

VECTOR SURVEILLANCE IN NEW JERSEY EEE, WNV, SLE, LAC, DENV, CHIK, ZIKV, and JCV

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Data download 1:20 pm 25 June



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NOTE: County/species tables for arboviruses are now in a supplemental file [here](#)

Arbovirus Summary

- Currently, there are two positive WNV pools, both in *Culex Mix* (Somerset and Warren County). No other arboviruses in mosquito pools were found positive.
- There is one human case of Jamestown Canyon virus, in Sussex County. Date of onset was May 8.

- In 2020, there were 13 positive EEE pools in *Culiseta melanura*.
- There were 241 positive WNV pools, in *Culex Mix* (231), in *Culex pipiens* (4), *Culex restuans* (1), *Culiseta melanura* (2), *Aedes albopictus* (2), and *Aedes canadensis canadensis* (1).
- There were 6 positive JVC pools in *Aedes cantator* (2), *Aedes taeniorhynchus* (1), *Anopheles quadrimaculatus* (1) and *Coquillettidia perturbans* (2).
- There was one EEE horse case reported. There are no WNV horse cases.
- There were 3 human WNV cases; in Essex County (1) and Monmouth County (2).
- There was one WNV positive Red-tailed Hawk (*Buteo jamaicensis*) in Cumberland County (regular surveillance of birds is no longer done in NJ).
- Note: Data download 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.

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	0.09	ND	ND			
Green Bank (Burlington Co.)/25	Coastal	0.84	0.00	17	2		
Corbin City (Atlantic Co.)/25	Coastal	0.95	0.88	55	1		
Dennisville (Cape May Co.)/50	Coastal	2.53	0.30	62	3		
Winslow (Camden Co.)/50	Inland	3.14	NC				
Centerton (Salem Co.)/50	Inland	1.56	0.44	64	3		
Turkey Swamp (Monmouth Co.)/50	Inland	0.41	0.0	1	1		
Glassboro (Gloucester Co.)/50	Inland	0.38	0.0	89	2		

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

Remarks: Currently, no EEE arboviral activity has been detected. Sampling near Bass River is no longer done after loss of site due to fire.

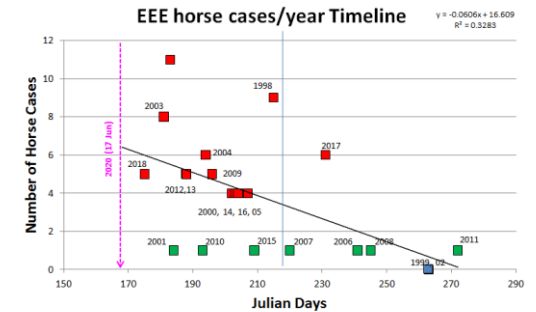
Statewide: 3669 *Cs. melanura* from 179 pools have been tested, with no positives detected and an overall *Cs. melanura* MFIR of 0.000. 38,761 specimens in 1456 pools from 33 other species have also been tested with no positive pools detected. Overall MFIR for all species statewide is 0.000.

Traditional Resting Box Sites: 257 *Cs. melanura* from 20 pools have been tested, with no positive pools detected. 0 mosquitoes in 0 pools are pending. Overall *Cs. melanura* MFIR at the traditional resting box site is 0.000.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD UNDERLINED>					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	19	710		
Bergen	NJLT, RB	5	48		
Burlington	ULVT	21	876		
Cape May	GRA, RB	13	293		
Cumberland	CO2, GRA, RB	14	169		
Gloucester	RB	35	1128		
Middlesex	NJLT	4	9		
Monmouth	Other	1	1		
Morris	CO2, RB	7	33		
Ocean	CO2	4	7		
Salem	CO2, GRA, RB	12	71		
Sussex	CO2, GRA, RB	24	67		
TOTAL		159	3412		

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Currently, no positive pools of *Cs. melanura* have been detected outside of the traditional resting box sites.

Graph below indicate start times to detection of EEE in *Culiseta melanura* from 1998 to 2020. Last year was the earliest collected during that time period, suggesting the possibility of multiple horse cases.



Horses and Humans: Last year, only 1 horse was reported with EEE, detected in September. **Horse owners are urged to make sure their horses are up to date on their vaccinations. Horse cases are known to occur through October and sometimes into November (see link below).** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins.

