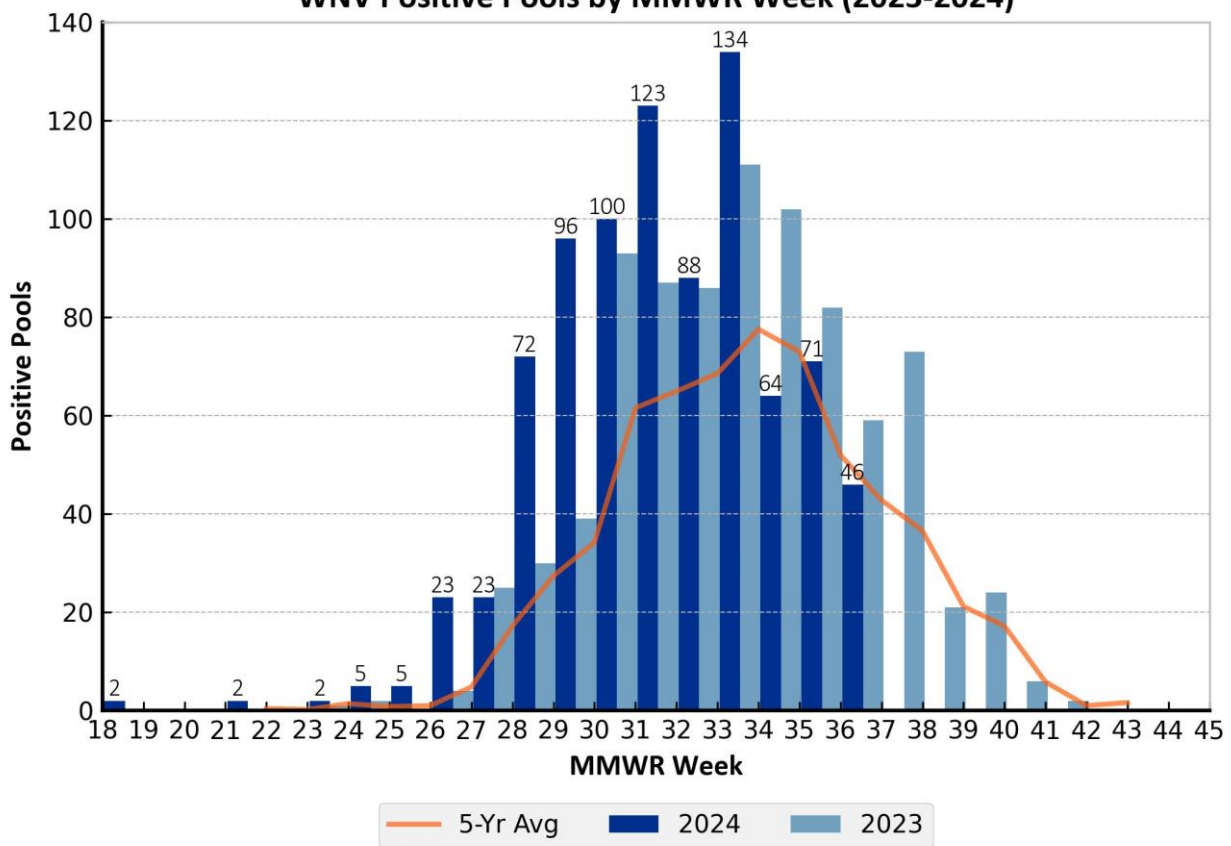
WEEK 36: Sep 3 - 9, 2023; Sep 1 - 7, 2024.

\*184 mosquito pools submitted by 8 counties were collected prior to Week 20.

