

VECTOR SURVEILLANCE IN NEW JERSEY

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

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16 August to 22 August, 2020, CDC Week 34

Data download 3:30 pm 24 August



This New Jersey Agricultural Experiment Station report is supported by Rutgers University, Hatch funds, funding from the NJ State Mosquito Control Commission and with the participation of the Department of Health, Department of Agriculture and of the 21 county mosquito control agencies of New Jersey. Data is held in JerseySurv, a subset of the CalSurv system.

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

Arbovirus Summary

- In 2020, there are two positive EEE pools in *Culiseta melanura*. (Note: an additional positive EEE *Cs. melanura* pool was reported in Atlantic County at a county site after the finish of this report so total is 3.)
- There are 83 positive WNV pools, in *Culex Mix* (82) and *Aedes albopictus* (1).
- There are six positive JVC pools in *Aedes cantator* (2), *Aedes taeniorhynchus* (1), *Anopheles quadrimaculatus* (1) and *Coquillettidia perturbans* (2).
- There are no horse arboviruses cases reported.
- There is 1 human WNV case in Essex County.
- 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	0.36	0.00	4	1		
Green Bank (Burlington Co.)/25	Coastal	2.93	0.20	6 (11)	4 (5)		
Corbin City (Atlantic Co.)/25	Coastal	1.52	0.36	133 (142)	11 (12)	1	7.518
Dennisville (Cape May Co.)/50	Coastal	7.98	0.12	2 (8)	1 (2)		
Winslow (Camden Co.)/50	Inland	1.98	0.36	31	2		
Centerton (Salem Co.)/43	Inland	3.42	0.24	16	3		
Turkey Swamp (Monmouth Co.)/50	Inland	1.90	0.08	13 (17)	9 (10)		
Glassboro (Gloucester Co.)/50	Inland	0.28	0.04	22	6		

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

Remarks: Currently two positive EEE pools have been detected, collected in a pool of *Culiseta melanura* at the Corbin City traditional resting box site on 17 June and in Burlington County 10 August. *Cs. melanura* populations are low. (Note: an additional positive EEE *Cs. melanura* pool was reported in Atlantic County at a county site after the finish of this report so total is 3.)

Statewide, 3,243 *Cs. melanura* from 310 pools have been tested, with an overall *Cs. melanura* MFIR of 0.617. 107,404 specimens in 3730 pools from 39 other species have also been tested, with no positive pools detected. Overall MFIR for all species statewide is 0.018.

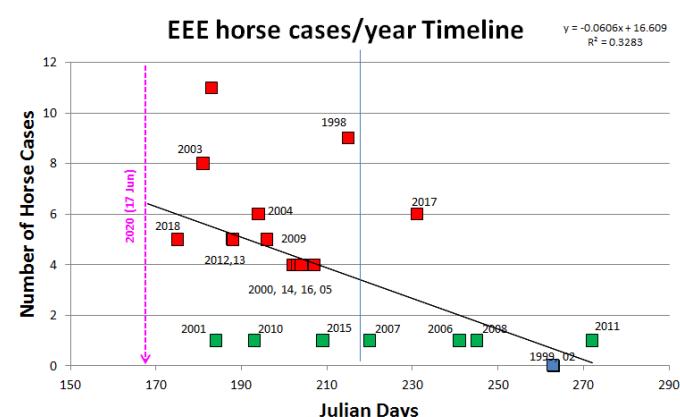
Traditional Resting Box Sites: 227 *Cs. melanura* from 37 pools has been tested, with one positive pool at Corbin City, collected 17 June. Four pools with 24 mosquitoes are pending. Overall MFIR at the traditional resting box site is 4.4054.

