

# VECTOR SURVEILLANCE IN NEW JERSEY

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

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Data download 1:16 pm 6 July



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

## Arbovirus Summary

- In 2020, there is one positive EEE pool in *Culiseta melanura*.
- There are two positive JVC pools in *Aedes cantator*.
- There are no horse or human arbovirus cases reported.
- 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	0.12	0.00	0			
Green Bank (Burlington Co.)/25	Coastal	1.37	0.00	0			
Corbin City (Atlantic Co.)/25	Coastal	0.56	0.04	33 (34)	4 (5)	1	30.303
Dennisville (Cape May Co.)/50	Coastal	2.83	NC	0			
Winslow (Camden Co.)/50	Inland	1.44	NC	0			
Centerton (Salem Co.)/50	Inland	2.00	NC	0			
Turkey Swamp (Monmouth Co.)/50	Inland	0.46	0.00	5	3		
Glassboro (Gloucester Co.)/50	Inland	0.45	0.06	3	1		

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

**Remarks:** Currently one positive EEE pool was detected collected in a pool of *Culiseta melanura* at the Corbin City traditional resting box site on 17 June. This is the earliest positive pool collected in the past 20 years (see graph page 2). Note that not all sites are up and running.

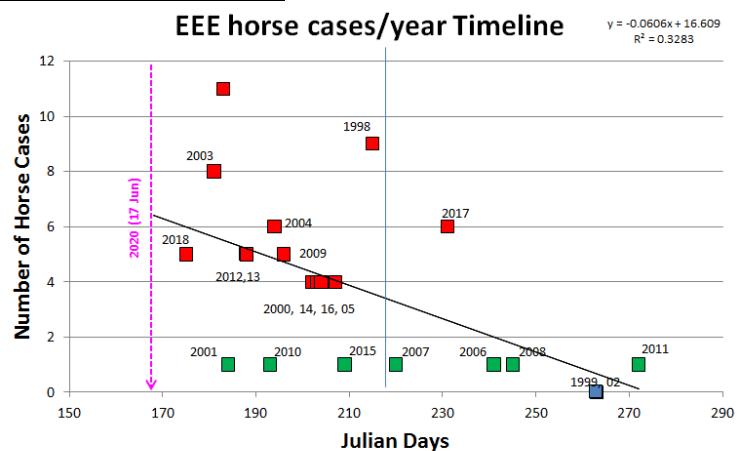
Statewide, 819 *Cs. melanura* from 109 pools have been tested, with an overall *Cs. melanura* MFIR of 1.221. 32,632 specimens in 1224 pools from 29 other species have also been tested, with no positive pools detected. Overall MFIR for all species statewide is 0.030.

**Traditional Resting Box Sites:** 41 *Cs. melanura* from 8 pools has been tested, with one positive pool at Corbin City, collected 17 June. One pool with 1 mosquito is pending. MFIR at the traditional resting box site is 24.390.

Additional <i>Cs. melanura</i> trapped by counties					
*traps with positives indicated in <b>BOLD UNDERLINED</b> .					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	8	74		
Bergen	RB	1	1		
Burlington	ULVT	9	128		
Cumberland	CO2, RB	3	12		
Gloucester	RB	26	340		
Middlesex	CO2, LT, RB	6	65		
Monmouth	CO2, Other	3	10		
Morris	CO2, RB	13	63		
Ocean	CO2	3	5		
Salem	CO2, Other, RB	7	23		
Sussex	CO2, RB	22	57		
<b>TOTAL</b>		<b>101</b>	<b>778</b>		

**Additional County-set Cs. melanura:** Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps.. In 2019, 36 pools of *Cs. melanura* have been found positive. Currently, there are no positive detections.

**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.



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

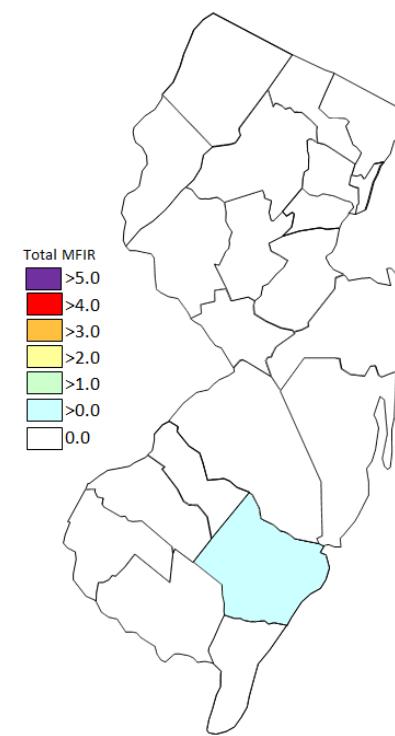
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practitioners, see: [http://www.aaep.org/vaccination\\_guidelines.htm](http://www.aaep.org/vaccination_guidelines.htm)