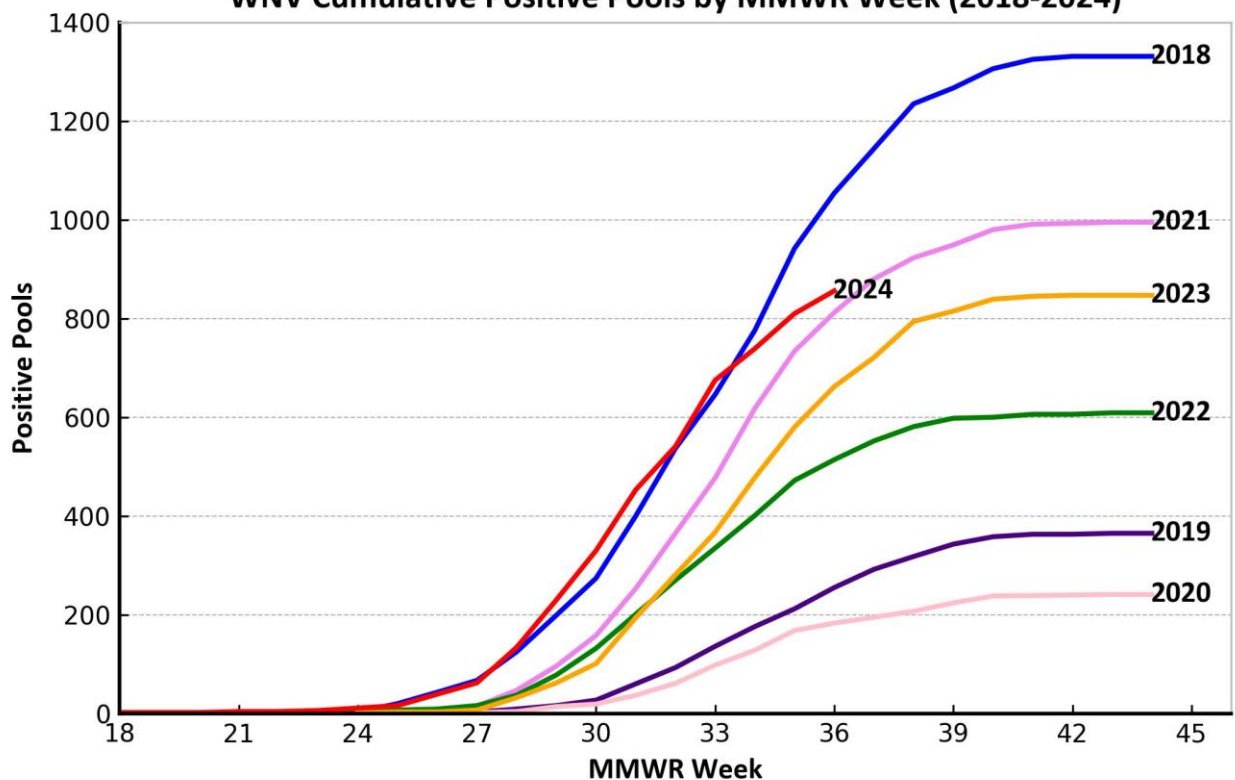
\*Vector Index cannot be calculated because all tested pools were positive. In these situations, the county is shown on the map with red stripes to indicate elevated activity.

<sup>†</sup>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 (2023-2024)**



**WNV Cumulative Positive Pools by MMWR Week (2018-2024)**

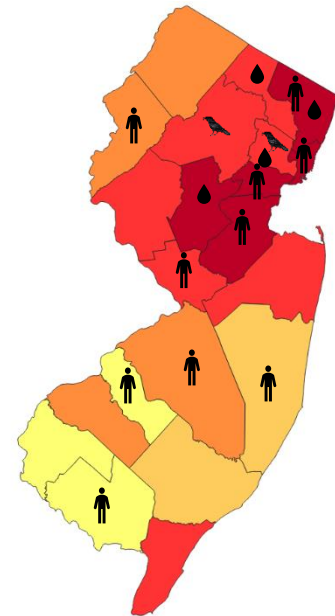
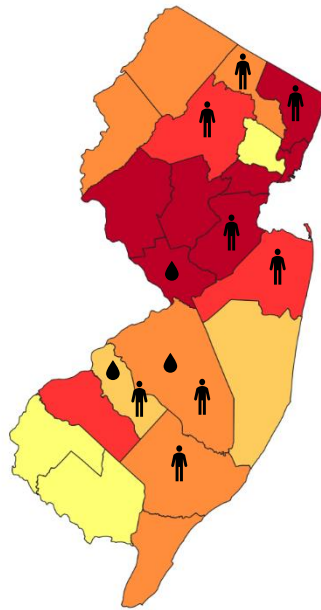


### 2023 WNV Activity

### Cumulative WNV Activity, 2024

#### WNV Positive Pools

- > 50
- ≤ 50
- ≤ 30
- ≤ 20
- < 10
- 0
- ♀ ≥ 1 WNV human case
- ♂ ≥ 1 WNV presumptive viremic donor
- 🦅 ≥ 1 WNV avian case



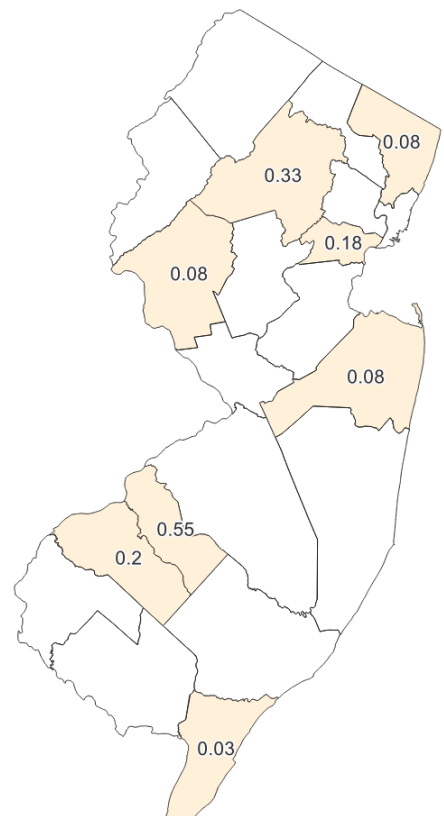
### Eastern Equine Encephalitis (EEE)

