

VECTOR SURVEILLANCE IN NEW JERSEY

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

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Data download 1:20 pm 13 August



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

Arbovirus Summary

- Currently, there are 239 positive WNV pools, 233 in *Culex Mix*, 3 in *Cx. pipiens*, and one each in *Aedes triseriatus*, *Ae. trivittatus* and *Ae. vexans*. Four positive birds (1 *Corvus brachyrhynchos*, 3 *Accipiter cooperii*).
- There are three positive EEE pools detected in *Cs. melanura*, one each from Gloucester, Camden and Atlantic counties.
- There is one positive JCV pool detected in *Aedes vexans*, from Sussex County, collected 8 July.
- 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	0.28	ND	0	0		
Green Bank (Burlington Co.)/25	Coastal	3.23	0.20	17 (22)	4 (5)		
Corbin City (Atlantic Co.)/25	Coastal	0.49	0.96	207	10		
Dennisville (Cape May Co.)/50	Coastal	5.75	0.24	78	9		
Winslow (Camden Co.)/50	Inland	1.11	0.14	144	7	1	6.944
Centerton (Salem Co.)/50	Inland	1.38	0.00	116 [‡]	12 [‡]		
Turkey Swamp (Monmouth Co.)/50	Inland	1.01	0.00	21 (23)	5 (6)		
Glassboro (Gloucester Co.)/50	Inland	0.21	0.00	110	7		

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

Remarks: Currently, three positive EEE pools in *Cs. melanura* have been detected. First detected pool was from a county-run site in Gloucester, sampled 30 June. Second came from a traditional resting box site in Camden County sampled 20 July. Third positive was in Atlantic County, collected 11 August. Current weekly mean is for Week 31.

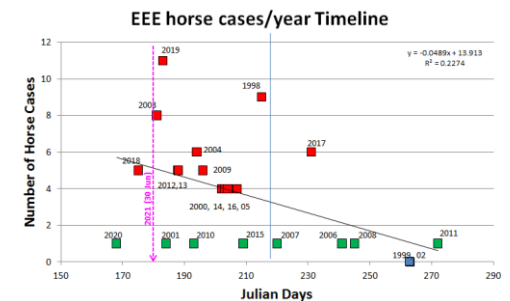
Statewide: 5868 *Cs. melanura* from 352 pools have been tested, with three positive pools detected and an overall *Cs. melanura* MFIR of 0.580. 100,921 specimens in 3321 pools from 35 other species have also been tested with no positive pools detected. Overall MFIR for all species statewide is 0.028.

Traditional Resting Box Sites: 695 *Cs. melanura* from 55 pools have been tested, with one positive pool detected at Winslow in Camden County. 31 mosquitoes in 3 pools pending. Overall *Cs. melanura* MFIR at the traditional resting box site is 1.439.

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	45	1167	1	0.857
Bergen	NJLT, RB	6	61		
Burlington	ULVT	29	972		
Camden	GRA	1	2		
Cape May	GRA, RB	30	412		
Cumberland	CO2, GRA, RB	32	270		
Gloucester	RB	66	1942	1	0.515
Middlesex	NJLT	5	16		
Monmouth	Other	2	3		
Morris	CO2, RB	14	51		
Ocean	CO2	7	12		
Salem	CO2, GRA, RB	22	107		
Sussex	CO2, GRA, RB	37	142		
Warren	Co2	1	16		
TOTAL		297	5173	2	0.387

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. First positive pools of *Cs. melanura* have been detected at a non-traditional resting box site in Gloucester County, collected 30Jun. Second positive in Atlantic County was collected 11 Aug.

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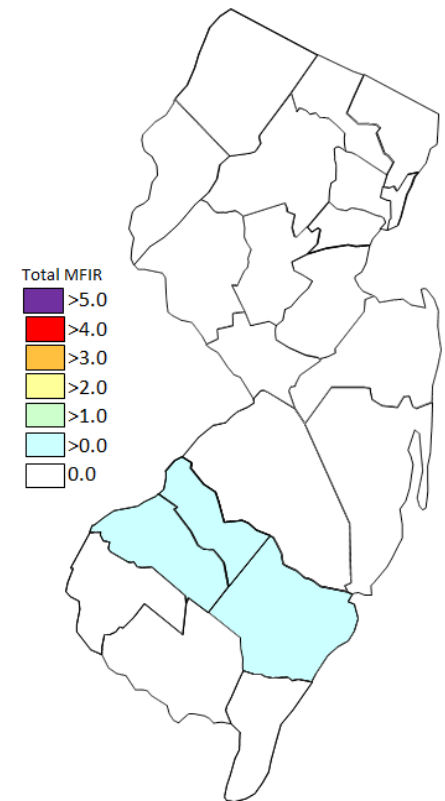
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