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>	9	27		
<i>Aedes albopictus</i>	49	186		
<i>Aedes canadensis canadensis</i>	41	616		
<i>Aedes cantator</i>	30	812		
<i>Aedes cinereus</i>	1	16		
<i>Aedes grossbecki</i>	1	4		
<i>Aedes japonicus</i>	65	246		
<i>Aedes provocans</i>	1	1		
<i>Aedes sollicitans</i>	9	59		
<i>Aedes sticticus</i>	5	174		
<i>Aedes stimulans</i>	12	30		
<i>Aedes taeniorhynchus</i>	4	160		
<i>Aedes triseriatus</i>	18	65		
<i>Aedes trivittatus</i>	3	30		
<i>Aedes vexans</i>	17	123		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles crucians</i>	6	57		
<i>Anopheles punctipennis</i>	39	253		
<i>Anopheles quadrimaculatus</i>	18	274		
<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	53	1290		
<i>Culex erraticus</i>	13	33		
<i>Culex Mix</i>	710	25726		
<i>Culex pipiens</i>	48	1305		
<i>Culex restuans</i>	20	435		
<i>Culex salinarius</i>	28	628		
<i>Culiseta inornata</i>	9	38		
<i>Culiseta morsitans</i>	4	23		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ferox</i>	5	9		
<b>State Total</b>	<b>1224</b>	<b>32632</b>		

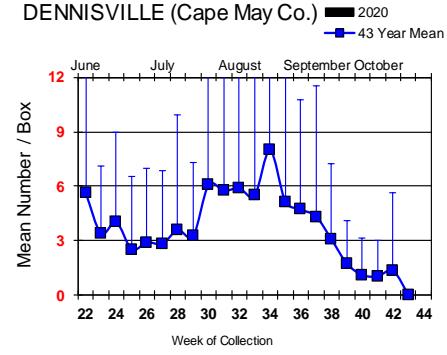
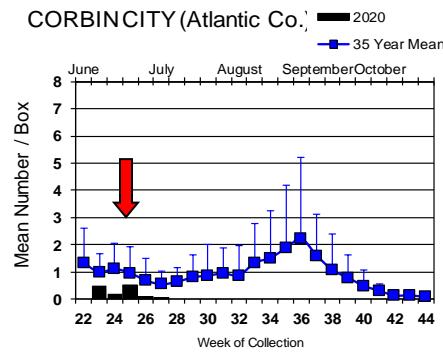
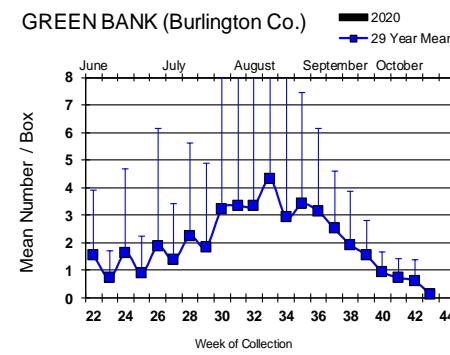
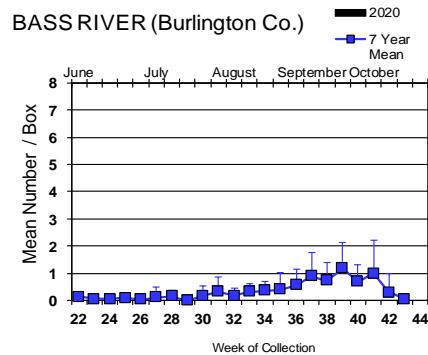
**Additional Species:** 29 additional species were tested for EEE. No positive pools have been detected to date.