- One human case of EEE was reported in week 27 in Atlantic County. EEE human cases were last reported in 2019 (4 cases).
- Two horses tested positive for EEE in week 31 in Atlantic County and in week 36 in Salem County. Neither horse was vaccinated.
- Out of 9,264 mosquito pools tested for EEE, 13 pools have tested positive in 2024 with 1 positive pool in week 36. The positive pools were found in *Coquillettidia perturbans* (1), *Cx. restuans* (1), *Culiseta melanura* (6), *Culiseta morsitans* (1), and *Cx. pipiens/restuans/salinarius* (4) mosquitoes.
- The earliest EEE positive mosquito pool (*Cx. restuans*) was detected in week 27 from Cape May County. In 2023, the first EEE positive pool was detected in week 30 from Cumberland County.

#### EEE Mosquito Pool Testing

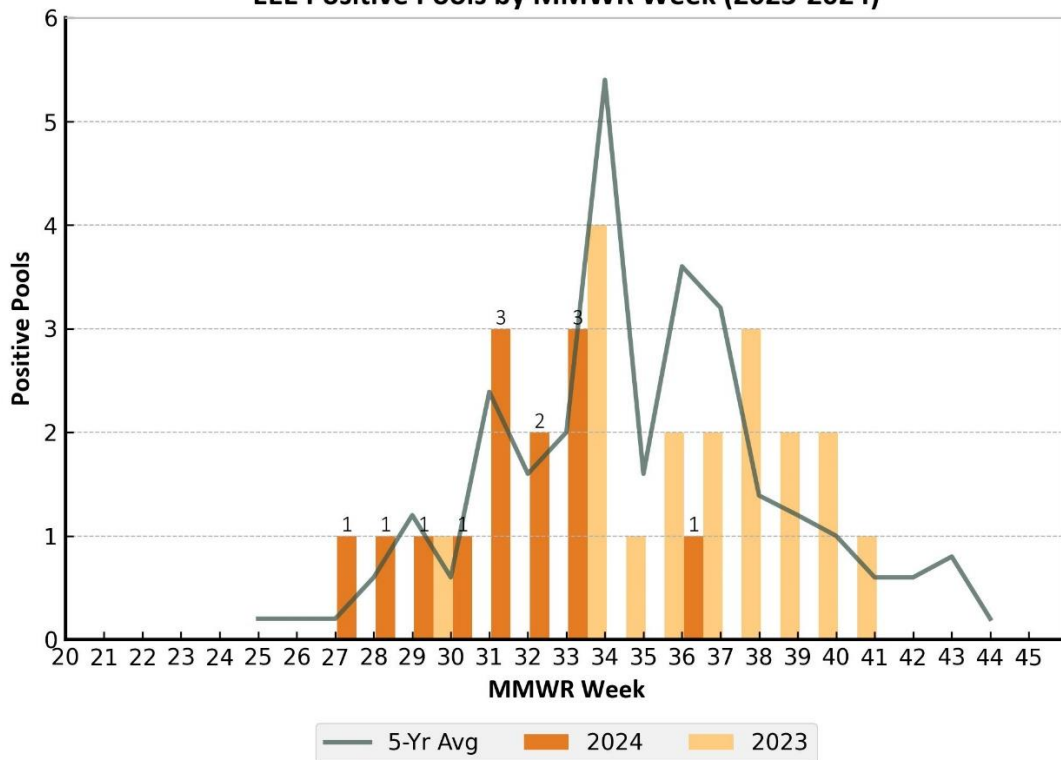
County	WEEK 36 Positive Pools		Cumulative Pos. Total* (WEEK 36)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Morris			4		336	0.33
Gloucester			2		538	0.20
Union			2		239	0.18
Bergen	1		1		269	0.08
Camden			1	2	179	0.55
Cape May		1	1	1	3,178	0.03
Hunterdon			1		295	0.08
Monmouth			1		364	0.08
Atlantic		1		3	328	
Burlington				1	214	
Cumberland				1	340	
Essex					312	
Hudson					245	
Mercer					334	
Middlesex					287	
Ocean					306	
Passaic					205	
Salem					420	
Somerset					241	
Sussex					305	
Warren					329	
<b>Total</b>	<b>1</b>	<b>2</b>	<b>13</b>	<b>8</b>	<b>9,264</b>	<b>-</b>