Case	Animal	Age	Sex	County	Date of Onset	Euthanized ?	Vaccinated?	Comment
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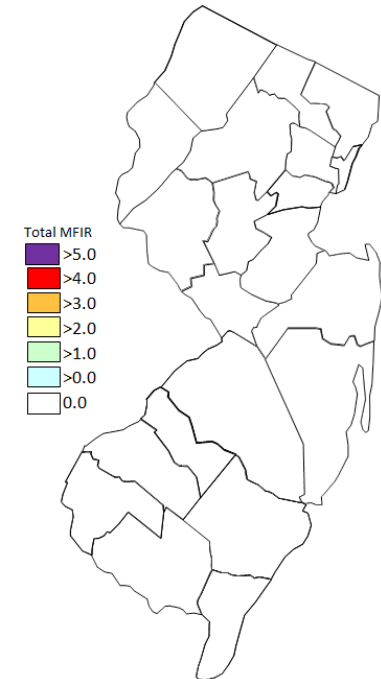
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

There are no human cases of EEE currently reported. For more information, see DOH Vectorborne Surveillance reports: <https://www.nj.gov/health/cd/statistics/arboviral-stats/>

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	12	116		
<i>Aedes albopictus</i>	27	90		
<i>Aedes atlanticus</i>	1	55		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	52	793		
<i>Aedes cantator</i>	36	490		
<i>Aedes cinereus</i>	2	79		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	64	218		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	12	301		
<i>Aedes sticticus</i>	12	248		
<i>Aedes stimulans</i>	4	26		
<i>Aedes taeniorhynchus</i>	9	548		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	2	5		
<i>Aedes trivittatus</i>	5	11		
<i>Aedes vexans</i>	27	807		
<i>Anopheles bradleyi</i>	7	18		
<i>Anopheles crucians</i>	5	44		
<i>Anopheles punctipennis</i>	73	961		
<i>Anopheles quadrimaculatus</i>	26	193		
<i>Anopheles walkeri</i>	12	873		
<i>Coquillettidia perturbans</i>	41	1012		
<i>Culex erraticus</i>	11	20		
<i>Culex Mix</i>	825	28114		
<i>Culex pipiens</i>	74	1815		
<i>Culex restuans</i>	55	1181		
<i>Culex salinarius</i>	19	138		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	13	224		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	5	110		
<i>Psorophora ferox</i>	3	24		
State Total	1456	38761		

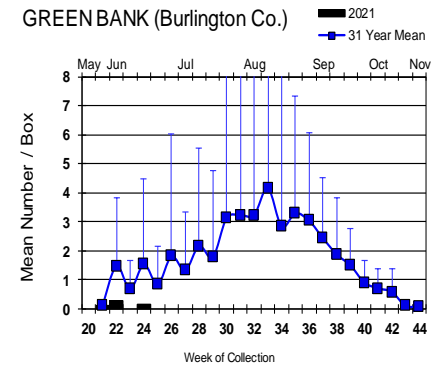
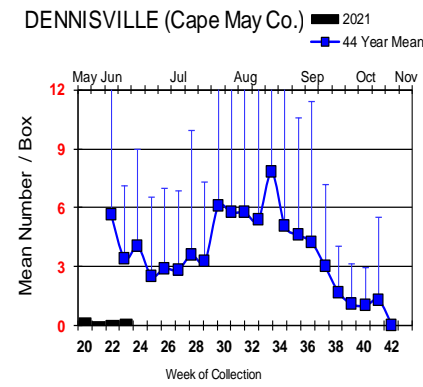
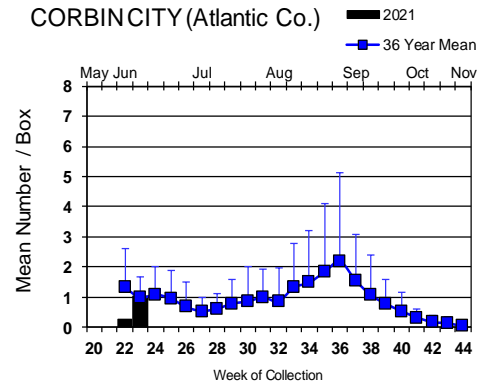
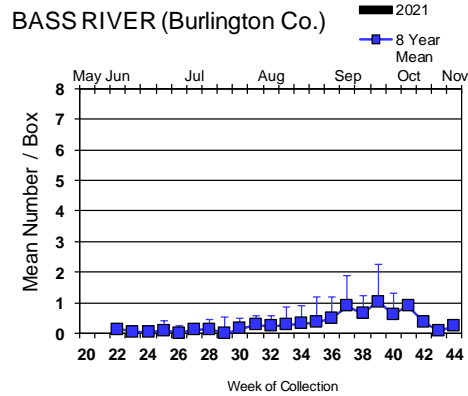
Additional Species: 33 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

