

VECTOR SURVEILLANCE IN NEW JERSEY

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

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20 June to 26 June, 2021, CDC Week 25

Data download 1:20 pm 25 June



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 two positive WNV pools, both in *Culex Mix* (Somerset and Warren County). No other arboviruses in mosquito pools were found positive.
- 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 | 0.09 | ND | ND | | | |
| Green Bank (Burlington Co.)/25 | Coastal | 0.84 | 0.00 | 17 | 2 | | |
| Corbin City (Atlantic Co.)/25 | Coastal | 0.95 | 0.88 | 55 | 1 | | |
| Dennisville (Cape May Co.)/50 | Coastal | 2.53 | 0.30 | 62 | 3 | | |
| Winslow (Camden Co.)/50 | Inland | 3.14 | NC | | | | |
| Centerton (Salem Co.)/50 | Inland | 1.56 | 0.44 | 64 | 3 | | |
| Turkey Swamp (Monmouth Co.)/50 | Inland | 0.41 | 0.0 | 1 | 1 | | |
| Glassboro (Gloucester Co.)/50 | Inland | 0.38 | 0.0 | 89 | 2 | | |

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

Remarks: Currently, no EEE arboviral activity has been detected. Sampling near Bass River is no longer done after loss of site due to fire.

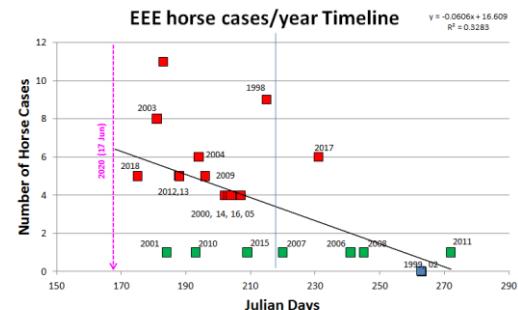
Statewide: 3669 *Cs. melanura* from 179 pools have been tested, with no positives detected and an overall *Cs. melanura* MFIR of 0.000. 38,761 specimens in 1456 pools from 33 other species have also been tested with no positive pools detected. Overall MFIR for all species statewide is 0.000.

Traditional Resting Box Sites: 257 *Cs. melanura* from 20 pools have been tested, with no positive pools detected. 0 mosquitoes in 0 pools are pending. Overall *Cs. melanura* MFIR at the traditional resting box site is 0.000.

| County | Trap types* | Additional <i>Cs. melanura</i> trapped by counties | | | |
|--------------|--------------|--|-------------|-----------|------|
| | | Pools | Mosquitoes | Positives | MFIR |
| Atlantic | CO2, RB | 19 | 710 | | |
| Bergen | NJLT, RB | 5 | 48 | | |
| Burlington | ULVT | 21 | 876 | | |
| Cape May | GRA, RB | 13 | 293 | | |
| Cumberland | CO2, GRA, RB | 14 | 169 | | |
| Gloucester | RB | 35 | 1128 | | |
| Middlesex | NJLT | 4 | 9 | | |
| Monmouth | Other | 1 | 1 | | |
| Morris | CO2, RB | 7 | 33 | | |
| Ocean | CO2 | 4 | 7 | | |
| Salem | CO2, GRA, RB | 12 | 71 | | |
| Sussex | CO2, GRA, RB | 24 | 67 | | |
| TOTAL | | 159 | 3412 | | |

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Currently, no positive pools of *Cs. melanura* have been detected outside of the traditional resting box sites.