#### Cumulative EEE MFIR, 2024



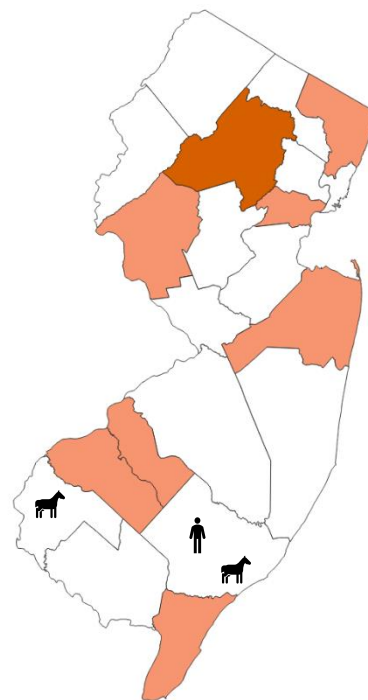
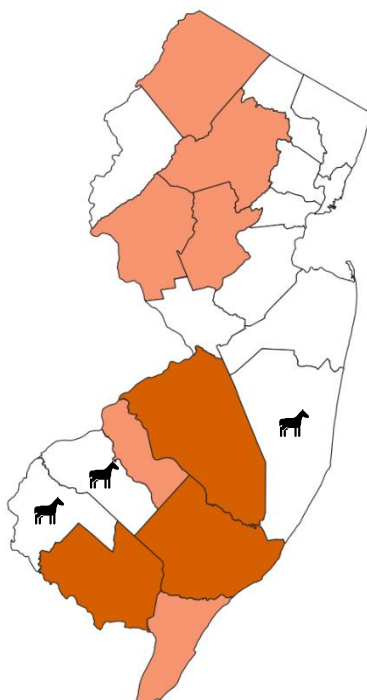
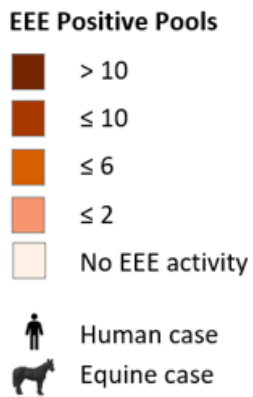
WEEK 36: Sep 3 - 9, 2023; Sep 1 - 7, 2024

EEE Positive Pools by MMWR Week (2023-2024)



2023 EEE Activity

Cumulative EEE Activity, 2024



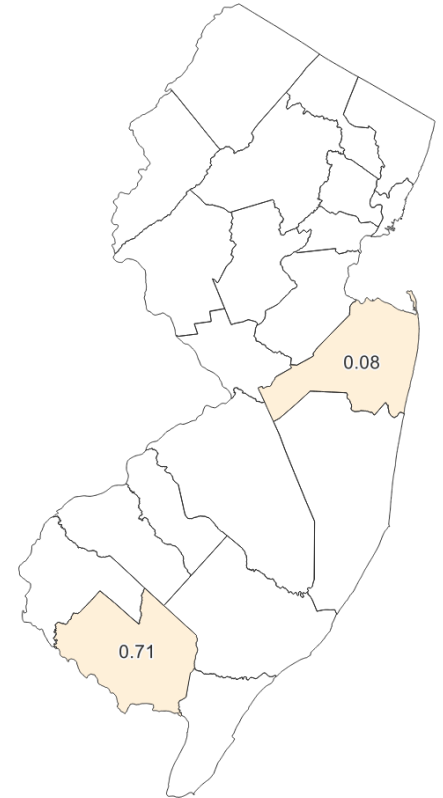
## Jamestown Canyon Virus (JCV)

- There was one human case of JCV reported in New Jersey in 2024 in week 19 in Sussex County. In 2023, there was one human case of JCV in week 42 in Sussex County.
- Out of 9,264 mosquito pools tested for JCV, 3 pools have tested positive in 2024. The positive pools were found in *Aedes cantator* (1), *Cx. salinarius* (1), and *Psorophora columbiae* (1) mosquitoes.
- In 2023, the first JCV positive pool was detected in week 23 from Cumberland County.