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

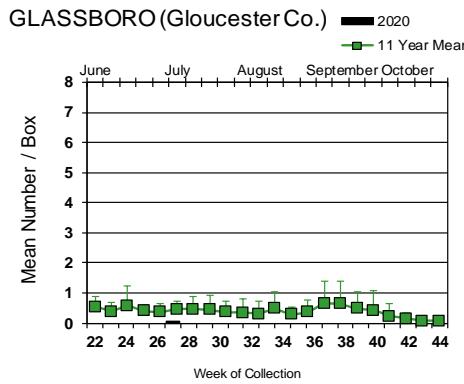
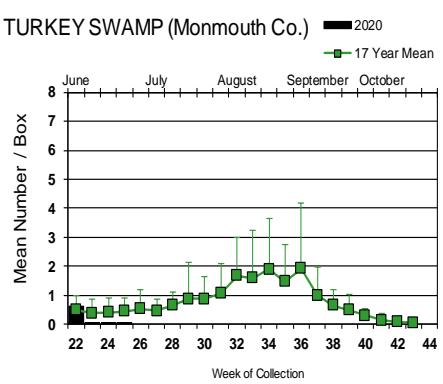
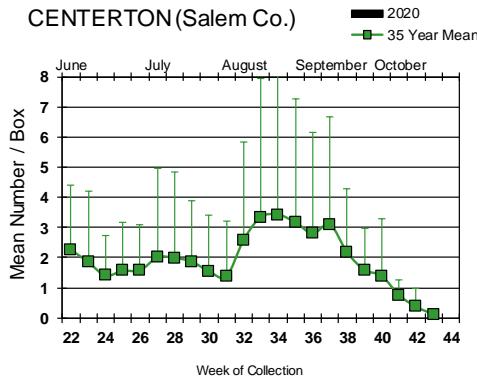
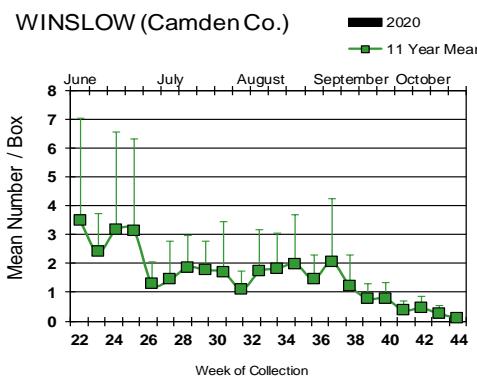


# *Culiseta melanura* Populations

## Coastal



## Inland



*Culiseta melanura* populations are reported at certain sites (Corbin City, Bass River, Green Bank, Turkey Swamp, and Glassboro) with the rest of the traditional resting box sites expected to come online during week 28. First positive EEE pool has been detected at Corbin City, on 17 June. Populations at sites monitored are significantly low, presumably due to the lack of monitoring because of covid effects.

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

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

- equine: 6(FL)
- mosquito pools: 1(FL) 1(NJ)
- sentinel: 12+1duck(FL)
- human:

## 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					<b>0</b>
Alaska					
Arizona		<b>1</b>			<b>2</b>
Arkansas					<b>1</b>
California	<b>19/23</b>	<b>92/135</b>	<b>0</b>	<b>0</b>	<b>1</b>
Colorado					<b>0</b>
Connecticut					
Delaware					
Florida	<b>1</b>	<b>5</b>	<b>34</b>	<b>1</b>	<b>2</b>
Georgia					
Hawaii					
Idaho	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>
Illinois		<b>9/12</b>			<b>0</b>
Indiana	<b>0</b>	<b>1</b>		<b>0</b>	<b>0</b>
Iowa					<b>1</b>
Kansas					<b>2</b>
Kentucky					
Louisiana					<b>0</b>
Maine					<b>0</b>
Maryland(+DC)					<b>1</b>
Mass.					<b>0</b>
Michigan	<b>1</b>				<b>0</b>
Minnesota					<b>0</b>
Mississippi					<b>1</b>
Missouri		<b>0</b>		<b>0</b>	<b>1</b>

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					<b>0</b>
Nebraska		<b>0</b>		<b>0</b>	<b>0</b>
Nevada					<b>0</b>
New Hampshire					<b>0</b>
New Jersey		<b>0</b>		<b>0</b>	<b>0</b>
New Mexico					<b>2/3</b>
New York					<b>0</b>
North Carolina					
North Dakota					<b>0</b>
Ohio		<b>22</b>		<b>0</b>	<b>0</b>
Oklahoma					<b>0</b>
Oregon	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Pennsylvania					<b>0</b>
Rhode Island					<b>0</b>
South Carolina					
South Dakota		<b>1</b>			<b>0</b>
Tennessee					
Texas		<b>20/38</b>	<b>1</b>		<b>0</b>
Utah					<b>0</b>
Vermont					<b>0</b>
Virginia					<b>0</b>
Washington	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>
West Virginia					
Wisconsin					<b>0</b>
Wyoming					<b>0</b>

\* 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.