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	27 6 38 1 7 48 12 3 34 7 26 64	505 59 923 1 29 755 79 10 342 16 92 205	1	1.083
Bergen	RB				
Burlington	ULVT				
Cape May	RB				
Cumberland	CO2, RB				
Gloucester	RB				
Middlesex	CO2, LT, RB				
Monmouth	CO2, Other				
Morris	CO2, RB				
Ocean	CO2				
Salem	CO2, Other, RB				
Sussex	CO2, RB				
TOTAL		273	3016	1	0.332

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. In the previous year, 2019, 36 pools of *Cs. melanura* have been found positive. Currently, one positive pool of *Cs. melanura* has been detected in Burlington County, sampled 10 August.

Graph below indicate start times to detection of EEE in *Culiseta melanura* from 1998 to 2020. This year is the earliest collected during that time period, suggesting multiple horse cases could occur this year.

Horses and Humans: Currently, no large animals have been reported with EEE. Last year eleven horses (plus 1 deer and 1 alpaca) were reported with EEE. All equids had either an incomplete or no vaccination history. **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

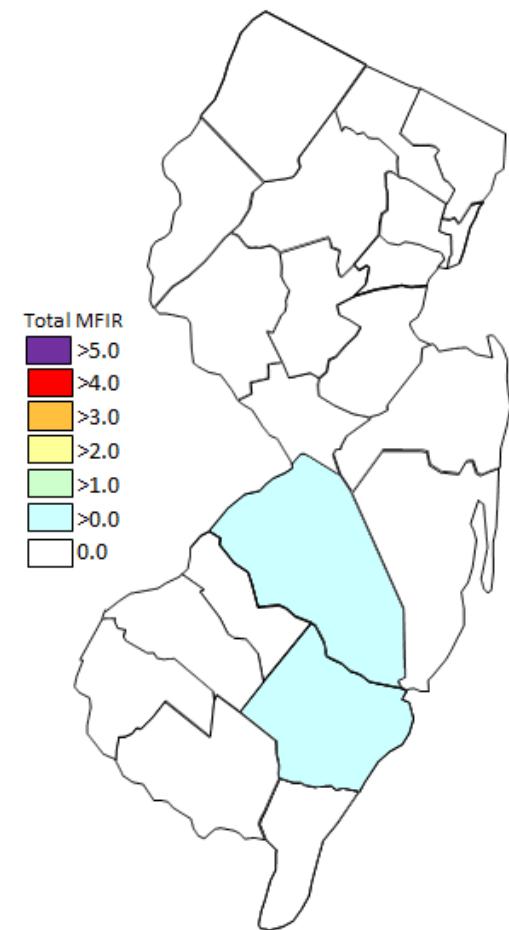
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

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>	11	29		
<i>Aedes albopictus</i>	361	3288		
<i>Aedes atlanticus</i>	4	4		
<i>Aedes canadensis canadensis</i>	54	874		
<i>Aedes cantator</i>	36	828		
<i>Aedes cinereus</i>	1	16		
<i>Aedes excrucians</i>	2	2		
<i>Aedes grossbecki</i>	1	4		
<i>Aedes japonicus</i>	192	917		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	29	727		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	28	1001		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	70	252		
<i>Aedes trivittatus</i>	3	30		
<i>Aedes vexans</i>	59	383		
<i>Anopheles barberi</i>	1	3		
<i>Anopheles bradleyi</i>	8	178		
<i>Anopheles crucians</i>	16	143		
<i>Anopheles punctipennis</i>	98	1021		
<i>Anopheles quadrimaculatus</i>	76	1352		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	156	3919		
<i>Culex erraticus</i>	85	796		
<i>Culex Mix</i>	2111	84445		
<i>Culex pipiens</i>	156	4583		
<i>Culex restuans</i>	27	512		
<i>Culex salinarius</i>	49	1401		
<i>Culiseta inornata</i>	11	48		
<i>Culiseta morsitans</i>	13	48		
<i>Orthopodomyia signifera</i>	5	6		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	14	237		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	23	123		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	1	2		
State Total	3730	107404		