### JCV Mosquito Pool Testing

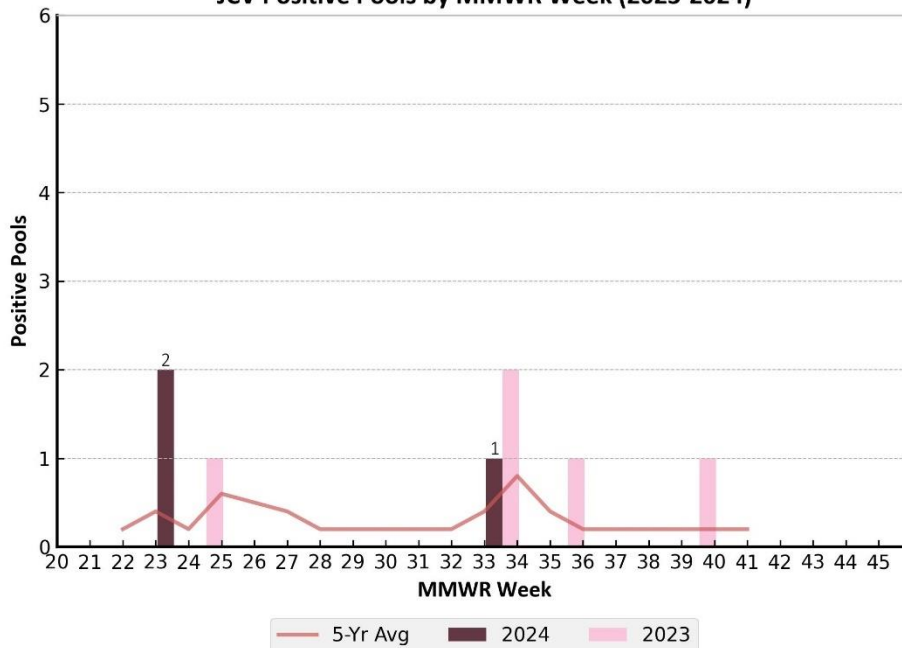
County	WEEK 36 Positive Pools		Cumulative Pos. Total* (WEEK 36)		# Pools Tested	Cumulative MFIR
	2024	2023	2024	2023		
Cumberland			2	1	340	0.71
Monmouth			1		364	0.08
Atlantic					328	
Bergen					269	
Burlington					214	
Camden					179	
Cape May					3,178	
Essex					312	
Gloucester	1		1		538	
Hudson					245	
Hunterdon					295	
Mercer					334	
Middlesex					287	
Morris					336	
Ocean					306	
Passaic					205	
Salem				1	420	
Somerset					241	
Sussex				1	305	
Union					239	
Warren					329	
<b>Total</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>9,264</b>	<b>-</b>

### Cumulative JCV MFIR, 2024



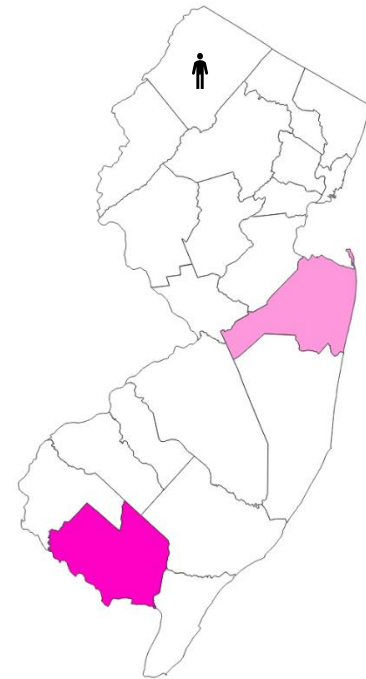
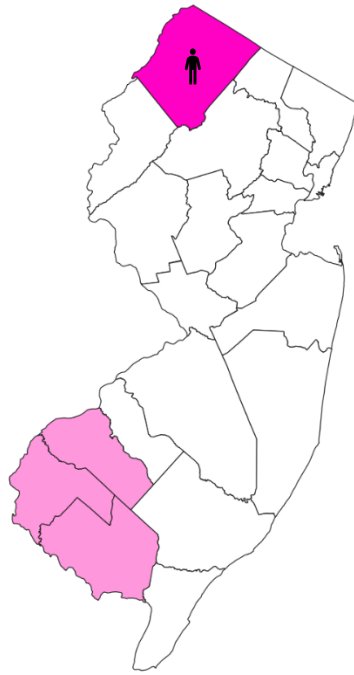
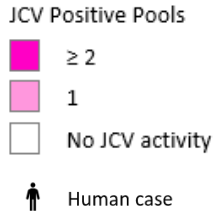
WEEK 36: Sep 3 - 9, 2023; Sep 1 - 7, 2024

### JCV Positive Pools by MMWR Week (2023-2024)



### 2023 JCV Activity

### Cumulative JCV Activity, 2024



### Other Mosquito-borne Viruses

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

### Cumulative 2024 Mosquito Pool Testing (Other Viruses<sup>a</sup>)

County	SLE		LAC		CHIKV		DENV		ZIKV	
	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos	Pools	Pos
Atlantic	328									
Bergen	269		9		8		8		8	
Burlington	214		1							
Camden	179		9		1		1		1	
Cape May	3,178		175		152		152		152	
Cumberland	340									
Essex	312				1		1		1	
Gloucester	538									
Hudson	245									
Hunterdon	295		3		3		3		3	
Mercer	334		2		2		2		2	
Middlesex	287		6		5		5		5	
Monmouth	364									
Morris	336				4		4		4	
Ocean	306		2							
Passaic	205		3							
Salem	420		15							
Somerset	241									
Sussex	305		30							
Union	239									
Warren	329		17		1		1		1	
<b>Total</b>	<b>9,264</b>	<b>-</b>	<b>272</b>	<b>-</b>	<b>177</b>	<b>-</b>	<b>177</b>	<b>-</b>	<b>177</b>	<b>-</b>