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>	14	118		
<i>Aedes albopictus</i>	157	1233		
<i>Aedes atlanticus</i>	4	105		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	70	1093		
<i>Aedes cantator</i>	40	563		
<i>Aedes cinereus</i>	3	80		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	161	887		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	15	317		
<i>Aedes sticticus</i>	15	261		
<i>Aedes stimulans</i>	5	28		
<i>Aedes taeniorhynchus</i>	23	1124		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	21	49		
<i>Aedes trivittatus</i>	16	301		
<i>Aedes vexans</i>	81	2020		
<i>Anopheles spp.</i>	7	103		
<i>Anopheles bradleyi</i>	15	450		
<i>Anopheles crucians</i>	11	149		
<i>Anopheles punctipennis</i>	146	2313		
<i>Anopheles quadrimaculatus</i>	55	696		
<i>Anopheles walkeri</i>	12	873		
<i>Coquillettidia perturbans</i>	162	6016		
<i>Culex erraticus</i>	43	467		
<i>Culex Mix</i>	1835	71225		
<i>Culex pipiens</i>	214	7093		
<i>Culex restuans</i>	75	1488		
<i>Culex salinarius</i>	40	461		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	17	242		
<i>Culiseta morsitans</i>	4	8		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	5	103		
<i>Psorophora columbiae</i>	14	367		
<i>Psorophora ferox</i>	20	442		
State Total	3321	100921		

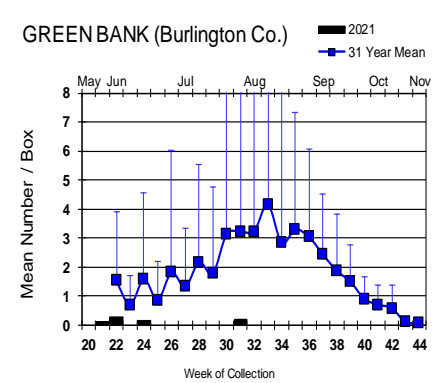
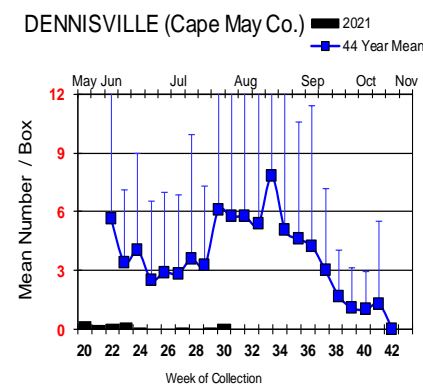
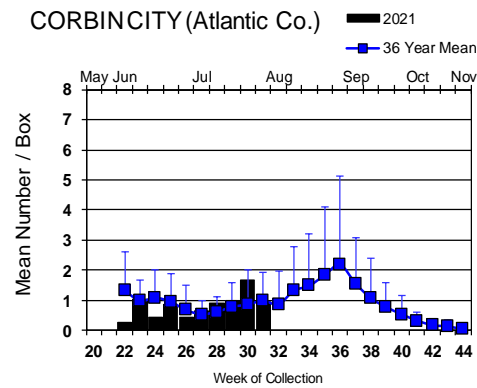
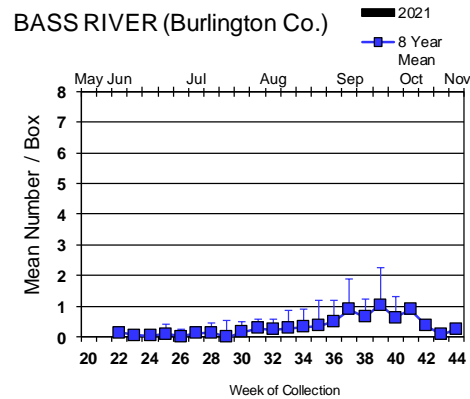
Additional Species: 34 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

