

VECTOR SURVEILLANCE IN NEW JERSEY

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

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7 August to 13 August 2022, CDC Week 32

Data download 3:55 pm 12 August



New Jersey Agricultural Experiment Station



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 JerseySurf, a subset of the CalSurv system.

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

Arbovirus Summary

- 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.
- No pools tested for EEE virus have been detected positive in any species submitted to date. No horse or human cases have been reported.
- 191 pools have tested positive for WN virus, the first in *Aedes cantator*, collected in Burlington County on 2 June. Also positive were pools of *Culex Mix*, *Culex pipiens*, *Aedes albopictus*, *Ae. canadensis canadensis*, *Aedes cantator*, *Ae. triseriatus*, and *Ae. vexans*. No horse or human cases have been reported.
- No pools tested for SLE, LAC, DENG, CHIK, or ZIKA virus have been detected positive in any species submitted to date.
- 2 pools have tested positive for JC virus, both in *Aedes cantator*, collected in Bergen County at the same location, first collected on 3 June.
- In 2021, there were 35 positive EEE pools in *Culiseta melanura*, *Culex erraticus*, *Ae. taeniorhynchus*, and *Ae. triseriatus*. There were 3 horse case reported. There were no human cases reported.
- There were 997 positive WNV pools, in *Culex Mix*, *Culex pipiens*, *Culex restuans*, *Culex erraticus*, *Culiseta melanura*, *Aedes albopictus*, *Aedes japonicus*, *Ae. taeniorhynchus*, *Ae. triseriatus*, *Ae. trivittatus*, *Ae. vexans*, *Anopheles bradleyi*, *An. punctipennis*, *An. quadrimaculatus*, *Coquillettidia perturbans*, *Psorophora ciliata*, and *Ps. ferox*. There were 36 human cases with 5 fatalities, plus 13 positive birds. There were no horse cases.
- There were 8 positive JVC pools in *Aedes albopictus*, *Ae. vexans*, *Anopheles punctipennis* and *Culex Mix*. There were 2 human cases reported.

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 | 0.24 | 0.00 | 0 | 0 | | |
| Green Bank (Burlington Co.)/25 | Coastal | 3.24 | 0.00 | 9 | 4 | | |
| Corbin City (Atlantic Co.)/25 | Coastal | 0.87 | 0.04 | 136 | 14 | | |
| Dennisville (Cape May Co.)/50 | Coastal | 5.63 | 0.00 | 26 | 6 | | |
| Winslow (Camden Co.)/50 | Inland | 1.35 | 0.02 | 211 | 10 | | |
| Centerton (Salem Co.)/50 | Inland | 2.52 | 0.00 | 36 | 10 | | |
| Turkey Swamp (Monmouth Co.)/50 | Inland | 1.66 | 0.00 | 100‡ | 12‡ | | |
| Glassboro (Gloucester Co.)/50 | Inland | 0.29 | 0.00 | 29 | 10 | | |

*Current week (in parentheses) results pending. ‡ Corrected from previous week. PW = Previous week na =not available ND=No Data NR=Not Recorded

Remarks: Currently, there are no positive EEE pools detected in the samples submitted.

Statewide: 1709 *Cs. melanura* from 214 pools have been submitted for testing, with no positive pools detected and an overall *Cs. melanura* MFIR of 0.000. 103,410 specimens in 3737 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: 547 *Cs. melanura* from 66 pools (corrected from last week) have been collected at the traditional resting box sites with no positive pools detected. Overall *Cs. melanura* MFIR at the traditional resting box site is 0.00.