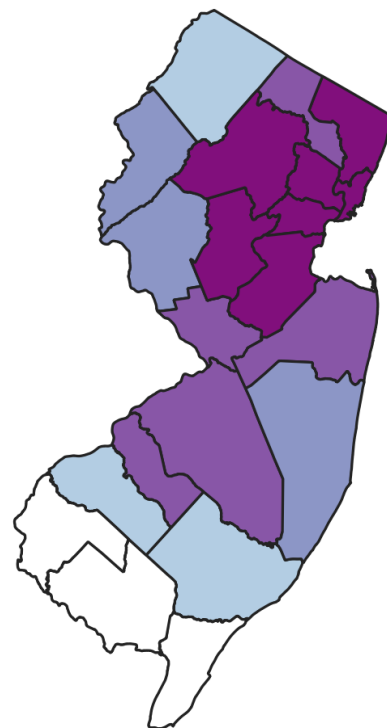
<sup>a</sup> St. Louis virus (SLE), La Crosse encephalitis (LAC), Chikungunya virus (CHIKV), Dengue virus (DENV), Zika Virus (ZIKV)  
 Numbers in white columns represent number of pools tested to date in 2024  
 Number in green shaded columns represent positive pools in 2024

## Human Dengue Virus Cases

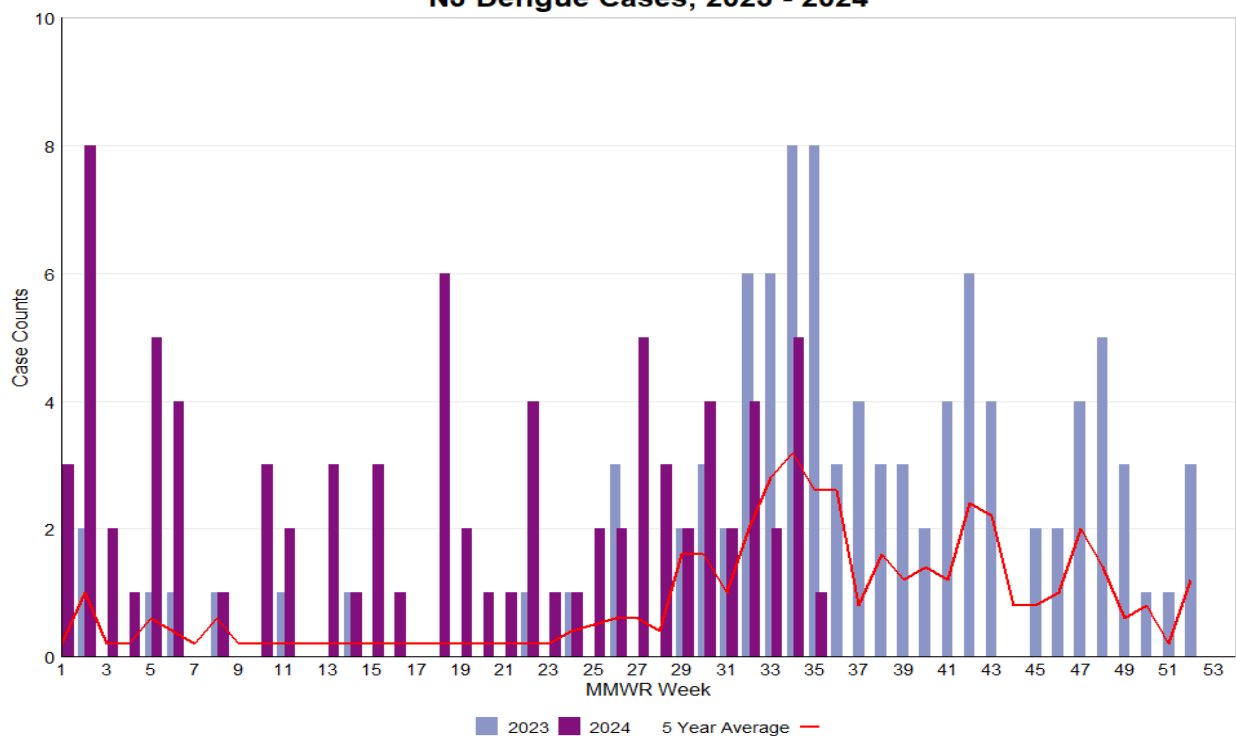
- There have been 85 cases of dengue virus reported so far in 2024, which is considerably higher than the number reported this time last year (51).
- All dengue cases are travel-associated, and the high case count is driven by outbreaks in several Latin American countries. Almost all (79) cases have reported travel to a country or U.S. territory in Latin America or the Caribbean.
- Many of the NJ cases are concentrated in the northeast region, with most cases residing in Bergen (13), Middlesex (10), and Essex (8) counties.

