

# VECTOR SURVEILLANCE IN NEW JERSEY

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

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Data download 2:30 pm 7 September



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

## Arbovirus Summary

- In 2020, there are three positive EEE pools in *Culiseta melanura*.
- There are 170 positive WNV pools, in *Culex Mix* (167), in *Culex pipiens* (2) and *Aedes albopictus* (1).
- There are 6 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 are 2 human WNV cases; in Essex County (1) and Monmouth County (1).
- 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	0.56	0.00	4	1		
Green Bank (Burlington Co.)/25	Coastal	3.14	0.00	12	6		
Corbin City (Atlantic Co.)/25	Coastal	2.22	0.00	159	13	1	6.289
Dennisville (Cape May Co.)/50	Coastal	4.72	0.00	10	3		
Winslow (Camden Co.)/50	Inland	2.05	0.74	103 <sup>‡</sup>	5		
Centerton (Salem Co.)/50	Inland	2.80	0.46	46	54		
Turkey Swamp (Monmouth Co.)/50	Inland	1.92	0.08	20 (24)	11 (12)		
Glassboro (Gloucester Co.)/50	Inland	0.65	0.14	32	8		

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

**Remarks:** Currently three positive EEE pools have been detected, collected in a pool of *Culiseta melanura* at the Corbin City traditional resting box site on 17 June, in Burlington County 10 August and in Atlantic County on 13 August. *Cs. melanura* populations continue to run low.

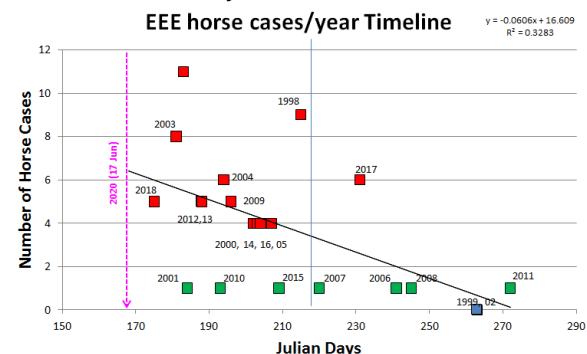
Statewide, 4,378 *Cs. melanura* from 410 pools have been tested, with an overall *Cs. melanura* MFIR of 0.685. 132,760 specimens in 5022 pools from 40 other species have also been tested, with no positive pools detected. Overall MFIR for all species statewide is 0.022.

**Traditional Resting Box Sites:** 386 *Cs. melanura* from 52 pools has been tested, with one positive pool at Corbin City, collected 17 June. One pool with 4 mosquitoes are pending. Overall MFIR at the traditional resting box site is 3.521.

County	Trap types*	Additional <i>Cs. melanura</i> trapped by counties			
		Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	35	763	1	1.311
Bergen	RB	7	63		
Burlington	ULVT	46	1207	1	0.829
Camden	GRA	1	1		
Cape May	RB	23	37		
Cumberland	CO2, RB	7	29		
Gloucester	RB	56	972		
Middlesex	CO2, LT, RB	14	83		
Monmouth	CO2, Other	3	10		
Morris	CO2, RB	36	345		
Ocean	CO2	10	21		
Salem	CO2, Other, RB	33	104		
Sussex	CO2, RB	87	357		
<b>TOTAL</b>		<b>358</b>	<b>3992</b>	<b>2</b>	<b>0.501</b>

**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, two positive pools of *Cs. melanura* have been detected in Burlington County, sampled 10 August and Atlantic County, sampled 13 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

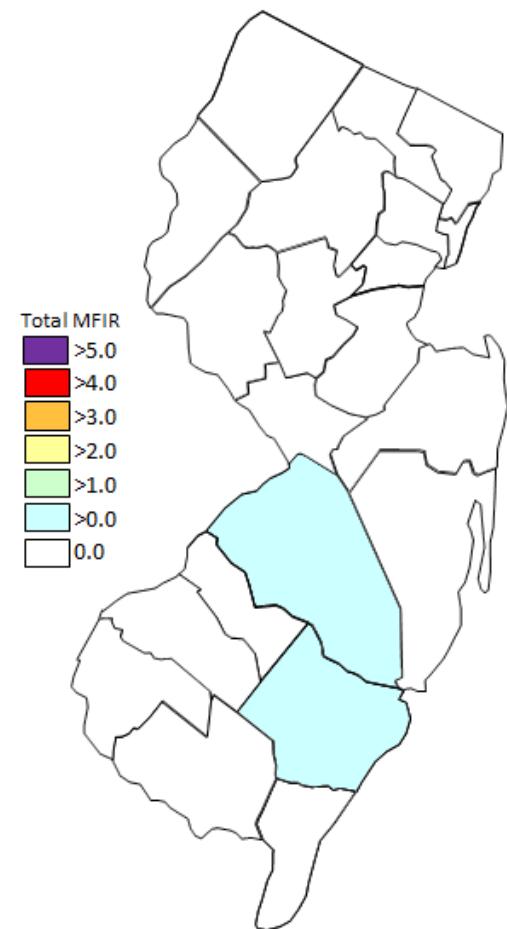
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: [http://www.aaep.org/vaccination\\_guidelines.htm](http://www.aaep.org/vaccination_guidelines.htm)