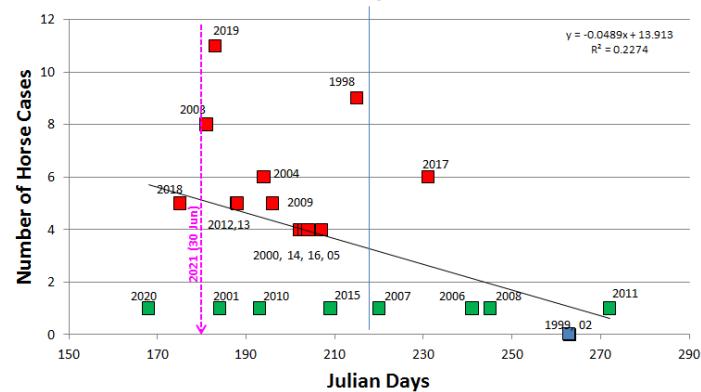
| Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD UNDERLINED . | | | | | |
|---|-------------------|------------|-------------|-----------|------|
| County | Trap types* | Pools | Mosquitoes | Positives | MFIR |
| Atlantic | CO2, RB | 30 | 392 | | |
| Bergen | RB | 2 | 42 | | |
| Burlington | UVLT | 8 | 70 | | |
| Cape May | GRA, RB | 12 | 20 | | |
| Cumberland | CO2, GRA, RB | 24 | 83 | | |
| Gloucester | RB | 12 | 127 | | |
| Middlesex | NJLT | 3 | 15 | | |
| Monmouth | CO2 | 3 | 4 | | |
| Morris | ASP, CO2, GRA, RB | 23 | 152 | | |
| Ocean | CO2 | 3 | 5 | | |
| Salem | CO2, RB | 10 | 110 | | |
| Sussex | CO2, RB | 18 | 142 | | |
| TOTAL | | 148 | 1162 | | |

Graph to the right indicate start times to detection of EEE in *Culiseta melanura* and associated number of horse cases from 1998 to 2021. Early detections are associated with multiple horse cases.

Horses and Humans: In 2021, 3 horses were reported with EEE. Currently, no horse or humans have been reported. For more information, see DOH Vectorborne Surveillance reports: <https://www.nj.gov/health/cd/statistics/arboviral-stats/>

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. In 2021, first positive pools of *Cs. Melanura* were detected at a non-traditional resting box site in Gloucester County, collected 30 Jun. Currently, there are no positive EEE pools detected.

EEE horse cases/year Timeline



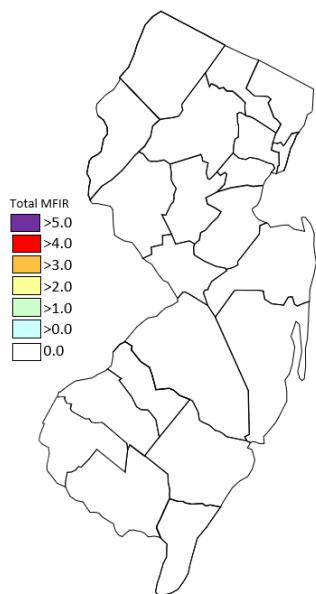
| Case | Animal | Age | Sex | County | Date of Onset | Euthanized? | Vaccinated? | Comment |
|------|--------|-----|-----|--------|---------------|-------------|-------------|---------|
| | | | | | | | | |

Horses and Vaccinations: **Horse owners are urged to make sure their horses are up to date on their vaccinations (see link below). EEE horse cases are known to occur through October and sometimes into November.** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins. 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

