

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

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11 July to 17 July, 2021, CDC Week 28
Data download 12:30 pm 16 July



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

- Currently, there are 13 positive WNV pools, 12 in *Culex Mix* (Bergen, Burlington, Hudson, Middlesex, Ocean, Somerset, and Warren counties), one in *Aedes trivittatus* (Essex County).
 - There is one positive EEE pool detected in *Cs. melanura* from Gloucester County, collected 30 June.
 - 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.
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- 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	0.11	0.00	0	0		
Green Bank (Burlington Co.)/25	Coastal	1.33	0.00	10	2		
Corbin City (Atlantic Co.)/25	Coastal	0.55	0.64	82 (93)	6 (7)		
Dennisville (Cape May Co.)/50	Coastal	2.83	0.02	64 (65)	6 (7)		
Winslow (Camden Co.)/50	Inland	1.44	0.14	33	3		
Centerton (Salem Co.)/50	Inland	2.00	0.02	69	8		
Turkey Swamp (Monmouth Co.)/50	Inland	0.43	0.08	4 (8)	2 (3)		
Glassboro (Gloucester Co.)/50	Inland	0.42	0.26	102	5		

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

Remarks: Currently, one positive EEE pool in *Cs. melanura* has been detected. This pool was from a county-run site in Gloucester, sampled 30 June. Sampling near Bass River has begun again with the understanding that the canopy has opened up after a fire and the site might not see much activity. Current weekly mean is for Week 27 as no data for the current week are in. Reagents for EEE testing have become limited, resulting in testing modifications. This should resolve itself soon.

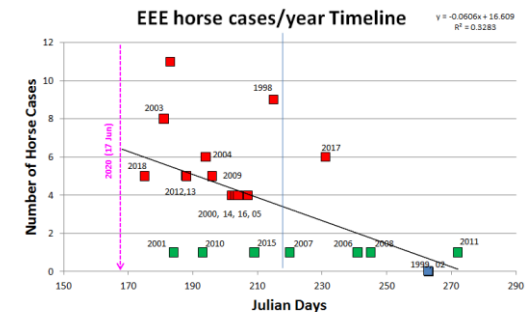
Statewide: 4542 *Cs. melanura* from 255 pools have been tested, with one positives detected and an overall *Cs. melanura* MFIR of 0.220. 55,640 specimens in 2018 pools from 34 other species have also been tested with no positive pools detected. Overall MFIR for all species statewide is 0.017.

Traditional Resting Box Sites: 375 *Cs. melanura* from 32 pools have been tested, with no positive pools detected. 16 mosquitoes in 3 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	33	894		
Bergen	NJLT, RB	5	48		
Burlington	ULVT	24	942		
Cape May	GRA, RB	21	348		
Cumberland	CO2, GRA, RB	21	213		
Gloucester	RB	51	1476	1	0.678
Middlesex	NJLT	4	9		
Monmouth	Other	1	1		
Morris	CO2, RB	7	33		
Ocean	CO2	7	12		
Salem	CO2, GRA, RB	16	79		
Sussex	CO2, GRA, RB	32	96		
Warren	Co2	1	16		
TOTAL		223	4167	1	0.240

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.

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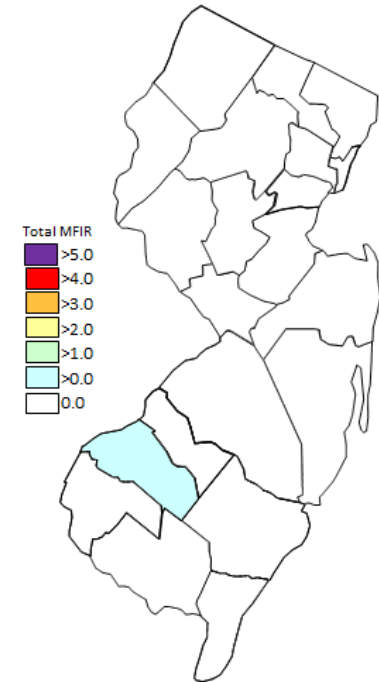
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