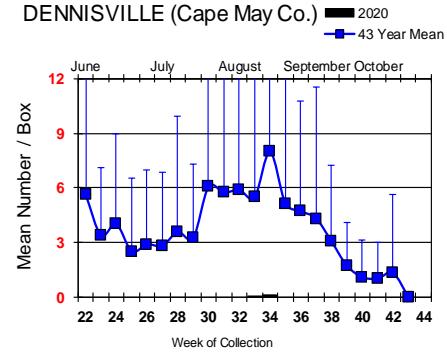
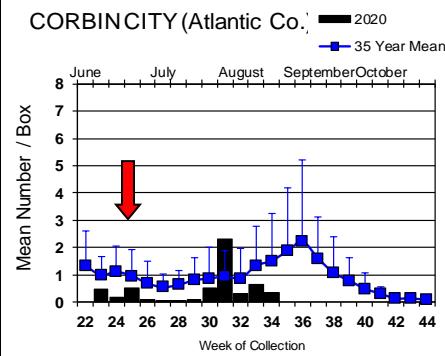
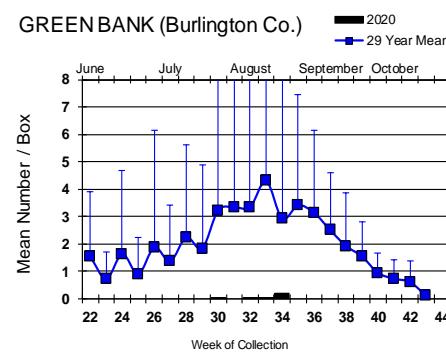
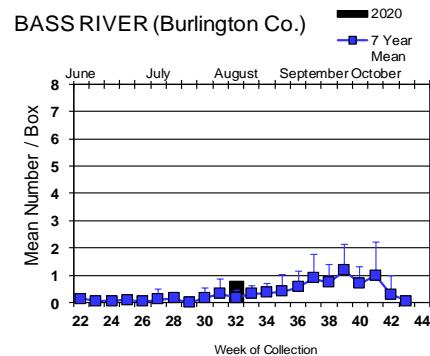
Additional Species: 39 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

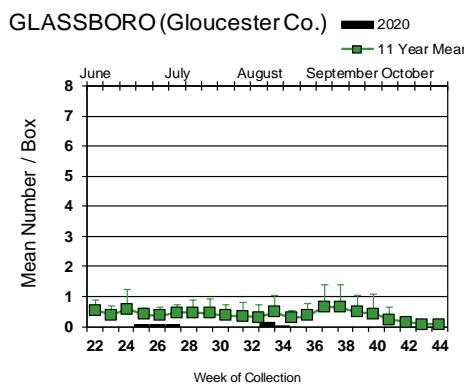
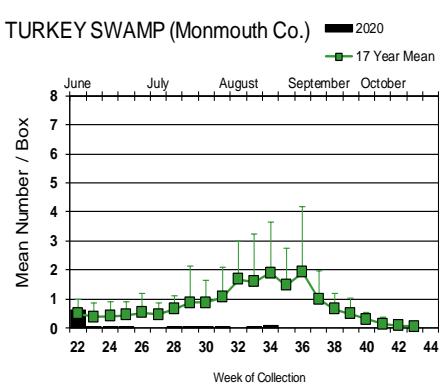
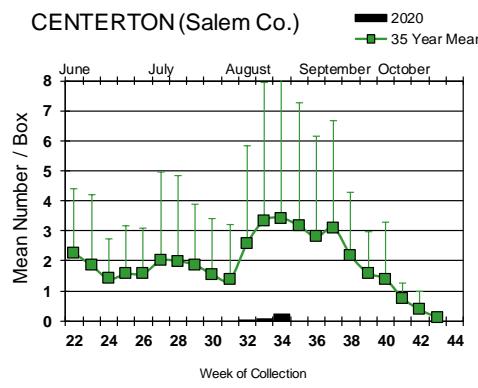
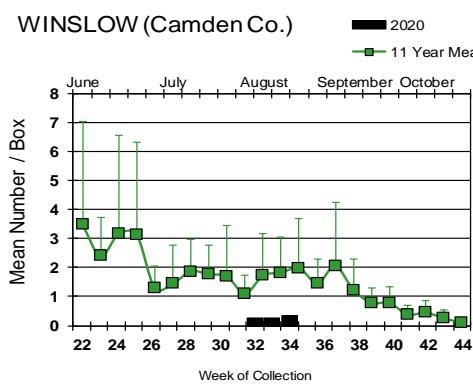


Culiseta melanura Populations

Coastal



Inland



Culiseta melanura populations are now reported at all sites but populations are well below historical averages. First positive EEE pool has been detected at Corbin City, on 17 June.