| Species other than <i>Cs. melanura</i> | Pools | Mosquitoes | Positives | MFIR |
|--|-------------|---------------|-----------|------|
| <i>Aedes abserratus</i> | 17 | 393 | | |
| <i>Aedes albopictus</i> | 276 | 2799 | | |
| <i>Aedes atlanticus</i> | 3 | 7 | | |
| <i>Aedes atropalpus</i> | 1 | 1 | | |
| <i>Aedes aurifer</i> | 16 | 154 | | |
| <i>Aedes canadensis canadensis</i> | 77 | 1253 | | |
| <i>Aedes cantator</i> | 49 | 1658 | | |
| <i>Aedes cinereus</i> | 4 | 48 | | |
| <i>Aedes grossbecki</i> | 9 | 51 | | |
| <i>Aedes japonicus</i> | 322 | 2189 | | |
| <i>Aedes provocans</i> | 2 | 3 | | |
| <i>Aedes sollicitans</i> | 25 | 503 | | |
| <i>Aedes sticticus</i> | 7 | 166 | | |
| <i>Aedes stimulans</i> | 13 | 71 | | |
| <i>Aedes taeniorhynchus</i> | 20 | 567 | | |
| <i>Aedes triseriatus</i> | 58 | 153 | | |
| <i>Aedes trivittatus</i> | 5 | 64 | | |
| <i>Aedes vexans</i> | 115 | 2681 | | |
| <i>Anopheles spp.</i> | 3 | 97 | | |
| <i>Anopheles barbieri</i> | 3 | 3 | | |
| <i>Anopheles bradleyi</i> | 17 | 189 | | |
| <i>Anopheles crucians</i> | 7 | 13 | | |
| <i>Anopheles punctipennis</i> | 165 | 1869 | | |
| <i>Anopheles quadrimaculatus</i> | 55 | 710 | | |
| <i>Coquillettidia perturbans</i> | 149 | 3551 | | |
| <i>Culex erraticus</i> | 37 | 360 | | |
| <i>Culex Mix</i> | 1925 | 74831 | | |
| <i>Culex pipiens</i> | 174 | 6449 | | |
| <i>Culex restuans</i> | 128 | 1905 | | |
| <i>Culex salinarius</i> | 18 | 342 | | |
| <i>Culiseta inornata</i> | 6 | 14 | | |
| <i>Orthopodomyia signifera</i> | 2 | 2 | | |
| <i>Psorophora ciliata</i> | 3 | 9 | | |
| <i>Psorophora columbiae</i> | 7 | 40 | | |
| <i>Psorophora ferox</i> | 19 | 265 | | |
| State Total | 3737 | 103410 | | |

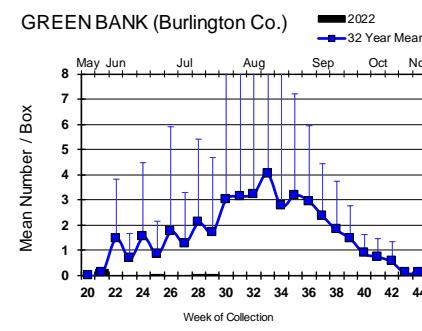
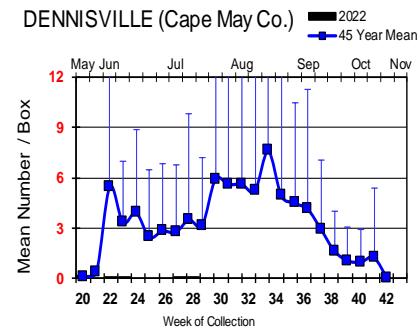
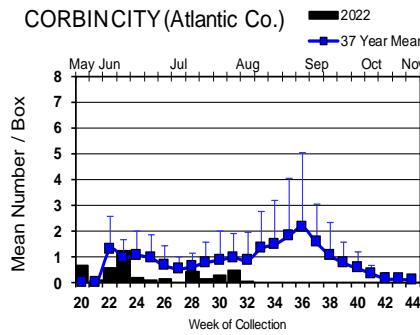
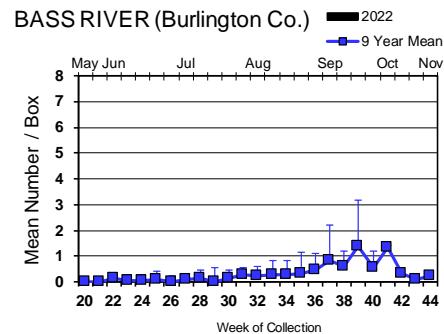
Additional Species: 33 additional species were tested for EEE. No positive pools were detected. In 2021, the first positive non-*melanura* pool was detected in of *Culex erraticus* in Atlantic County on 5 Aug.