Travel Destination(s) of Dengue Cases	
Country/U.S. Territory of Travel	Count
Dominican Republic	11
Puerto Rico	11
Colombia	9
Brazil	6
Guatemala	6
Mexico	6
El Salvador	5
India	5
Ecuador	3
Trinidad & Tobago	3
Aruba	2
Costa Rica	2
Guyana	2
Honduras	2
Martinique	2
Peru	2
U.S. Virgin Islands	2
Antigua and Barbuda	1
Cuba	1
Grenada	1
Indonesia	1
Paraguay	1

Dengue Cases



NJ Dengue Cases, 2023 - 2024



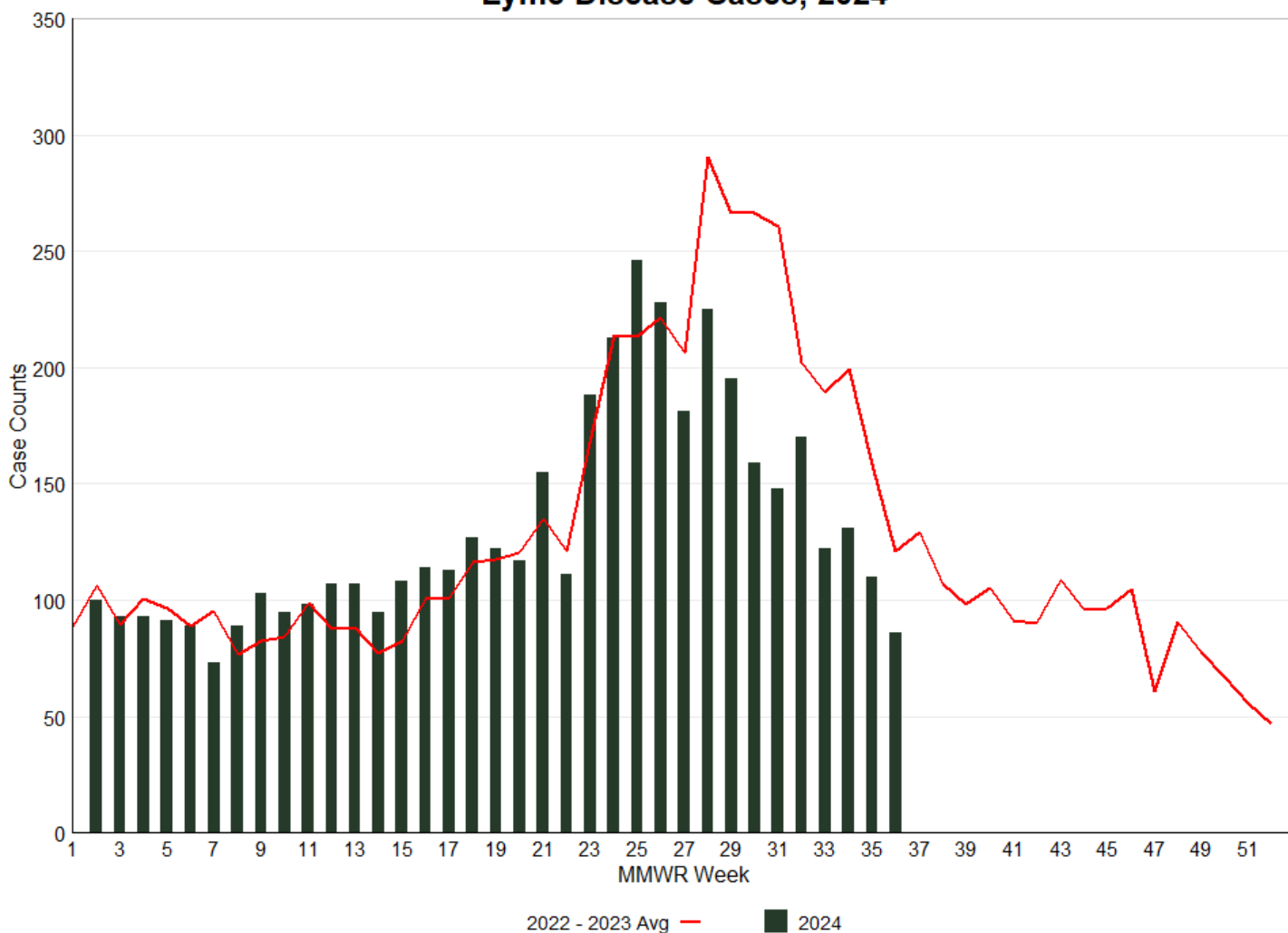


## Tickborne Disease Activity

### Lyme Disease

- There have been 4,692 cases of Lyme disease reported in New Jersey in 2024.
- The number of cases in Week 36 decreased and remains below the average number of cases reported this week.