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

EEE in US (2020 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: 16(FL) 3(MI) 3(NY) 7(SC) 2(VA) 1(WI)
- mosquito pools: 2(CT) 1(FL) 64(MA) 3(NJ)
- sentinel: 24+1duck(FL)
- human: 3(MA)

West Nile Virus Positive Organisms in US, 2020

West Nile in US (2020 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					1
Alaska					
Arizona	89	31			4
Arkansas					1
California	111/124	882/1114	22/40	4	18/27
Colorado		7/16			1/2
Connecticut		30/74			
Delaware					
Florida	15/17	12	40/68	1	3/9
Georgia					
Hawaii					
Idaho	0	8/12		0	0
Illinois	5	477/918			0
Indiana	0	13/19		0	0
Iowa					1
Kansas					2
Kentucky					
Louisiana	2	121		1	0
Maine					0
Maryland(+DC)					1
Mass.		48/66			1
Michigan	2	11/13			0
Minnesota					0
Mississippi		61/71			2
Missouri		0		0	1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					0
Nebraska		0		0	0
Nevada					0
New Hampshire					0
New Jersey		62/83		0	1
New Mexico					3
New York					0
North Carolina					
North Dakota					0
Ohio		271/337		0	0
Oklahoma					0
Oregon	1	0	0	0	0
Pennsylvania		8/175			1
Rhode Island					0
South Carolina					
South Dakota		2/3			3
Tennessee					
Texas		549/710	1		3/6
Utah					0
Vermont					0
Virginia					0
Washington	0	7		0	0
West Virginia					
Wisconsin					
Wyoming		1			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.

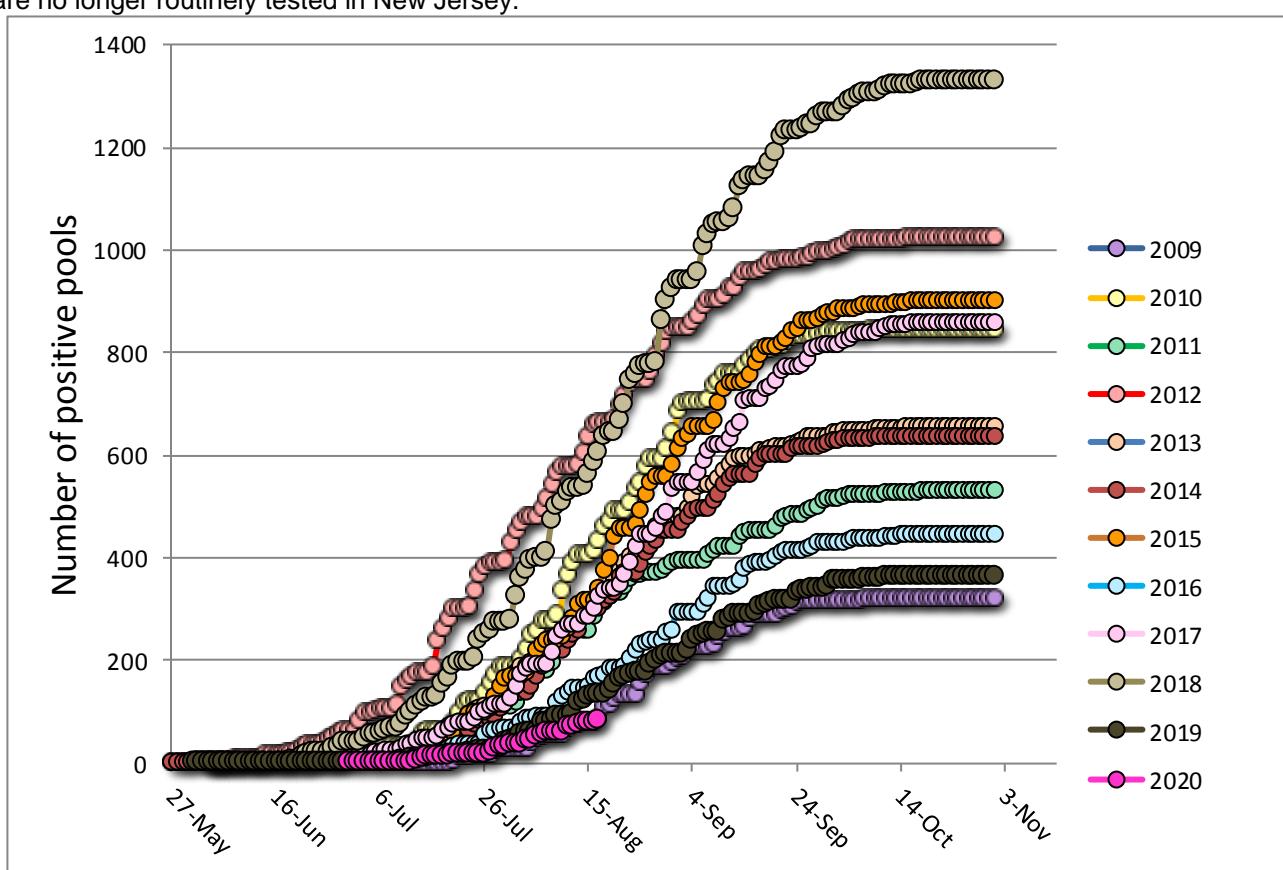
**Mosquito Species Submitted and Tested
for West Nile Virus through 24 August 2020**