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>	56	247		
<i>Aedes atlanticus</i>	3	70		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	63	887		
<i>Aedes cantator</i>	38	546		
<i>Aedes cinereus</i>	2	79		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	100	384		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	13	302		
<i>Aedes sticticus</i>	15	261		
<i>Aedes stimulans</i>	5	28		
<i>Aedes taeniorhynchus</i>	11	613		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	6	13		
<i>Aedes trivittatus</i>	8	98		
<i>Aedes vexans</i>	42	981		
<i>Anopheles spp.</i>	1	18		
<i>Anopheles bradleyi</i>	13	374		
<i>Anopheles crucians</i>	6	50		
<i>Anopheles punctipennis</i>	97	1258		
<i>Anopheles quadrimaculatus</i>	36	263		
<i>Anopheles walkeri</i>	12	873		
<i>Coquillettidia perturbans</i>	98	3733		
<i>Culex erraticus</i>	19	130		
<i>Culex Mix</i>	1093	38731		
<i>Culex pipiens</i>	123	3421		
<i>Culex restuans</i>	64	1304		
<i>Culex salinarius</i>	30	228		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	16	240		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	2	2		
<i>Psorophora columbiae</i>	6	114		
<i>Psorophora ferox</i>	5	28		
State Total	2018	55640		

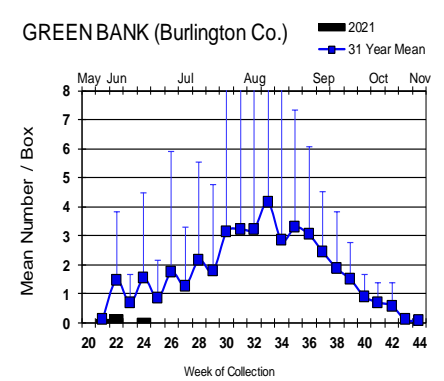
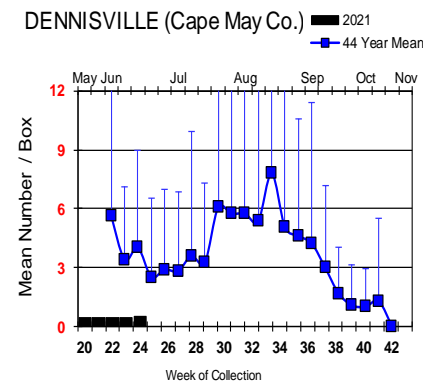
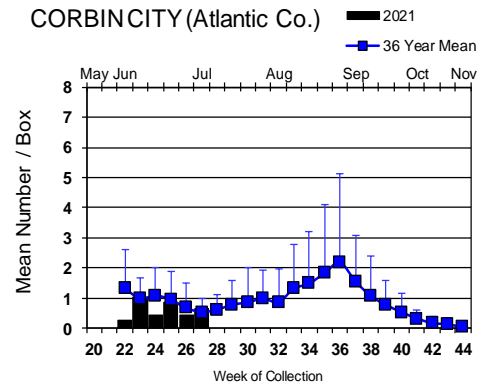
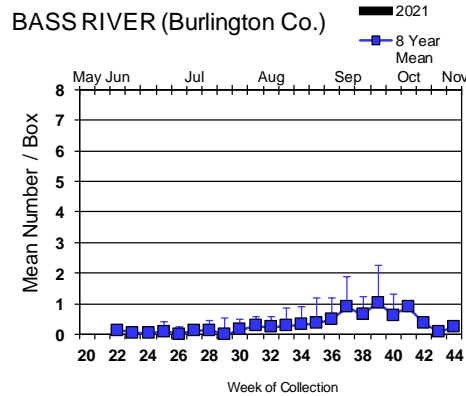
Additional Species: 34 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

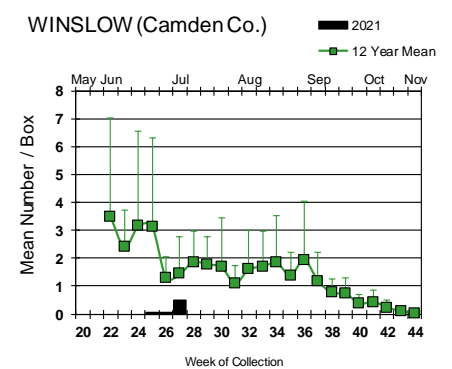
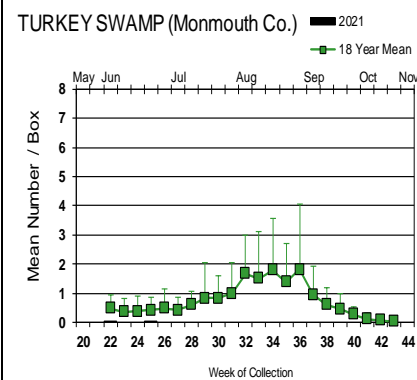
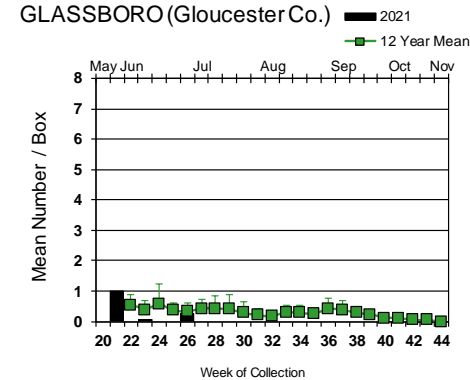
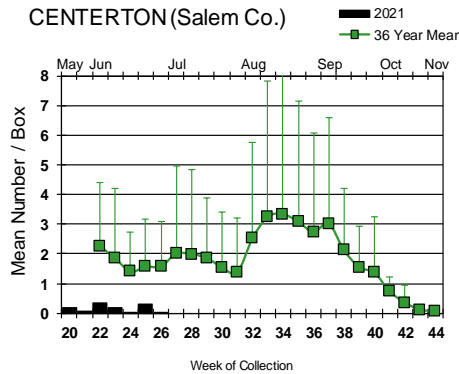