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 |
|------|--------|-----|-----|--------|---------------|-------------|-------------|---------|
| | | | | | | ? | | |

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

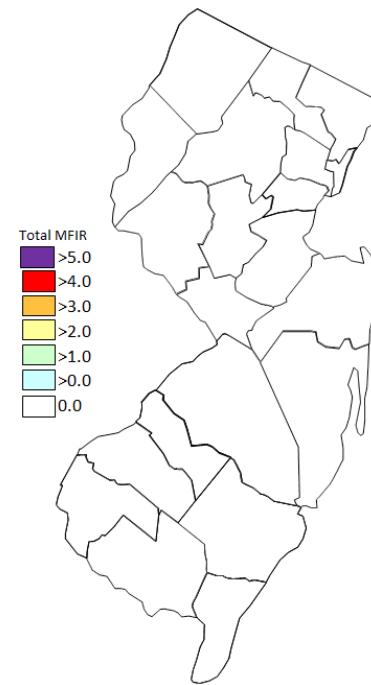
There are no human cases of EEE currently reported. For more information, see DOH Vectorborne Surveillance reports:

<https://www.nj.gov/health/cd/statistics/arboviral-stats/>

| Species other than <i>Cs. melanura</i> | Pools | Mosquitoes | Positives | MFIR |
|--|-------------|--------------|-----------|------|
| <i>Aedes abserratus</i> | 12 | 116 | | |
| <i>Aedes albopictus</i> | 27 | 90 | | |
| <i>Aedes atlanticus</i> | 1 | 55 | | |
| <i>Aedes aurifer</i> | 5 | 102 | | |
| <i>Aedes canadensis canadensis</i> | 52 | 793 | | |
| <i>Aedes cantator</i> | 36 | 490 | | |
| <i>Aedes cinereus</i> | 2 | 79 | | |
| <i>Aedes grossbecki</i> | 9 | 33 | | |
| <i>Aedes japonicus</i> | 64 | 218 | | |
| <i>Aedes mitchellae</i> | 1 | 1 | | |
| <i>Aedes sollicitans</i> | 12 | 301 | | |
| <i>Aedes sticticus</i> | 12 | 248 | | |
| <i>Aedes stimulans</i> | 4 | 26 | | |
| <i>Aedes taeniorhynchus</i> | 9 | 548 | | |
| <i>Aedes thibaulti</i> | 2 | 105 | | |
| <i>Aedes triseriatus</i> | 2 | 5 | | |
| <i>Aedes trivittatus</i> | 5 | 11 | | |
| <i>Aedes vexans</i> | 27 | 807 | | |
| <i>Anopheles bradleyi</i> | 7 | 18 | | |
| <i>Anopheles crucians</i> | 5 | 44 | | |
| <i>Anopheles punctipennis</i> | 73 | 961 | | |
| <i>Anopheles quadrimaculatus</i> | 26 | 193 | | |
| <i>Anopheles walkeri</i> | 12 | 873 | | |
| <i>Coquillettidia perturbans</i> | 41 | 1012 | | |
| <i>Culex erraticus</i> | 11 | 20 | | |
| <i>Culex Mix</i> | 825 | 28114 | | |
| <i>Culex pipiens</i> | 74 | 1815 | | |
| <i>Culex restuans</i> | 55 | 1181 | | |
| <i>Culex salinarius</i> | 19 | 138 | | |
| <i>Culex territans</i> | 1 | 1 | | |
| <i>Culiseta inornata</i> | 13 | 224 | | |
| <i>Orthopodomyia signifera</i> | 3 | 4 | | |
| <i>Psorophora ciliata</i> | 1 | 1 | | |
| <i>Psorophora columbiae</i> | 5 | 110 | | |
| <i>Psorophora ferox</i> | 3 | 24 | | |
| State Total | 1456 | 38761 | | |