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	11	29		
<i>Aedes albopictus</i>	367	3434	1	0.291
<i>Aedes atlanticus</i>	4	4		
<i>Aedes canadensis canadensis</i>	54	874		
<i>Aedes cantator</i>	36	828		
<i>Aedes cinereus</i>	1	16		
<i>Aedes excrucians</i>	2	2		
<i>Aedes grossbecki</i>	1	4		
<i>Aedes japonicus</i>	196	962		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	29	727		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	28	1001		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	142	485		
<i>Aedes trivittatus</i>	3	30		
<i>Aedes vexans</i>	59	383		
<i>Anopheles barberi</i>	1	3		
<i>Anopheles bradleyi</i>	8	178		
<i>Anopheles crucians</i>	16	143		
<i>Anopheles punctipennis</i>	98	1021		
<i>Anopheles quadrimaculatus</i>	76	1352		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	156	3919		
<i>Culex erraticus</i>	85	796		
<i>Culex spp.</i>	2111	84445	82	0.971
<i>Culex pipiens</i>	156	4583		
<i>Culex restuans</i>	27	512		
<i>Culex salinarius</i>	49	1401		
<i>Culiseta inornata</i>	11	48		
<i>Culiseta melanura</i>	310	3243		
<i>Culiseta morsitans</i>	13	48		
<i>Orthopodomyia signifera</i>	5	6		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	14	237		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	23	123		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	1	2		
Grand Total	4122	111071	83	0.747

Remarks: To date 4,122 pools of 111,071 mosquitoes from 40 species have been tested. 83 positive WNV pools have been detected by RTPCR this year, 82 pools in *Culex* Mix and one pool in *Aedes albopictus* (collected in Union County 28 July). The pools were in Bergen, Burlington, Camden, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Union, and Warren counties (earliest collected 30 June).

Humans, Horses and Wild Birds: No horses or wild birds have been reported infected with WNV in 2020. One human case of WNV has been reported in Essex County. Last year, eight human cases were reported. No horses were detected with WNV in 2019. 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 11 years, inclusive of the most active (2018) and least active (2009) years. 2020 is represented in PINK.

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