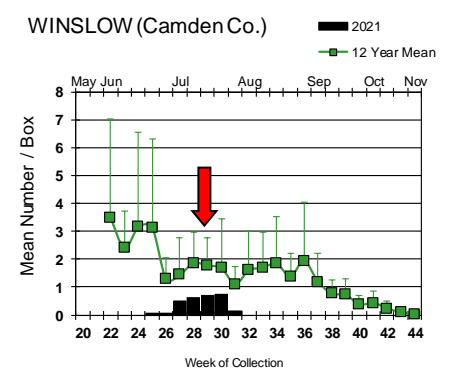
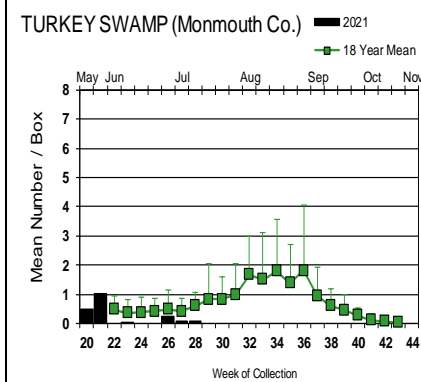
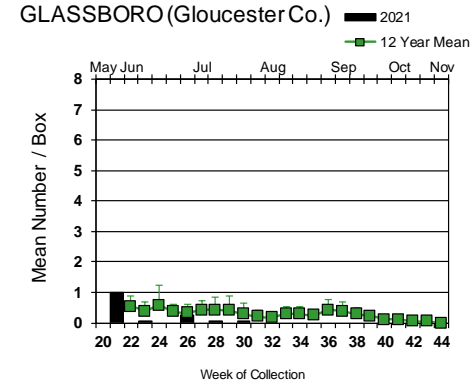
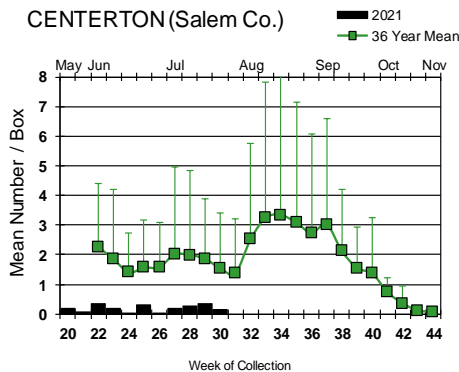


Culiseta melanura Populations



Coastal



Inland



This year's surveillance season began two weeks earlier to accommodate increasing indications of earlier population emergences. Populations of *Cs. melanura* have risen modestly at Corbin City, Centerton and Winslow recently. One positive pool has been detected at Winslow, in addition to a non-traditional resting box site pool collected earlier. Adult mosquito surveillance reports at <http://vectorbio.rutgers.edu/reports/mosquito/> continue to suggest resting box collections are lower than light box collections, apart from Corbin City.

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

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

- equine: 1(AZ) 12(FL) 1(WI) 1(Ontario)
- mosquito pools: 3(NJ)
- sentinel: 153(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					3
Alaska					
Arizona		62			13
Arkansas					1
California	109	770	10	1/1	8/15
Colorado		5		1	2
Connecticut		35/39			
Delaware					
Florida			10/11		
Georgia					
Hawaii					
Idaho		23		1	2
Illinois	3	406/786	0	0	2
Indiana	0	2/4		0	0
Iowa					2
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland(+DC)					
Mass.		30/40			
Michigan				1	
Minnesota					
Mississippi		3/11		2?	
Missouri					1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska	0	6		0	1
Nevada					
New Hampshire					
New Jersey	4	165/239		0	0
New Mexico					
New York					
North Carolina					
North Dakota					1
Ohio		160			
Oklahoma				1	
Oregon	0	0	0	0	0
Pennsylvania	0	76	0	0	0
Rhode Island					
South Carolina				1	
South Dakota					
Tennessee					
Texas	5	395/537	0	0	1/2
Utah					
Vermont					
Virginia					
Washington		30/32		1/4	
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.

