VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV, CHIK, ZIKV, and JCV

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Begin to 27 May, 2022, CDC Week 22
Data download Noon 27 May

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NOTE: County/species tables for arboviruses are now in a supplemental file here

Arbovirus Summary

- **Note: Data downloads times are noted and do not necessarily reflect all pools submitted and analyzed to that point in time. This report may vary from other reports from the same dataset as they are all snapshots in time.**

- **No pools tested for EEE virus have been detected positive in any species submitted to date. Testing at the Cape May facilities will commence shortly. No horse or human cases have been reported.**
- **No pools tested for WN virus have been detected positive in any species submitted to date. No horse or human cases have been reported.**
- **No pools tested for SLE virus have been detected positive in any species submitted to date.**
- **No pools tested for JC virus have been detected positive in any species submitted to date.**
- **Testing for DENG, CHIK, and ZIKA have not yet been requested.**

- **In 2021, there were 35 positive EEE pools in *Culiseta melanura*, *Culex erraticus*, *Ae. taeniorhynchus*, *and Ae. triseriatus*. There were 3 horse case reported. There were no human cases reported.**
- **There were 997 positive WNV pools, in *Culex* Mix, *Culex pipiens*, *Culex restuans*, *Culex*, *erraticus*, *Culiseta melanura*, *Aedes albopictus*, *Aedes japonicus*, *Ae. taeniorhynchus*, *Ae. triseriatus*, *Ae. trivitattus*, *Ae. vexans*, *Anopheles bradleyi*, *An. punctipennis*, *An. quadrimaculatus*, *Coquillettidia perturbans*, *Psorophora ciliate*, and *Ps. ferox*. There were 36 human cases with 5 fatalities, plus 13 positive birds. There were no horse cases.**
- **There were 8 positive JVC pools in *Aedes albopictus*, *Ae. vexans*, *Anopheles punctipennis* and *Culex* Mix. There were 2 human cases reported.**

Culiseta melanura and Eastern Equine Encephalitis

SITE/Boxes	Inland or Coastal	Historic Population Mean	Current Weekly Mean	Total Tested* (Collected)	Total Pools Tested* (Submitted)	EEE Isolation Pools	MFIR
Bass River (Burlington Co.)/5	**Coastal**	na	na	0	0		
Green Bank (Burlington Co.)/25	**Coastal**	0.12	na	0	0		
Corbin City (Atlantic Co.)/25	**Coastal**	na	na	0	0		
Dennisville (Cape May Co.)/50	**Coastal**	0.40	0.14	(16)	(2)		
Winslow (Camden Co.)/50	**Inland**	0.00	0.08	(36)	(2)		
Centerton (Salem Co.)/50	**Inland**	0.08	0.06	(3)	(1)		
Turkey Swamp (Monmouth Co.)/50	**Inland**	1.02	(0.10) Week 18-20	5	4		
Glassboro (Gloucester Co.)/50	**Inland**	1.02	0.02	(4)	(2)		

*Current week (in parentheses) results pending. ‡ corrected from previous week na =not available ND=No Data (site offline) NR=Not Recorded

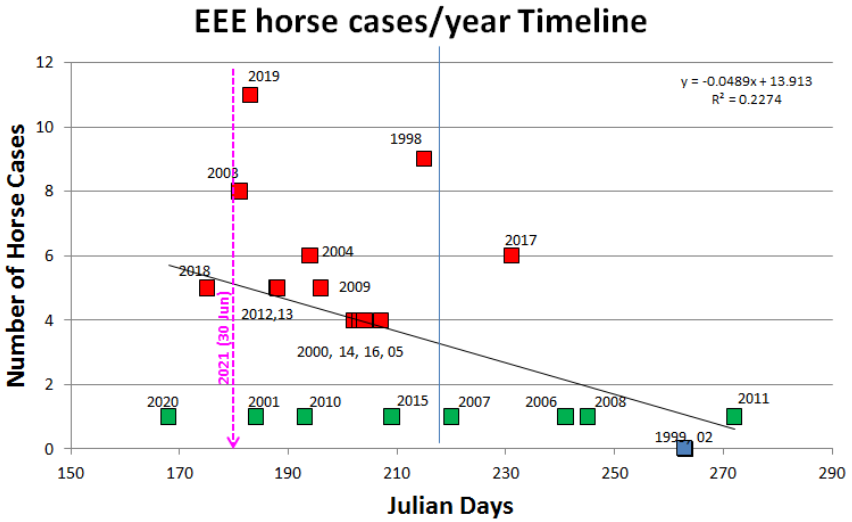
Remarks: Currently, there are no positive EEE pools detected in the samples submitted. (Only Turkey Swamp in Monmouth County tested so far, with the rest expected to be tested shortly.)