### Lyme Disease Cases, 2024

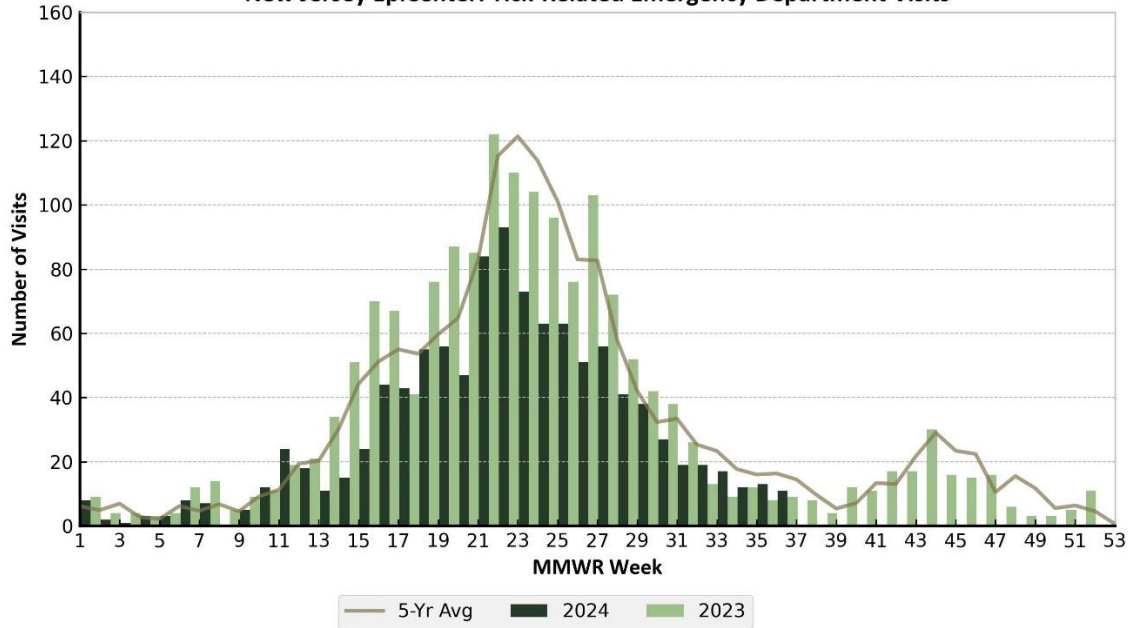


### Tick-related Emergency Department Visits

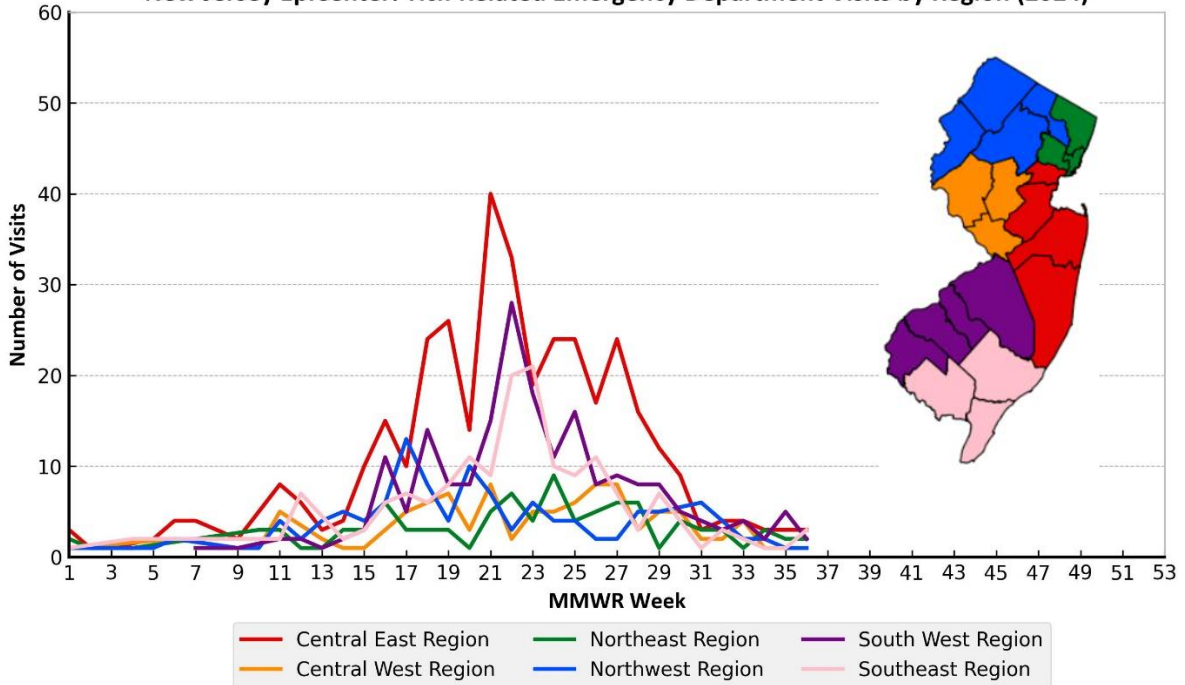
New Jersey's syndromic surveillance system, known as EpiCenter, receives real time Emergency Department (ED) data from 78 acute care and satellite health (99 percent reporting) facilities statewide. The system collects "chief complaint" information and limited patient registration data from existing 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 36, the number of tick-related ED visits remains lower than the 5-year average.

**New Jersey EpiCenter: Tick-Related Emergency Department Visits**



**New Jersey EpiCenter: Tick-Related Emergency Department Visits by Region (2024)**



**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](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/>