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 aegypti</i>	665	6170		
<i>Aedes albopictus</i>	16	108		
<i>Aedes atlanticus</i>	56	882		
<i>Aedes canadensis canadensis</i>	36	828		
<i>Aedes cantator</i>	1	16		
<i>Aedes cinereus</i>	2	2		
<i>Aedes excrucians</i>	1	4		
<i>Aedes grossbecki</i>	1	1		
<i>Aedes iaponicus</i>	245	1065		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	33	748		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	30	1149		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	133	441		
<i>Aedes trivittatus</i>	6	140		
<i>Aedes vexans</i>	75	648		
<i>Anopheles barberi</i>	2	4		
<i>Anopheles bradlevi</i>	22	290		
<i>Anopheles crucians</i>	22	289		
<i>Anopheles punctipennis</i>	108	1245		
<i>Anopheles quadrimaculatus</i>	92	1530		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	188	4557		
<i>Culex erraticus</i>	127	1333		
<i>Culex Mix</i>	2551	101416		
<i>Culex pipiens</i>	327	6596		
<i>Culex restuans</i>	40	534		
<i>Culex salinarius</i>	114	1678		
<i>Culiseta inornata</i>	12	50		
<i>Culiseta morsitans</i>	13	48		
<i>Orthopodomyia signifera</i>	6	7		
<i>Psorophora ciliata</i>	2	2		
<i>Psorophora columbiae</i>	21	393		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	35	324		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	1	2		
<b>State Total</b>	<b>5022</b>	<b>132760</b>		

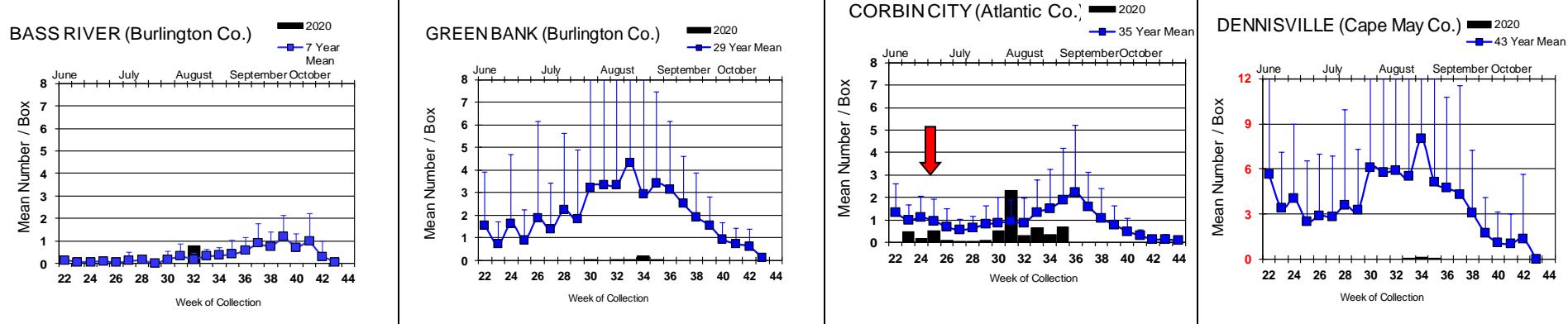
**Additional Species:** 40 additional species were tested for EEE. No positive pools have been detected to date.