Statewide: 67 *Cs. melanura* from 14 pools have been submitted for testing (testing to be completed soon), with no positive pools detected and an overall *Cs. melanura* MFIR of 0.000. 2076 specimens in 145 pools from 14 other species have also been tested with no positive pools detected. Overall MFIR for all species statewide is 0.000.

Traditional Resting Box Sites: 64 *Cs. melanura* from 11 pools have been submitted for testing with no positive pools detected for the Monmouth samples tested. Overall *Cs. melanura* MFIR at the traditional resting box site is 0.00. Testing at the Cape May facility will commence shortly.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD UNDERLINED.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Monmouth	CO2, Other	4	5		
Morris	CO2, GRA, RB	1	3		
TOTAL		**5**	**8**		

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. In 2021, first positive pools of *Cs. Melanura* were detected at a non-traditional resting box site in Gloucester County, collected 30JunCurrently, there are no positive pools detected.



Graph above indicate start times to detection of EEE in *Culiseta melanura* and associated number of horse cases from 1998 to 2021. Early detections are associated with multiple horse cases.

Horses and Humans: In 2021, 3 horses were reported with EEE. Currently, no horse or humans have been reported. For more information, see DOH Vectorborne Surveillance reports: https://www.nj.gov/health/cd/statistics/arboviral-stats/

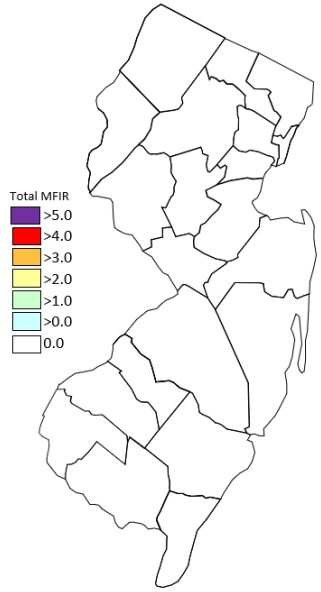
Case	Animal	Age	Sex	County	Date of Onset	Euthanized?	Vaccinated?	Comment

Horses and Vaccinations: ***Horse owners are urged to make sure their horses are up to date on their vaccinations (see link below). EEE horse cases are known to occur through October and sometimes into November.*** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins. The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

Species other than *Cs. melanura*	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	2	21		
Aedes albopictus	1	1		
Aedes canadensis canadensis	5	56		
Aedes cantator	4	36		
Aedes japonicus	4	6		
Aedes sollicitans	1	13		
Aedes sticticus	1	17		
Aedes vexans	6	116		
Anopheles bradleyi	1	1		
Anopheles punctipennis	28	154		
Anopheles quadrimaculatus	1	1		
Culex Mix	79	1368		
Culex pipiens	5	81		
Culex restuans	5	190		
Culex salinarius	2	15		
State Total	**145**	**2076**		

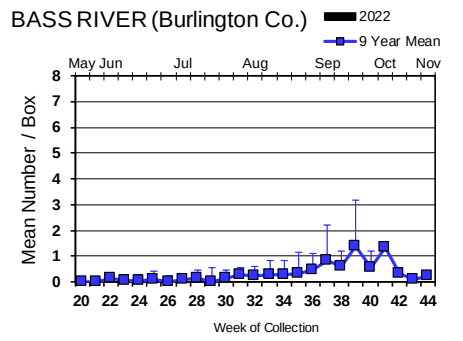
Additional Species: 14 additional species were tested for EEE. No positive pools were detected. In 2021, the first positive non-*melanura* pool was detected in of *Culex erraticus* in Atlantic County on 5 Aug.