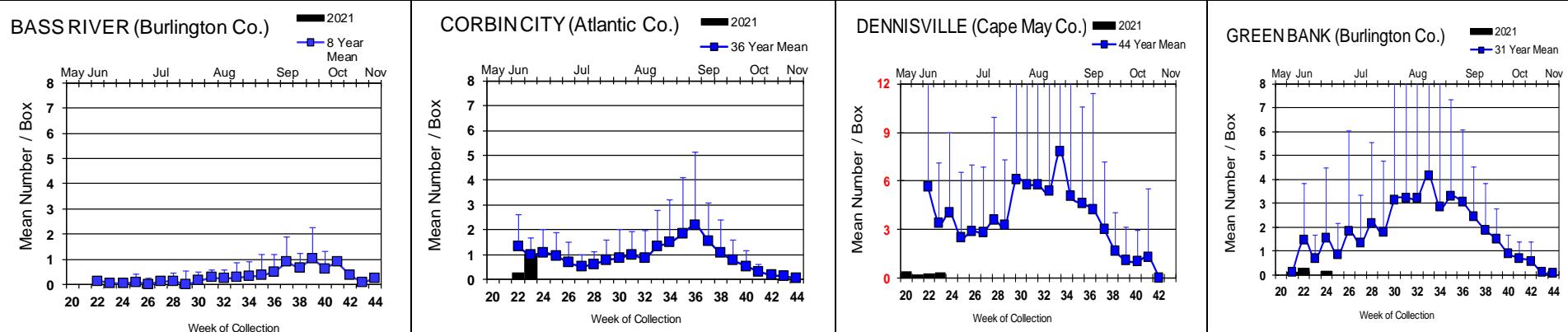
Additional Species: 33 additional species were tested for EEE. No positive pools have been detected to date.

Overall MFIR rates, human and animal cases per county:

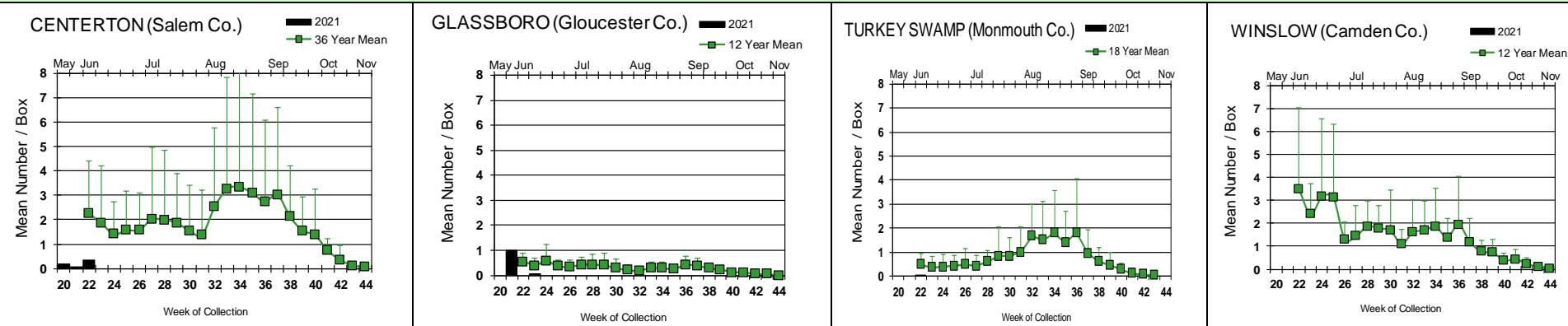


Culiseta melanura Populations

Coastal



Inland



This year's surveillance season began two weeks earlier to accommodate increasing indications of earlier population emergences. Currently, populations of *Cs. melanura* at reported sites are at low levels at or below historical trends. No viral activity has been reported. Resting box numbers appear to be below what light trap catches have been reporting at some areas (see Adult Surveillance reports at <http://vectorbio.rutgers.edu/reports/mosquito/>).



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

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

- equine: **5**(FL)
- mosquito pools:
- sentinel: **95**(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 | | | | | |
| Arkansas | | | | | |
| California | 11/22 | 18/29 | 0 | 0 | 0 |
| Colorado | | | | | 0 |
| Connecticut | | 0 | | | |
| Delaware | | | | | |
| Florida | | | 2 | | |
| Georgia | | | | | |
| Hawaii | | | | | |
| Idaho | | | | | |
| Illinois | 0 | 4/8 | 0 | 0 | 0 |
| Indiana | 0 | 0 | | 0 | 0 |
| Iowa | | | | | |
| Kansas | | | | | |
| Kentucky | | | | | |
| Louisiana | | | | | |
| Maine | | | | | |
| Maryland(+DC) | | | | | |
| Mass. | | | | | |
| Michigan | | | | | |
| Minnesota | | | | | |
| Mississippi | | | | | |
| Missouri | | | | | |