Overall MFIR rates, human and animal cases per county:

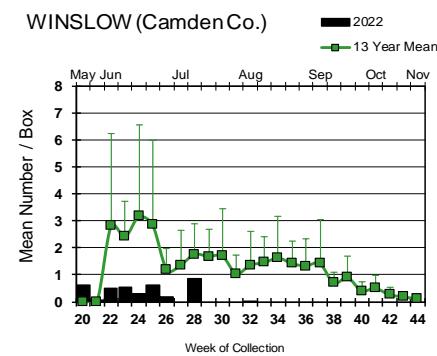
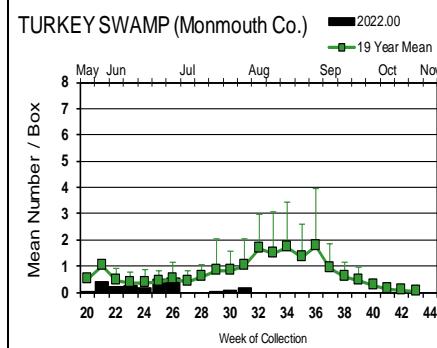
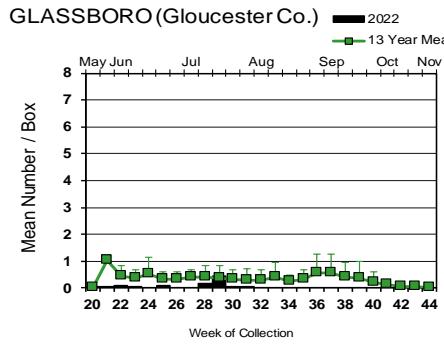
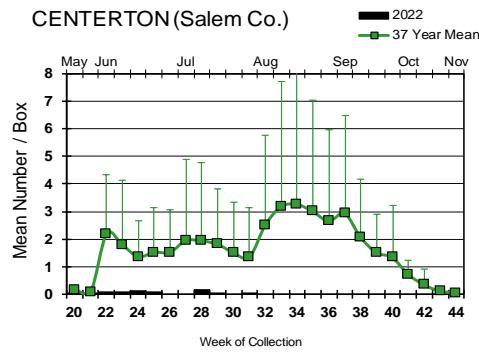


Culiseta melanura Populations

Coastal



Inland



As with other species throughout the state, *Cs. melanura* populations continue to remain below historic levels at the traditional resting box sites. Again, very few specimens were collected this week. Drought conditions continue. Currently, no positive EEE pools have been detected at any sites within the state, but a Green Bank sample of *Ae. cantator* was positive for WNV near the beginning of the season.



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

EEE in US (2022 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: **9**(FL)
- mosquito pools:
- sentinel: **43**(FL)
- human:

West Nile Virus Positive Organisms in US, 2022

West Nile in US (2022 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 | 2 | 0 | | | 5 |
| Arkansas | | | | | |
| California | 60/68 | 965/1263 | 17/17 | 2/2 | 7/12 |
| Colorado | | 54/82 | | | 3/5 |
| Connecticut | | 29/46 | | | |
| Delaware | | | | | |
| Florida | | 1/1 | 16/30 | | |
| Georgia | | | | | 1/1 |
| Hawaii | | | | | |
| Idaho | 0 | 2/3 | | 0 | 0 |
| Illinois | 1/1 | 408/652 | | 0 | 0 |
| Indiana | 0 | 3/6 | | 0 | 1/1 |
| Iowa | | | | | |
| Kansas | | | | | |
| Kentucky | | | | | |
| Louisiana | | | | | |
| Maine | | | | | |
| Maryland(+DC) | | | | | |
| Mass. | | 22/33 | | 0 | 0 |
| Michigan | | | | | |
| Minnesota | | | | | |
| Mississippi | | 46/46 | | | 3/3 |
| Missouri | | 0 | | 0 | 1/1 |

| | Birds | Mosquito Pools | Sentinels | Horses* | Humans | |
|----------------|------------|----------------|-----------|------------|----------|------------|
| Montana | | | | | | |
| Nebraska | | | | | | |
| Nevada | | | | | | |
| New Hampshire | | | | | | |
| New Jersey | 0 | 162/191 | | | 0 | 0 |
| New Mexico | | | | | | |
| New York | | | | | | |
| North Carolina | | | | | | |
| North Dakota | 0 | 0 | | | 0 | 4/5 |
| Ohio | | 65/136 | | | 0 | 0 |
| Oklahoma | | | | | | |
| Oregon | 0 | 7/8 | | 0 | 1 | 0 |
| Pennsylvania | 1/2 | 258/877 | | | | 4/6 |
| Rhode Island | | | | | | |
| South Carolina | | | | | | |
| South Dakota | | | | 7/7 | | 1 |
| Tennessee | | | | | | |
| Texas | 0 | 116/135 | | 0 | 0 | 3/5 |
| Utah | | | | | | |
| Vermont | | | | 0 | | 0 |
| Virginia | | | | | | |
| Washington | | | | | | |
| West Virginia | | | | | | |
| Wisconsin | | | | | | |
| Wyoming | | 3/3 | | 0 | 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.