Culiseta melanura Populations



Coastal



Inland



This year's surveillance season began two weeks earlier to accommodate increasing indications of earlier population emergences. Currently, populations remain at or well below the historical averages at these traditional resting box sites. No viral activity has been reported at these sites, although a positive *Cs. melanura* pool has been detected in Gloucester County at a county maintained resting box site. Adult Surveillance reports at <http://vectorbio.rutgers.edu/reports/mosquito/> suggests that populations are around historical averages at southern areas, but it is unknown why no *melanura* are going to resting boxes at these sites.



 = 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(Ontario)
- mosquito pools: **1(NJ)**
- sentinel: **113(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					7
Arkansas					1
California	35/66	115/177	0	1	1/2
Colorado		1			0
Connecticut		2			
Delaware					
Florida			2		
Georgia					
Hawaii					
Idaho		2/5			
Illinois	0	10/40	0	0	0
Indiana	0	1		0	0
Iowa					2
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland(+DC)					
Mass.		1/12			
Michigan					
Minnesota					
Mississippi					
Missouri					

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska	0	2		0	0
Nevada					
New Hampshire					
New Jersey		3/13		0	0
New Mexico					
New York					
North Carolina					
North Dakota					1
Ohio		8/9			
Oklahoma					
Oregon	0	0	0	0	0
Pennsylvania	0	32	0	0	0
Rhode Island					
South Carolina				1	
South Dakota					
Tennessee					
Texas	3	52/125	0	0	0
Utah					
Vermont					
Virginia					
Washington		1/5			
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 16 July 2021