| | Birds | Mosquito Pools | Sentinels | Horses* | Humans | |
|----------------|----------|-------------------|------------|----------|----------|----------|
| Montana | | | | | | |
| Nebraska | 0 | 0 | | 0 | 0 | |
| Nevada | | | | | | |
| New Hampshire | | | | | | |
| New Jersey | | | 1/2 | | 0 | 0 |
| New Mexico | | | | | | |
| New York | | | | | | |
| North Carolina | | | | | | |
| North Dakota | | | | | | |
| Ohio | | | 2 | | | |
| Oklahoma | | | | | | |
| Oregon | 0 | 0 | 0 | 0 | 0 | |
| Pennsylvania | 0 | 4 counties | 0 | 0 | 0 | |
| Rhode Island | | | | | | |
| South Carolina | | | | | | |
| South Dakota | | | | | | |
| Tennessee | | | | | | |
| Texas | 0 | 14/24 | 0 | 0 | 0 | |
| Utah | | | | | | |
| Vermont | | | | | | |
| Virginia | | | | | | |
| Washington | | | | | | |
| 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 25 June 2021

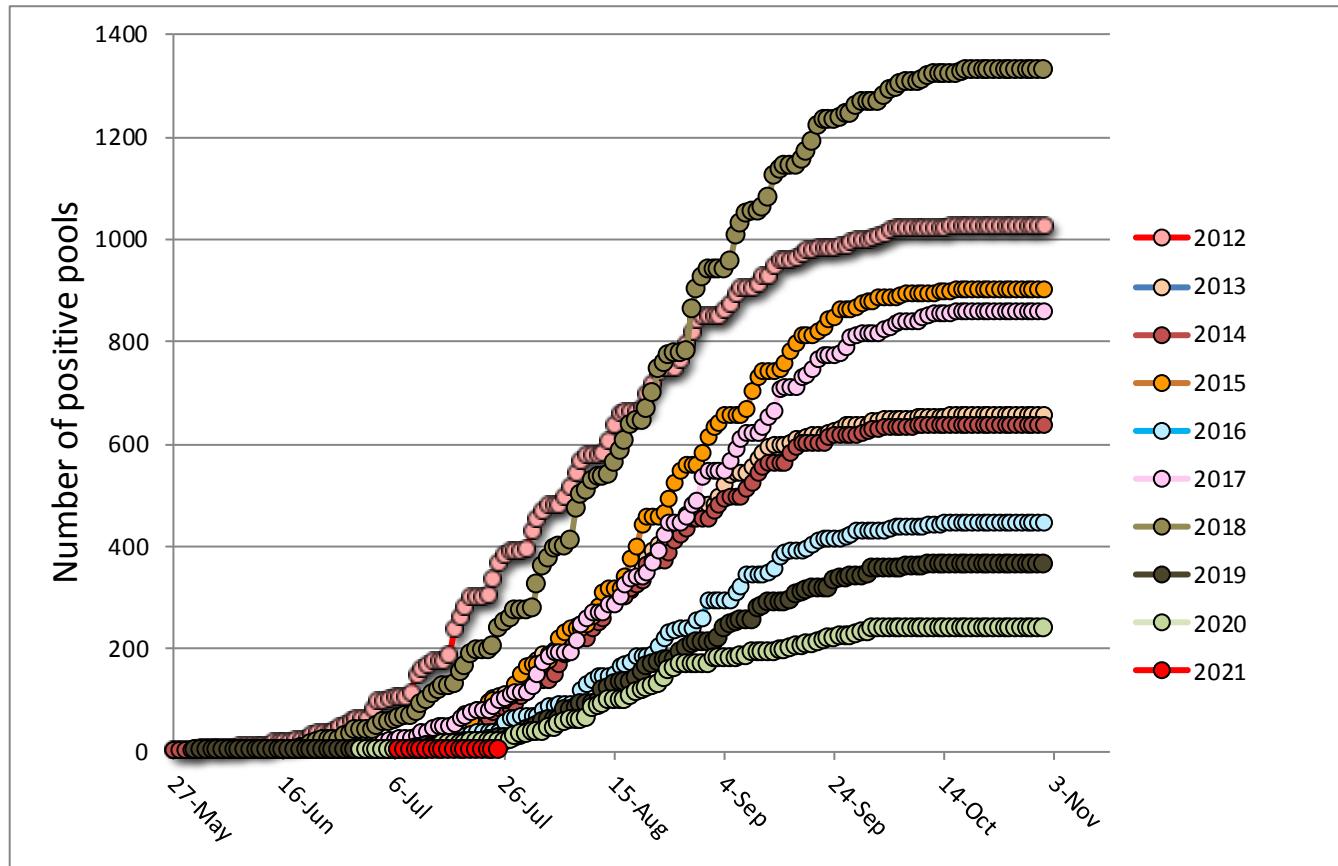
| Species | Pools | Mosquitoes | Positives | MFIR |
|------------------------------------|-------------|--------------|-----------|--------------|
| <i>Aedes abserratus</i> | 12 | 116 | | |
| <i>Aedes albopictus</i> | 30 | 113 | | |
| <i>Aedes atlanticus</i> | 1 | 55 | | |
| <i>Aedes aurifer</i> | 5 | 102 | | |
| <i>Aedes canadensis canadensis</i> | 52 | 793 | | |
| <i>Aedes cantator</i> | 36 | 490 | | |
| <i>Aedes cinereus</i> | 2 | 79 | | |
| <i>Aedes grossbecki</i> | 9 | 33 | | |
| <i>Aedes japonicus</i> | 69 | 279 | | |
| <i>Aedes mitchellae</i> | 1 | 1 | | |
| <i>Aedes sollicitans</i> | 12 | 301 | | |