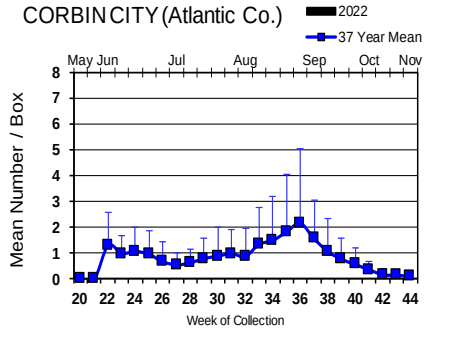
Overall MFIR rates, human and animal cases per county:

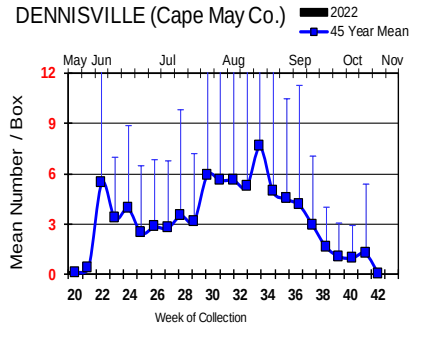


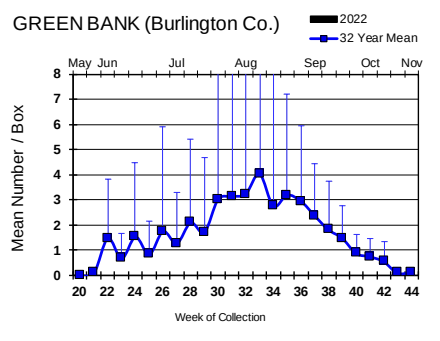
Culiseta melanura Populations

Coastal

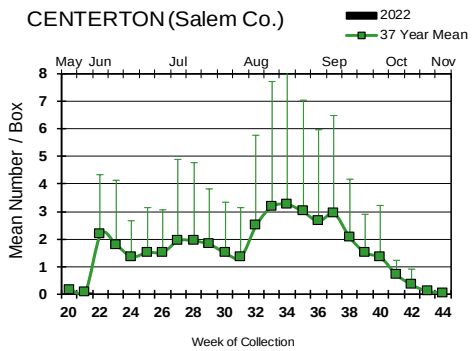


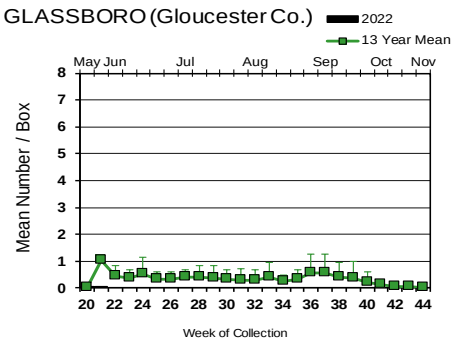


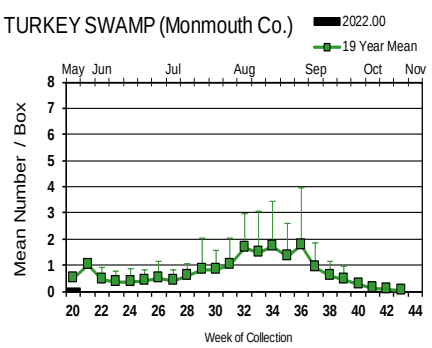


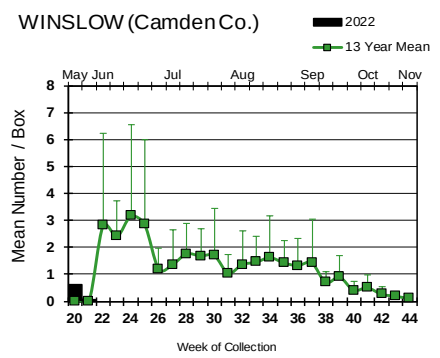


Inland









This year's surveillance season began mid-May, about two weeks earlier to accommodate increasing indications of earlier population emergences. This is the second year New Jersey has started this early (notice lack of error bars during the first two weeks). Currently, no positive EEE pools have been detected.

= Positive pool(s) detected (red = melanura, purple = other species).

EEE in US (2022 cumulative cases): (Black or Red = previous + new reported cases occurring)

- **equine: 1(FL)**
- **mosquito pools:**
- **sentinel: 17(FL)**
- **human:**

West Nile Virus Positive Organisms in US, 2022

West Nile in US (2022 cumulative cases): Single black values indicate no change from previous week. Black values / red values equals previous week/New totals.
Note: Data reported by all states should be considered provisional and subject to change. Sources for this table can be found here.

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Alabama					**0**
Alaska					
Arizona					
Arkansas					
California	**1**	**5**			
Colorado					
Connecticut					
Delaware					
Florida			**5**		
Georgia					
Hawaii					
Idaho					
Illinois		**1**			
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland(+DC)					
Mass.		**0**		**0**	**0**
Michigan					
Minnesota					
Mississippi					**2**
Missouri		**0**		**0**	**0**

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska					
Nevada					
New Hampshire					
New Jersey	**0**	**0**		**0**	**0**
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					
Oregon	**0**	**0**	**0**	**0**	**0**
Pennsylvania		**1+**			
Rhode Island					
South Carolina					
South Dakota					
Tennessee					
Texas	**0**	**2**	**0**	**0**	**0**
Utah					
Vermont		**0**		**0**	**0**
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming		**0**		**0**	**0**

* Can include other species (e.g., dogs, cows) reported positive.

Protocol: New Jersey Department of Health (NJDH Public Health Environmental and Agricultural Laboratories, PHEAL) and the Cape May County Department of Mosquito Control tests mosquito pools using RT-PCR Taqman techniques.