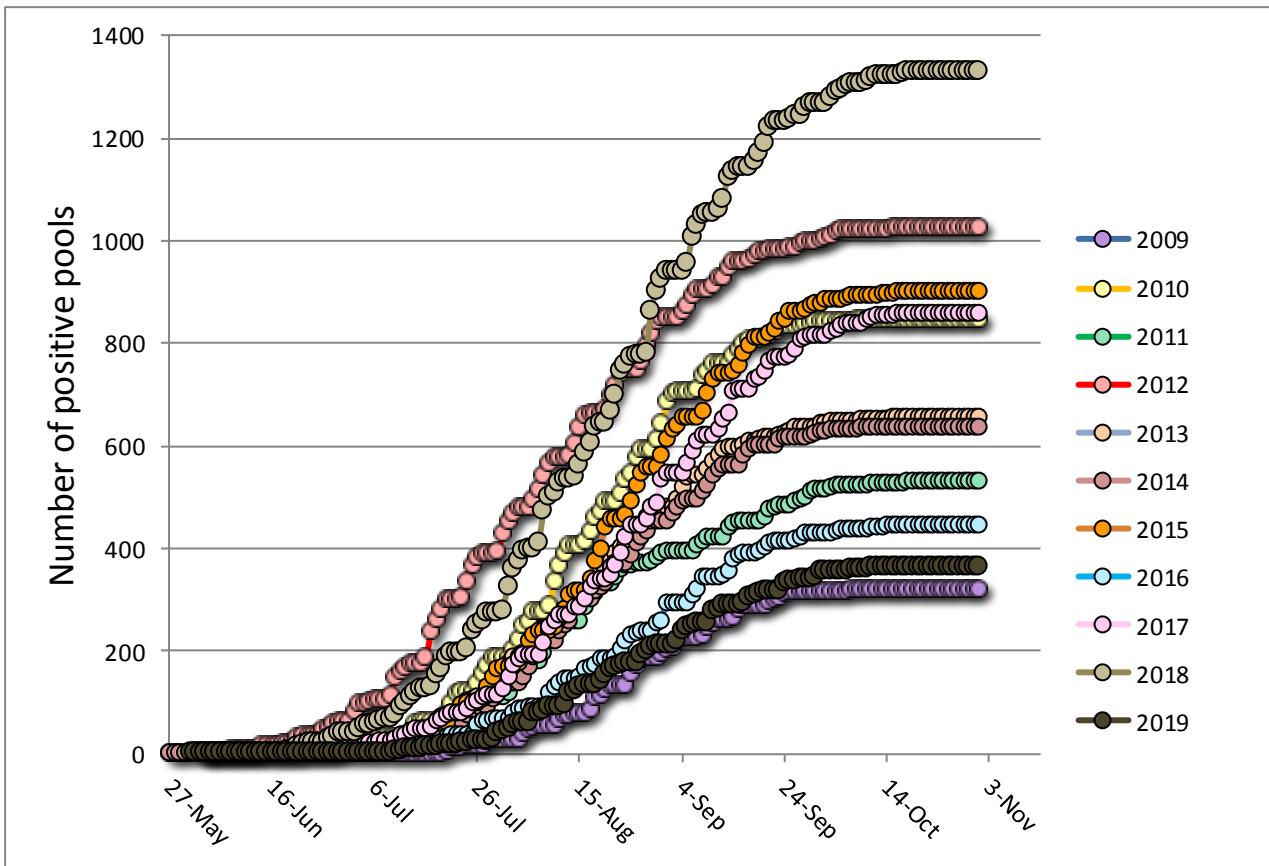
## Mosquito Species Submitted and Tested for West Nile Virus through 6 July 2020

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	9	27		
<i>Aedes albopictus</i>	49	186		
<i>Aedes canadensis canadensis</i>	41	616		
<i>Aedes cantator</i>	30	812		
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<i>Anopheles walkeri</i>	2	7		
<i>Coquillettidia perturbans</i>	53	1290		
<i>Culex erraticus</i>	13	33		
<i>Culex spp.</i>	710	25726		
<i>Culex pipiens</i>	48	1305		
<i>Culex restuans</i>	20	435		
<i>Culex salinarius</i>	28	628		
<i>Culiseta inornata</i>	9	38		
<i>Culiseta melanura</i>	115	830		
<i>Culiseta morsitans</i>	4	23		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ferox</i>	5	9		
<b>Grand Total</b>	<b>1355</b>	<b>33501</b>		

**Remarks:** To date 1,355 pools of 33,501 mosquitoes from 30 species have been tested. No positive WNV pools have been detected by RTPCR this year. Last year positive detections began with a pool of *Aedes triseriatus*, collected on 31 May, 2019 in Passaic County. That pool was also co-infected with LAC. Last year was a year of relatively low activity for WNV.

**Humans, Horses and Wild Birds:** No humans, horses or wild birds have been reported infected with WNV in 2020. Last year, eight human cases were reported. No horses were detected with WNV in 2019.

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 will be represented in RED when the first positive pool is detected.

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