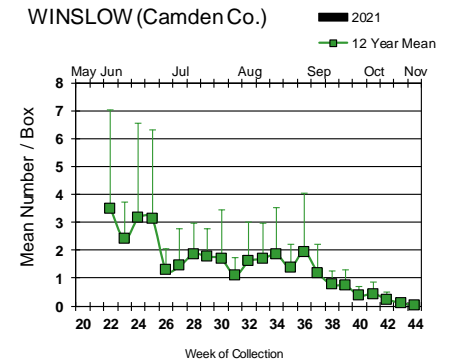
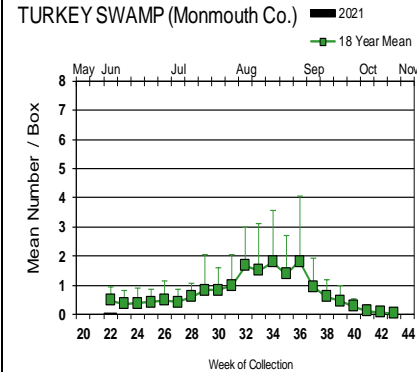
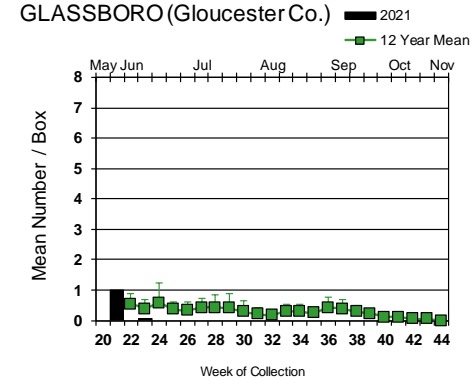
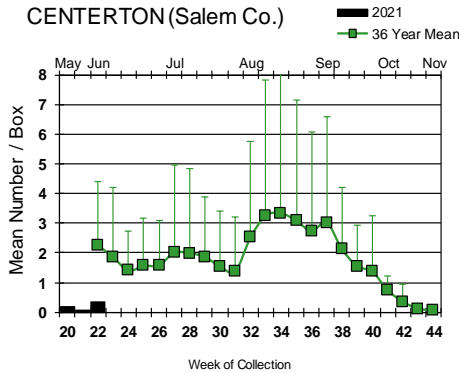


Culiseta melanura Populations



Coastal



Inland



This year's surveillance season began two weeks earlier to accommodate increasing indications of earlier population emergences. Currently, populations of *Cs. melanura* at reported sites are at low levels at or below historical trends. No viral activity has been reported. Resting box numbers appear to be below what light trap catches have been reporting at some areas (see Adult Surveillance reports at <http://vectorbio.rutgers.edu/reports/mosquito/>).



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

EEE in US (2021 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: **5(FL)**
- mosquito pools:
- sentinel: **95(FL)**
- human:

West Nile Virus Positive Organisms in US, 2021

West Nile in US (2021 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					2
Alaska					
Arizona					
Arkansas					
California	11/22	18/29	0	0	0
Colorado					0
Connecticut		0			
Delaware					
Florida			2		
Georgia					
Hawaii					
Idaho					
Illinois	0	4/8	0	0	0
Indiana	0	0		0	0
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland(+DC)					
Mass.					
Michigan					
Minnesota					
Mississippi					
Missouri					

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska	0	0		0	0
Nevada					
New Hampshire					
New Jersey		1/2		0	0
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio		2			
Oklahoma					
Oregon	0	0	0	0	0
Pennsylvania	0	4 counties	0	0	0
Rhode Island					
South Carolina					
South Dakota					
Tennessee					
Texas	0	14/24	0	0	0
Utah					
Vermont					
Virginia					
Washington					
West Virginia					
Wisconsin					
Wyoming					