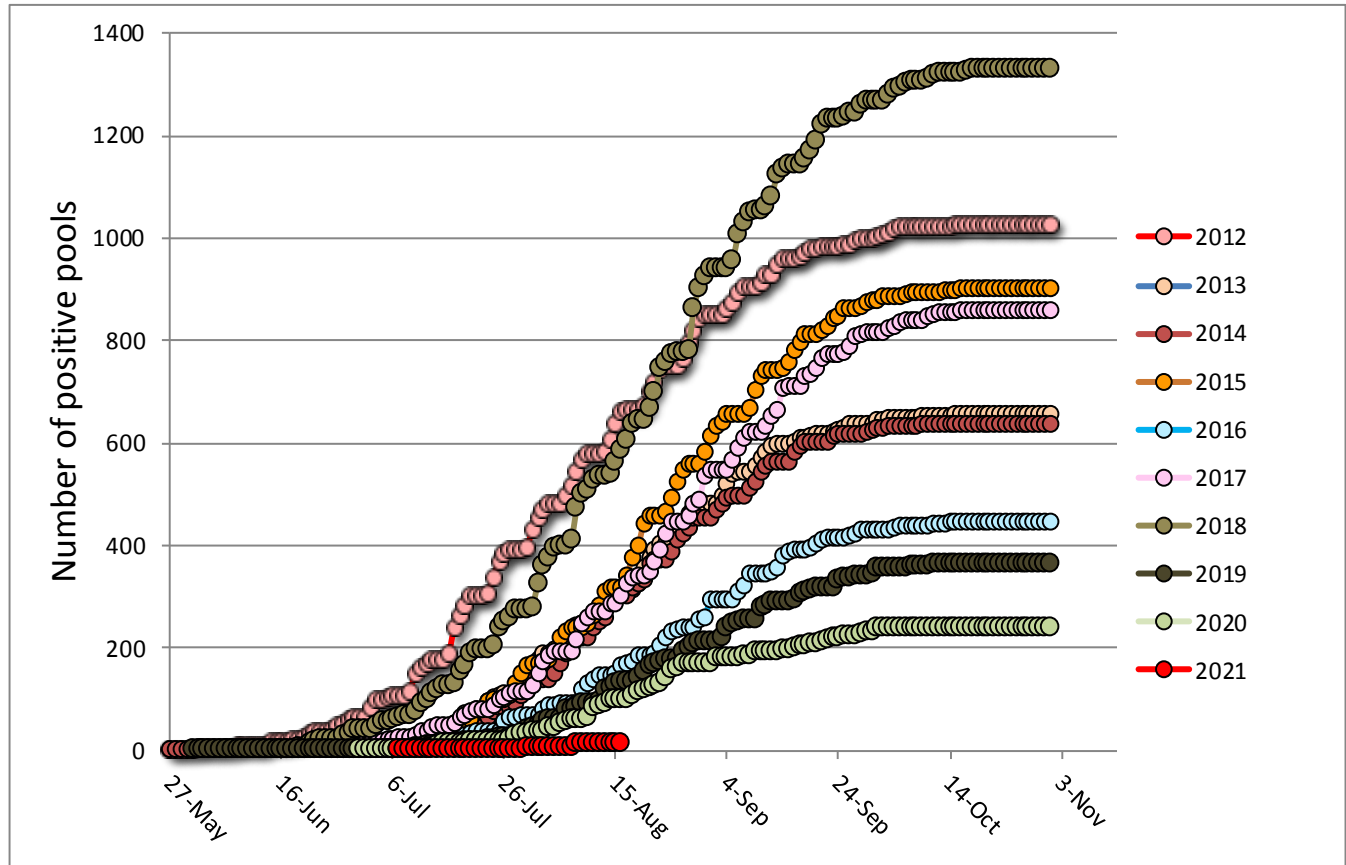
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	15	120		
<i>Aedes albopictus</i>	88	517		
<i>Aedes atlanticus</i>	3	70		
<i>Aedes aurifer</i>	5	102		
<i>Aedes canadensis canadensis</i>	73	1007		
<i>Aedes cantator</i>	42	653		
<i>Aedes cinereus</i>	2	79		
<i>Aedes grossbecki</i>	9	33		
<i>Aedes japonicus</i>	131	745		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	15	382		
<i>Aedes sticticus</i>	15	261		
<i>Aedes stimulans</i>	5	28		
<i>Aedes taeniorhynchus</i>	17	786		
<i>Aedes thibaulti</i>	2	105		
<i>Aedes triseriatus</i>	31	98		
<i>Aedes trivittatus</i>	12	107	1	9.346
<i>Aedes vexans</i>	53	1210		
<i>Anopheles</i> spp.	2	58		
<i>Anopheles bradleyi</i>	14	449		
<i>Anopheles crucians</i>	8	64		
<i>Anopheles punctipennis</i>	122	1755		
<i>Anopheles quadrimaculatus</i>	39	306		
<i>Anopheles walkeri</i>	13	898		
<i>Coquillettidia perturbans</i>	104	4025		
<i>Culex erraticus</i>	19	130		
<i>Culex</i> spp.	1458	56255	12	0.213
<i>Culex pipiens</i>	163	4643		
<i>Culex restuans</i>	70	1357		
<i>Culex salinarius</i>	35	431		
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	16	240		
<i>Culiseta melanura</i>	255	4542		
<i>Orthopodomyia signifera</i>	3	4		
<i>Psorophora ciliata</i>	2	2		
<i>Psorophora columbiae</i>	6	114		
<i>Psorophora ferox</i>	11	117		
Grand Total	2860	81695	13	0.159

Remarks: To date 2860 pools of 81,695 mosquitoes from 35 species have been tested. 12 pools of *Culex* Mix and 1 pool of *Ae. trivittatus* have been identified as positive for WNV in Bergen, Burlington, Essex, Hudson, Middlesex, Ocean, Somerset, and Warren counties. First positive detected in a pool of *Culex* Mix collected on 7 June in Somerset County and the *Ae. trivittatus* pool was collected on 2 July in Essex County. Cumulative MFIR for all mosquitoes in New Jersey is 0.159.

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. The cumulative pool rate of change is the lowest it has been the past 10 years. *Psorophora ferox*

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