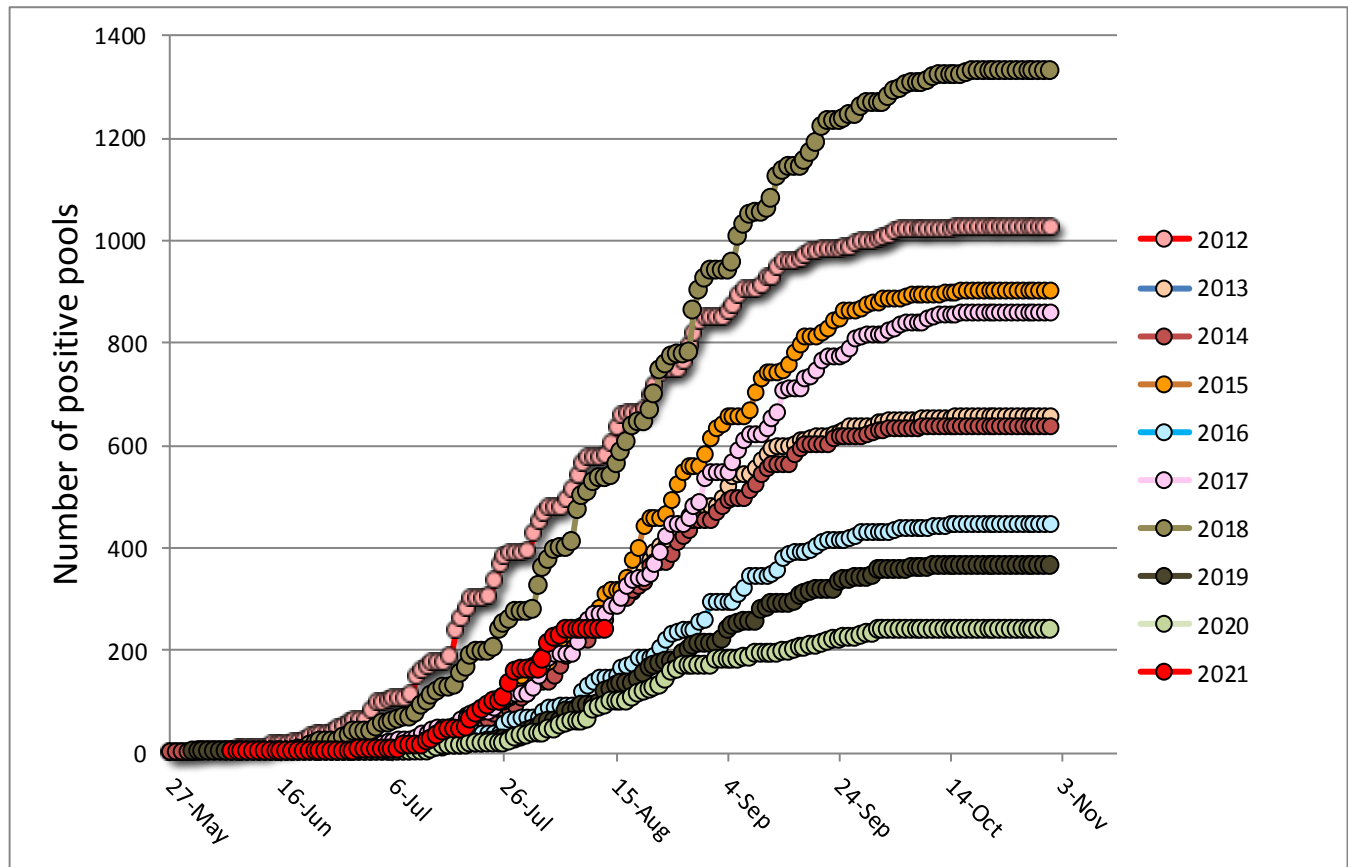
Mosquito Species Submitted and Tested for West Nile Virus through 13 August 2021

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	15	120		
<i>Aedes albopictus</i>	210	1693		
<i>Aedes atlanticus</i>	5	114		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	80	1213		
<i>Aedes cantator</i>	46	720		
<i>Aedes cinereus</i>	3	80		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	206	1472		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	18	447		
<i>Aedes sticticus</i>	15	261		
<i>Aedes stimulans</i>	5	28		
<i>Aedes taeniorhynchus</i>	31	1352		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	50	141	1	7.092
<i>Aedes trivittatus</i>	22	317	1	3.155
<i>Aedes vexans</i>	94	2277	1	0.439
<i>Anopheles</i> spp.	9	172		
<i>Anopheles bradleyi</i>	17	575		
<i>Anopheles crucians</i>	15	185		
<i>Anopheles punctipennis</i>	175	2839		
<i>Anopheles quadrimaculatus</i>	65	827		
<i>Anopheles walkeri</i>	13	898		
<i>Coquillettidia perturbans</i>	162	6016		
<i>Culex erraticus</i>	43	467		
<i>Culex</i> spp.	2324	93646	233	2.488
<i>Culex pipiens</i>	279	8997	3	0.333
<i>Culex restuans</i>	82	1545		
<i>Culex salinarius</i>	51	802		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	18	244		
<i>Culiseta melanura</i>	352	5868		
<i>Culiseta morsitans</i>	4	8		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	6	112		
<i>Psorophora columbiae</i>	19	478		
<i>Psorophora ferox</i>	31	618		
<i>Psorophora howardii</i>	1	50		
Grand Total	4487	134828	239	1.773

Remarks: To date 4487 pools of 134,828 mosquitoes from 36 species have been tested. 239 pools (236 pools of *Culex* Mix or *Cx. pipiens*, and 1 pool each of *Ae. triseriatus*, *Ae. trivittatus* and *Ae. vexans*) have been identified as positive for WNV in all but Cumberland and Salem 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 1.773.

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>

Although birds are no longer routinely tested in New Jersey, one American Crow (*Corvus brachyrhynchos*) from Burlington County has tested positive for WNV. Three Cooper's Hawks (*Accipiter cooperii*) tested positive from Union County.



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.