* 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 25 June 2021

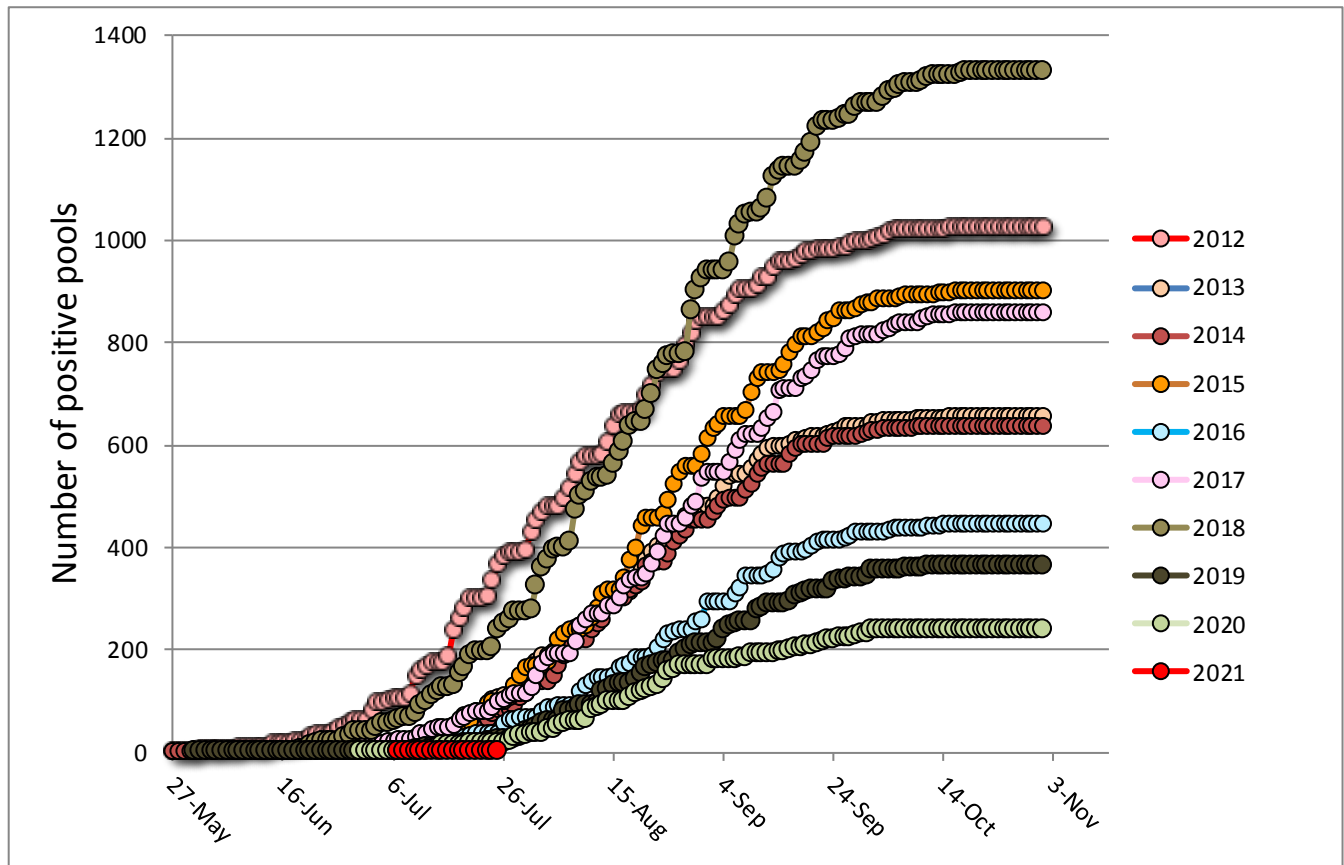
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	12	116		
<i>Aedes albopictus</i>	30	113		
<i>Aedes atlanticus</i>	1	55		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	52	793		
<i>Aedes cantator</i>	36	490		
<i>Aedes cinereus</i>	2	79		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	69	279		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	12	301		
<i>Aedes sticticus</i>	12	248		
<i>Aedes stimulans</i>	4	26		
<i>Aedes taeniorhynchus</i>	9	548		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	3	9		
<i>Aedes trivittatus</i>	5	11		
<i>Aedes vexans</i>	27	807		
<i>Anopheles bradleyi</i>	7	18		
<i>Anopheles crucians</i>	5	44		
<i>Anopheles punctipennis</i>	73	961		
<i>Anopheles quadrimaculatus</i>	26	193		
<i>Anopheles walkeri</i>	12	873		
<i>Coquillettidia perturbans</i>	41	1012		
<i>Culex erraticus</i>	11	20		
<i>Culex</i> spp.	827	28195	2	0.071
<i>Culex pipiens</i>	74	1815		
<i>Culex restuans</i>	55	1181		
<i>Culex salinarius</i>	19	138		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	13	224		
<i>Culiseta melanura</i>	179	3669		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	5	110		
<i>Psorophora ferox</i>	3	24		
Grand Total	1646	42599	2	0.047

Remarks: To date 1646 pools of 42,599 mosquitoes from 29 species have been tested. Two pools of *Culex* Mix have been identified as positive for WNV (Somerset, Warren counties). First positive detected in a pool of *Culex* Mix collected on 7 June in Somerset County. Cumulative MFIR for all mosquitoes in New Jersey is 0.047.

Humans, Horses and Wild Birds: No horses have been reported infected with WNV in 2021. No human activity has been reported to date. See DOH reports on arbovirus activity for further information:

<https://www.nj.gov/health/cd/statistics/arboviral-stats/index.shtml>

Birds are no longer routinely tested in New Jersey.



Above is a graph showing cumulative number of positive pools for the previous 9 years, inclusive of the most active (2018) year. 2021 is represented in RED, with first positive showing on 7 June.

Go [here](#) for the table supplement of arbovirus by county by mosquito species.