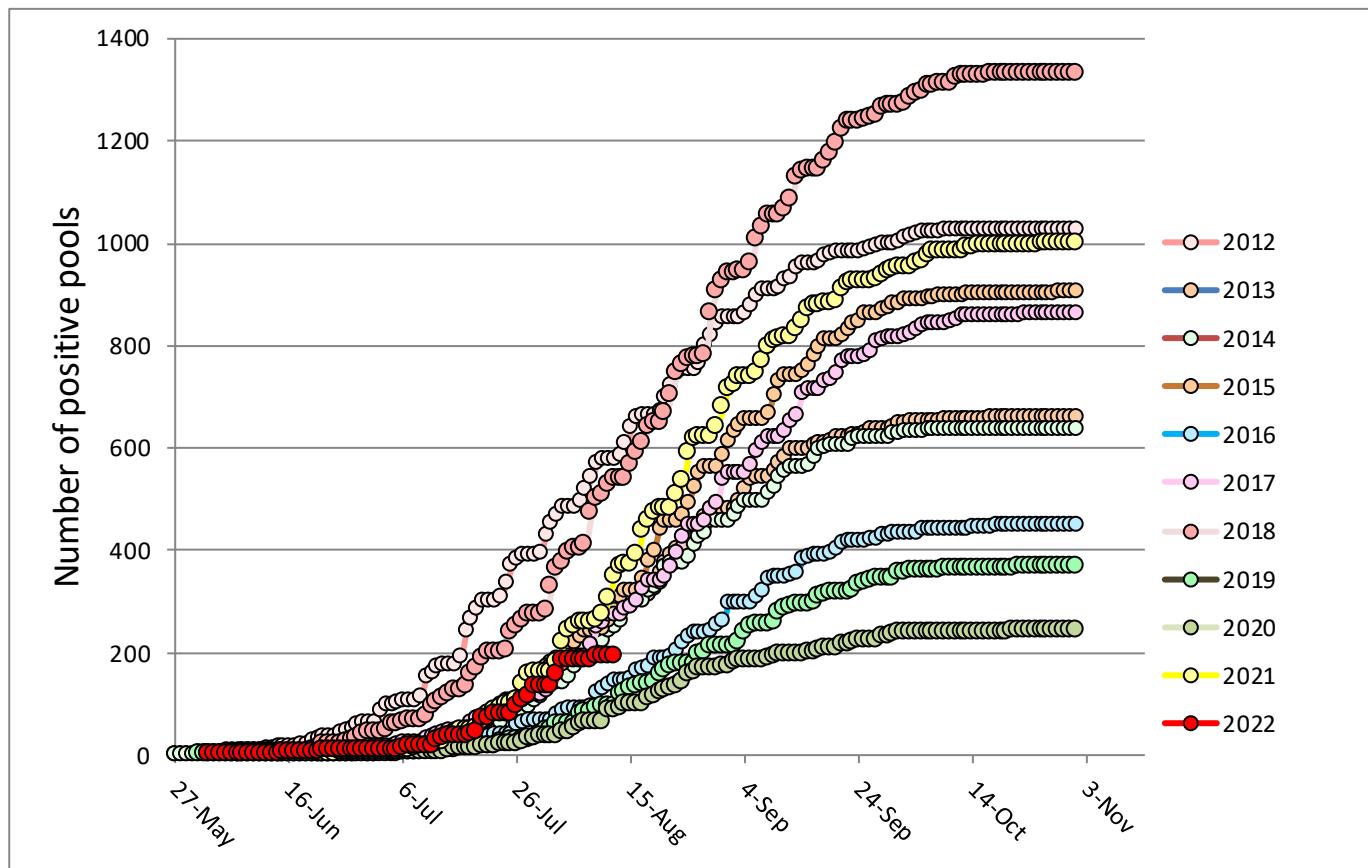
Mosquito Species Submitted and Tested for West Nile Virus through 12 August 2022