**Overall MFIR rates, human and animal cases per county:**

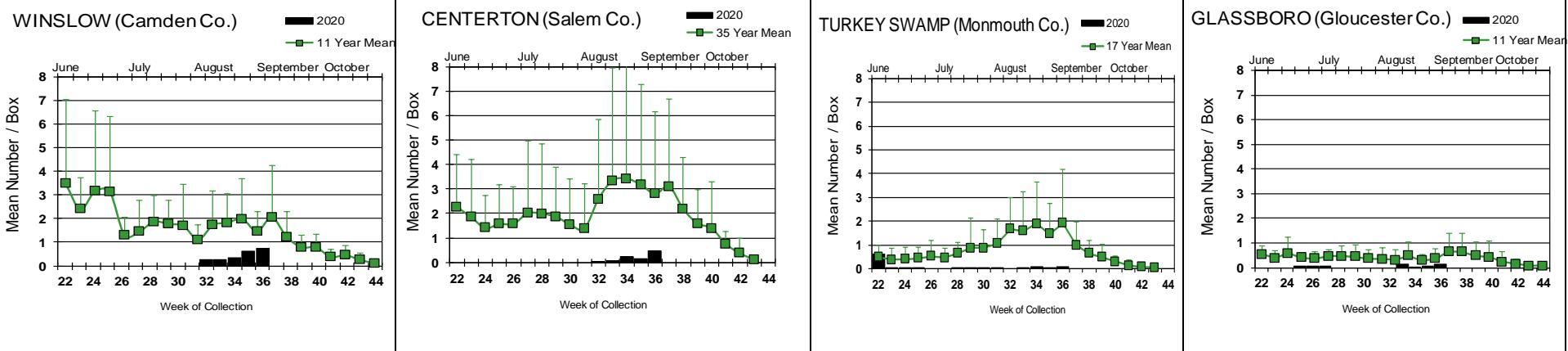


# *Culiseta melanura* Populations

## Coastal



## Inland



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

1/159\*1000

Red arrow = 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) 1(IN) 18(MI) 3(NY) 7(SC) 2(VA) 1(WI)
- mosquito pools: 2(CT) 1(FL) 65(MA) 3(NJ) 1(RI)
- sentinel: 27+1duck, 2sparrows(FL)
- human: 4(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		89/93	31		4
Arkansas					1
California	142/171	1420/1717	41/56	6/8	35/45
Colorado		24			4
Connecticut		84/106			
Delaware					
Florida	17	12/13	73/107	6/7	17/18
Georgia					
Hawaii					
Idaho	0	12		0	0
Illinois	6	1191/1686			0
Indiana	0	22/27		0	0
Iowa					1
Kansas					2
Kentucky					
Louisiana	2/3	157/278		1	4
Maine					0
Maryland(+DC)					1
Mass.		66/70			3
Michigan	2	14			2
Minnesota					0
Mississippi		81/85			2/3
Missouri		0		0	1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					0
Nebraska		1		0	0
Nevada					0
New Hampshire		1			0
New Jersey		136/170		0	2
New Mexico					3
New York					0
North Carolina					
North Dakota					0
Ohio		426/441		0	0
Oklahoma					0
Oregon	1	2/3	0	0	0
Pennsylvania		288			1
Rhode Island					0
South Carolina					
South Dakota		4/5			5
Tennessee					
Texas		855/997	1		9/10
Utah		21			0
Vermont					0
Virginia					0
Washington	0	7/10		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.