| <i>Aedes sticticus</i> | 12 | 248 | | |
| <i>Aedes stimulans</i> | 4 | 26 | | |
| <i>Aedes taeniorhynchus</i> | 9 | 548 | | |
| <i>Aedes thibaulti</i> | 2 | 105 | | |
| <i>Aedes triseriatus</i> | 3 | 9 | | |
| <i>Aedes trivittatus</i> | 5 | 11 | | |
| <i>Aedes vexans</i> | 27 | 807 | | |
| <i>Anopheles bradleyi</i> | 7 | 18 | | |
| <i>Anopheles crucians</i> | 5 | 44 | | |
| <i>Anopheles punctipennis</i> | 73 | 961 | | |
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| <i>Anopheles walkeri</i> | 12 | 873 | | |
| <i>Coquillettidia perturbans</i> | 41 | 1012 | | |
| <i>Culex erraticus</i> | 11 | 20 | | |
| <i>Culex</i> spp. | 827 | 28195 | 2 | 0.071 |
| <i>Culex pipiens</i> | 74 | 1815 | | |
| <i>Culex restuans</i> | 55 | 1181 | | |
| <i>Culex salinarius</i> | 19 | 138 | | |
| <i>Culex territans</i> | 1 | 1 | | |
| <i>Culiseta inornata</i> | 13 | 224 | | |
| <i>Culiseta melanura</i> | 179 | 3669 | | |
| <i>Orthopodomyia signifera</i> | 3 | 4 | | |
| <i>Psorophora ciliata</i> | 1 | 1 | | |
| <i>Psorophora columbiae</i> | 5 | 110 | | |
| <i>Psorophora ferox</i> | 3 | 24 | | |
| Grand Total | 1646 | 42599 | 2 | 0.047 |

Remarks: To date 1646 pools of 42,599 mosquitoes from 29 species have been tested. Two pools of *Culex* Mix have been identified as positive for WNV (Somerset, Warren 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 0.047.

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.

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