| Species | Pools | Mosquitoes | Positives | MFIR |
|------------------------------------|-------------|---------------|------------|--------------|
| <i>Aedes abserratus</i> | 17 | 393 | | |
| <i>Aedes albopictus</i> | 276 | 2799 | 2 | 0.715 |
| <i>Aedes atlanticus</i> | 3 | 7 | | |
| <i>Aedes atropalpus</i> | 1 | 1 | | |
| <i>Aedes aurifer</i> | 16 | 154 | | |
| <i>Aedes canadensis canadensis</i> | 77 | 1253 | 1 | 0.798 |
| <i>Aedes cantator</i> | 49 | 1658 | 1 | 0.603 |
| <i>Aedes cinereus</i> | 4 | 48 | | |
| <i>Aedes grossbecki</i> | 9 | 51 | | |
| <i>Aedes japonicus</i> | 329 | 2292 | | |
| <i>Aedes provocans</i> | 2 | 3 | | |
| <i>Aedes sollicitans</i> | 26 | 535 | | |
| <i>Aedes sticticus</i> | 7 | 166 | | |
| <i>Aedes stimulans</i> | 13 | 71 | | |
| <i>Aedes taeniorhynchus</i> | 20 | 567 | | |
| <i>Aedes triseriatus</i> | 120 | 387 | 1 | 2.584 |
| <i>Aedes trivittatus</i> | 5 | 64 | | |
| <i>Aedes vexans</i> | 115 | 2681 | 1 | 0.373 |
| <i>Anopheles spp.</i> | 3 | 97 | | |
| <i>Anopheles barberi</i> | 3 | 3 | | |
| <i>Anopheles bradleyi</i> | 17 | 189 | | |
| <i>Anopheles crucians</i> | 7 | 13 | | |
| <i>Anopheles punctipennis</i> | 165 | 1869 | | |
| <i>Anopheles quadrimaculatus</i> | 55 | 710 | | |
| <i>Coquillettidia perturbans</i> | 149 | 3551 | | |
| <i>Culex erraticus</i> | 37 | 360 | | |
| <i>Culex spp.</i> | 1925 | 74831 | 178 | 2.379 |
| <i>Culex pipiens</i> | 174 | 6449 | 7 | 1.085 |
| <i>Culex restuans</i> | 128 | 1905 | | |
| <i>Culex salinarius</i> | 18 | 342 | | |
| <i>Culiseta inornata</i> | 6 | 14 | | |
| <i>Culiseta melanura</i> | 219 | 1727 | | |
| <i>Orthopodomyia signifera</i> | 2 | 2 | | |
| <i>Psorophora ciliata</i> | 3 | 9 | | |
| <i>Psorophora columbiae</i> | 7 | 40 | | |
| <i>Psorophora ferox</i> | 19 | 265 | | |
| Grand Total | 4026 | 105506 | 191 | 1.810 |

Remarks: To date 4026 pools of 105,506 mosquitoes from 34 species have been tested, with 191 positive pools of WNV detected. First positive pool was detected in *Aedes cantator*, collected 2 June in Burlington County at a traditional resting box site. Positive species include *Culex Mix*, *Culex pipiens*, *Aedes albopictus*, *Ae. canadensis canadensis*, *Ae. cantator*, *Ae. triseriatus*, and *Ae. vexans*. Cumulative MFIR for all mosquitoes in New Jersey is 1.810, up from last week's value of 1.670.

Humans, Horses and Wild Birds: No date, no humans or livestock have been reported with WNV. Last year, no horses have been reported infected but 36 human cases were detected. 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, last year 13 corvids and birds of prey were reported positive for WNV.



Above is a graph showing cumulative number of positive pools for the previous 10 years, inclusive of the most active (2018) year. 2022 is represented in RED (first positive collected 2 June).

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