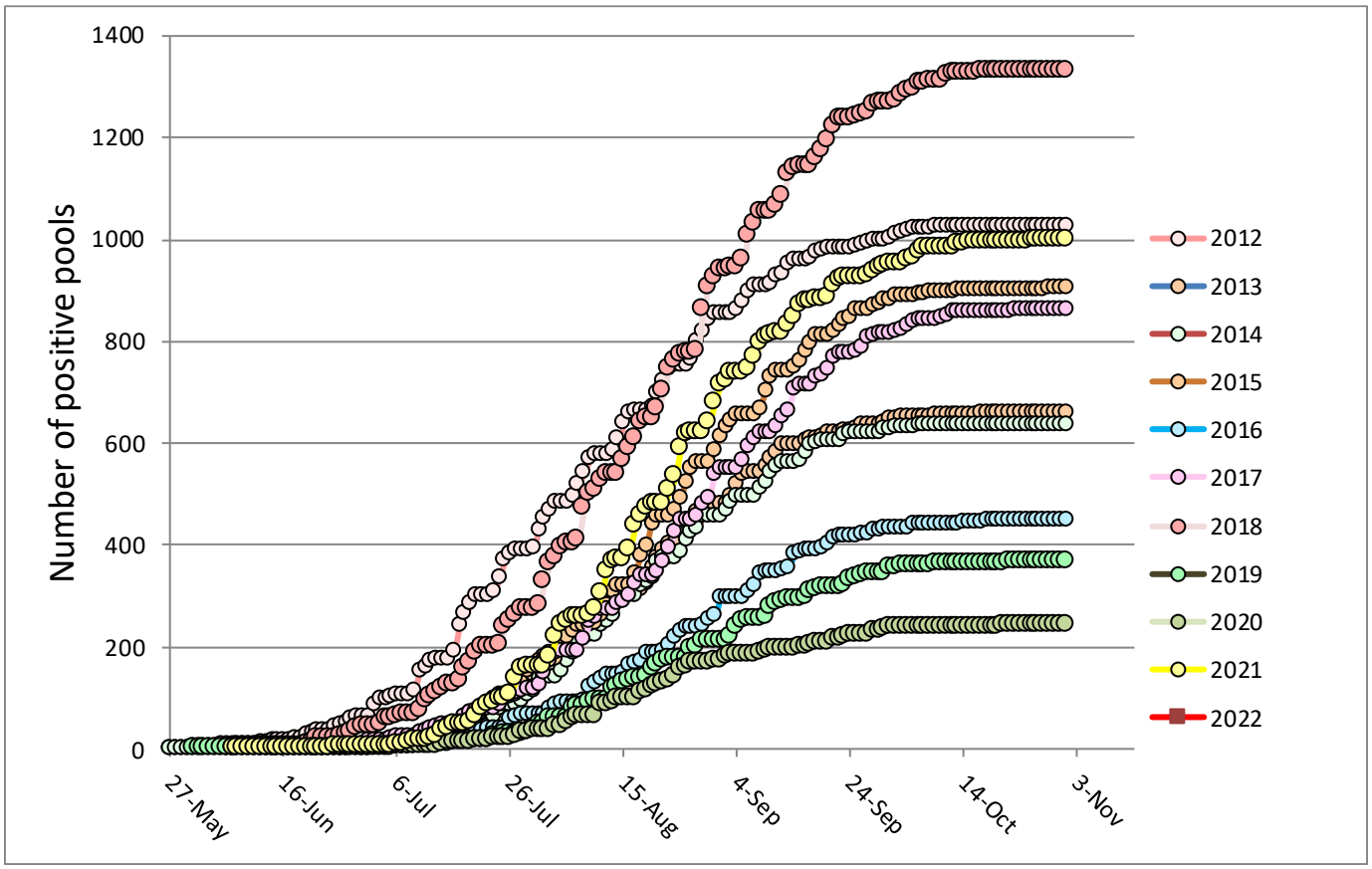
Mosquito Species Submitted and Tested for West Nile Virus through 27 May 2022

Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	2	21		
Aedes albopictus	1	1		
Aedes canadensis canadensis	5	56		
Aedes cantator	4	36		
Aedes japonicus	4	6		
Aedes sollicitans	1	13		
Aedes sticticus	1	17		
Aedes vexans	6	116		
Anopheles bradleyi	1	1		
Anopheles punctipennis	28	154		
Anopheles quadrimaculatus	1	1		
Culex spp.	79	1368		
Culex pipiens	5	81		
Culex restuans	5	190		
Culex salinarius	2	15		
Culiseta melanura	5	8		
Grand Total	**150**	**2084**		

Remarks: To date 150 pools of 2,084 mosquitoes from 15 species have been tested. No pools have been identified as positive for WNV. First positive detected in 2021 was a pool of *Culex* Mix collected on 7 June in Somerset County. Cumulative MFIR for all mosquitoes in New Jersey is 0.000.

Humans, Horses and Wild Birds: No date, no humans or livestock have been reported with WNV. Last year, no horses have been reported infected but 36 human cases were detected. See DOH reports on arbovirus activity for further information: https://www.nj.gov/health/cd/statistics/arboviral-stats/index.shtml

Although birds are no longer routinely tested in New Jersey, last year 13 corvids and birds of prey were reported positive for WNV.



Above is a graph showing cumulative number of positive pools for the previous 10 years, inclusive of the most active (2018) year. 2022 is represented in RED (no positives as of yet).

Go here for the table supplement of arbovirus by county by mosquito species.