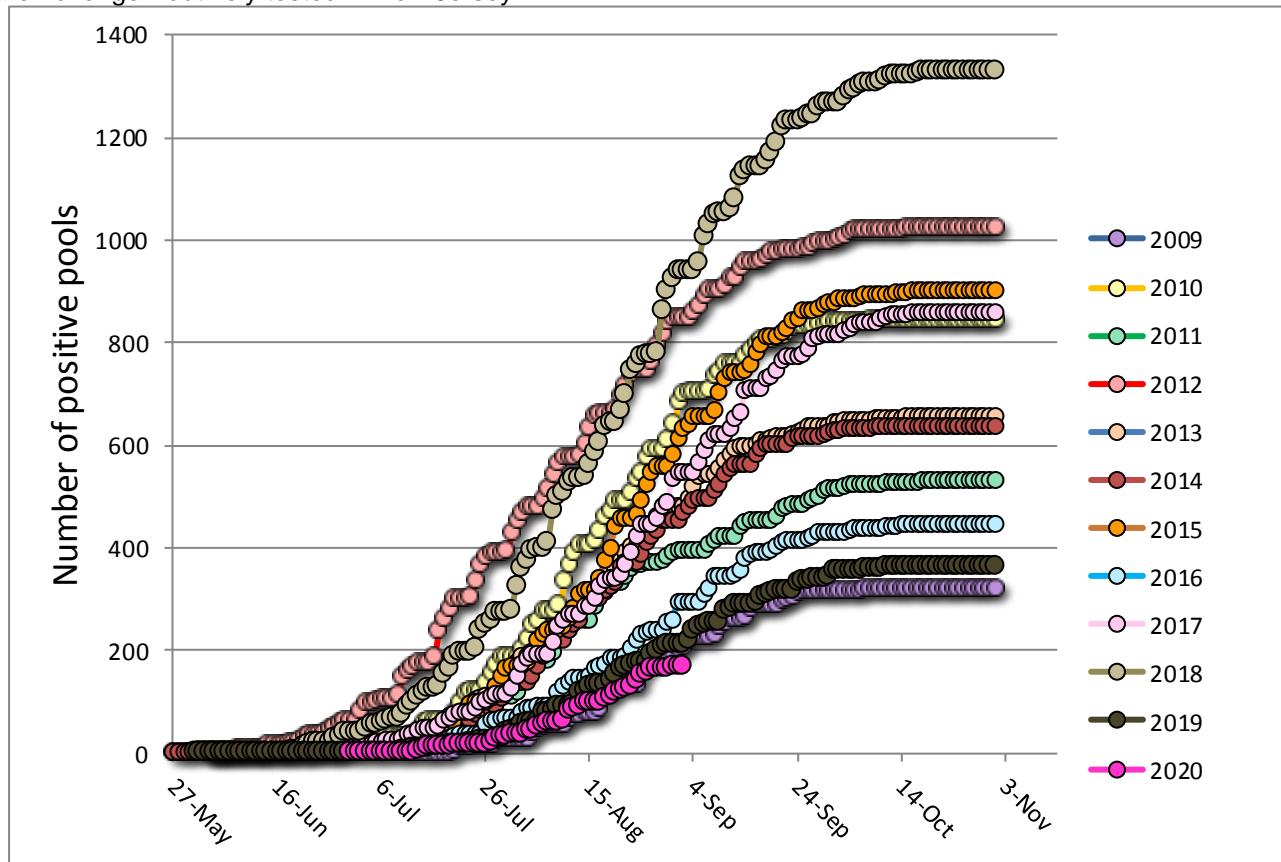
**Mosquito Species Submitted and Tested  
for West Nile Virus through 7 September 2020**

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	11	29		
<i>Aedes albopictus</i>	672	6352	1	0.157
<i>Aedes atlanticus</i>	16	108		
<i>Aedes canadensis canadensis</i>	56	882		
<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 infirmatus</i>	1	1		
<i>Aedes japonicus</i>	250	1125		
<i>Aedes mitchellae</i>	1	4		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	33	748		
<i>Aedes sticticus</i>	7	176		
<i>Aedes stimulans</i>	14	32		
<i>Aedes taeniorhynchus</i>	30	1149		
<i>Aedes thibaulti</i>	1	5		
<i>Aedes triseriatus</i>	215	779		
<i>Aedes trivittatus</i>	6	140		
<i>Aedes vexans</i>	75	648		
<i>Anopheles barberi</i>	2	4		
<i>Anopheles bradleyi</i>	22	290		
<i>Anopheles crucians</i>	22	289		
<i>Anopheles punctipennis</i>	108	1245		
<i>Anopheles quadrimaculatus</i>	92	1530		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	188	4557		
<i>Culex erraticus</i>	127	1333		
<i>Culex</i> spp.	2551	101416	167	1.647
<i>Culex pipiens</i>	327	6596	2	0.303
<i>Culex restuans</i>	40	534		
<i>Culex salinarius</i>	114	1678		
<i>Culiseta inornata</i>	12	50		
<i>Culiseta melanura</i>	410	4378		
<i>Culiseta morsitans</i>	13	48		
<i>Orthopodomyia signifera</i>	6	7		
<i>Psorophora ciliata</i>	2	2		
<i>Psorophora columbiae</i>	21	393		
<i>Psorophora cyanescens</i>	1	5		
<i>Psorophora ferox</i>	35	324		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	1	2		
<b>Grand Total</b>	<b>5526</b>	<b>137718</b>	<b>170</b>	<b>1.234</b>

**Remarks:** To date 5,526 pools of 137,718 mosquitoes from 41 species have been tested. 170 positive WNV pools have been detected by RTPCR this year, 167 pools in *Culex Mix*, 2 in *Culex pipiens* and one pool in *Aedes albopictus* (collected in Union County 28 July). The positive pools are less diverse than in previous years, particularly for those years when activity is higher. The pools were in Atlantic, Bergen, Burlington, Camden, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Union, and Warren counties (earliest collected 30 June). Note: *Aedes aegypti* retracted from previous report.

**Humans, Horses and Wild Birds:** No horses or wild birds have been reported infected with WNV in 2020. Two human case of WNV has been reported: first case in Essex County and most recently in Monmouth 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.