**Summary table – Week 27**

| Region                | Aedes vexans |  | Culex Mix |  | Coquillettidia perturbans |  | Aedes sollicitans |  |
|-----------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                       | This Week    | Average*         | Increase        | This Week        | Average*         | Increase        | This Week        | Average*         | Increase        |
| Agricultural          | 1.20         | 6.05             | 0               | 1.12             | 2.91             | 0               | 0.77             | 0.62             | 1               |
| Coastal               | 0.68         | 4.18             | 0               | 1.11             | 10.16            | 0               | 0.95             | 1.70             | 0               |
| Delaware Bayshore     | 0.09         | 2.46             | 0               | 0.43             | 30.22            | 0               | 0.03             | 2.73             | 0               |
| Delaware River Basin  | 0.39         | 10.26            | 0               | 0.18             | 2.55             | 0               | 0.00             | 0.28             | 0               |
| New York Metro        | 0.37         | 7.18             | 0               | 1.64             | 9.16             | 0               | 0.11             | 0.29             | 0               |
| North Central Rural   | 0.18         | 0.29             | 0               | 0.16             | 0.99             | 0               | 0.04             | 0.06             | 0               |
| Northwest Rural       | 0.17         | 26.07            | 0               | 0.54             | 6.01             | 0               | 0.60             | 1.63             | 0               |
| Philadelphia Metro    | 1.14         | 10.11            | 0               | 1.07             | 6.80             | 0               | 0.09             | 0.95             | 0               |
| Pinelands             | 0.29         | 2.17             | 0               | 0.79             | 3.73             | 0               | 0.65             | 2.15             | 0               |
| Suburban Corridor     | 1.12         | 8.12             | 0               | 1.19             | 2.23             | 0               | 0.72             | 0.50             | 1               |

*Averages represent data from, at most, the previous 5 years. Increase is a scale of current values from historical values where no difference or a decrease is represented by 0 (blue), up to 50% greater difference by 1 (green), up to 100% greater difference by 2 (yellow), up to 150% greater difference by 3 (orange) and greater than 150% increase by 4 (red). White cells in the increase column denote increases from an historic zero and thus no value can be appropriately given.

**State Summary:** *Coquillettidia perturbans* abundances continue to decline in many regions. Populations in the Agricultural and Suburban Corridor were above historical values while the three other pestiferous species continued to show low numbers.
The three figures show the interpolation of average maximum and minimum temperature and total precipitation from July 1 to July 14, 2010 in New Jersey. Data points are from 40 weather stations maintained through the New Jersey Weather & Climate Network and the State Climatologist. Interpolation between points was performed using ArcMap 9.2.

Cooler temperatures occurred during this past week with most areas receiving an inch or more of rain. Coastal and higher elevation areas are cooler during the day, but the Coastal areas retain heat during the night. The Coastal areas also did not get as much rain as inland areas.
The Species Graphs: The species graph pages include a graph with two plots for each of the ten regions defined on the first page (Agricultural, Coastal, Delaware Bayshore, Delaware River, New York Metro, North-Central, Northwestern, Philadelphia Metro, Pinelands, and Suburban Corridor). Below is an example of one graph from one species within one region. The bar plot shows the average number of mosquitoes per trap within the region (weekly means) and line plots show the historical trend as the average number of mosquitoes from the previous 5 years (5-year average). In general, historical data are running means from the previous 5 years, but on occasion, will include data from fewer years. Adjustments are made to account for year discrepancies. Data for this week are from Atlantic, Bergen, Camden, Cape May, Essex, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties. Note: Previous week’s data are from Atlantic, Bergen, Camden, Cape May, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex, Union and Warren counties.
Aedes vexans - Fresh Floodwater Species
Multivoltine Aedine (Ae. vexans Type)

**Agricultural**

**Coastal**

**Delaware Bayshore**

**Delaware River Basin**

**New York Metro**

**North Central Rural**

**Northwestern Rural**

**Philadelphia Metro**

**Pinelands**

**Suburban Corridor**

**Comments**

Aedes vexans has experienced very low numbers through much of this program’s time period for this season. Recent rainfall should change that in many places throughout New Jersey, particularly inland locations. Recent rainfall varied with some locales receiving more than 2 inches of rain, while others received less than 1 inch. Given that soil moisture was low, some of that rain will be rapidly taken up by plants and soil. Locally heavy rainfall in areas with the right topography may result in a substantial emergence of this and other floodwater species.
Culex Mix – Permanent Water Species
Multivoltine Culex/Anopheles (Cx. pipiens Type)

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| ![Graph](image9.png) | ![Graph](image10.png) | Culex Mix is represented by three species of Culex mosquitoes: Cx. pipiens, Cx. restuans and Cx. salinarius. These mosquitoes are usually grouped together as there is considerable difficulty in separating them to species easily after travelling through the grind of the light trap, often in the company of protesting moths and beetles.

Culex populations were recently showing the effect of the dry conditions New Jersey has been experiencing for the past 90 days. With the recent rainfall that has occurred in many places, habitat should be restored. Given the multivoltine nature of this species, some rebound of populations are likely to occur in the future. |
**Culiseta melanura** – Miscellaneous Group

**Unique (Cs. melanura Type)**

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<td><em>Culiseta melanura</em>, the enzootic ornithophilic vector of eastern equine encephalitis, are now at about historical values for most regions, except for the Agricultural which have numbers higher than historical trends. With recent rainfall, crypts that might have dried up during the past several drought-like weeks could have been restored. If this increases the survivability of any existing overwintering or second generation larvae, then a large late summer population may occur. Given the EEE activity last year, vigilance of this species should continue.</td>
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**Coquillettidia perturbans** – Miscellaneous Group
Monotypic (*Coq. perturbans* Type)

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<td><em>Coquillettidia perturbans</em> have decreased for some regions but the Agricultural, Coastal, North Central Rural, Philadelphia and Pinelands regions experiences minor to moderate increases, with all being at or below historical levels.</td>
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### Aedes sollicitans - Salt Floodwater Species
Multivoltine Aedine (Ae. sollicitans Type)

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<td><em>Aedes sollicitans</em> population numbers continue to be below recent historical trends at the two regions of highest production, the Coastal and the Delaware Bayshore.</td>
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**Aedes japonicus** – Container Species
Multivoltine Aedine (*Ae. triseriatus* Type)

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<td><em>Aedes japonicus</em>, a hardy cold-tolerant species, has shown higher than historical numbers for several regions over several weeks. Populations now appear to be around or below historical trends.</td>
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Anopheles quadrimaculatus
Multivoltine Culex/Anopheles (An. quadrimaculatus Type)

Previously, we showed the population of *Anopheles quadrimaculatus* in the Northwestern Rural region because it was displaying higher abundances earlier in the season than was usually seen. This increase in the population likely came from several contributing factors, including beavers and extended warm weather. Similar factors may also be contributing to the pattern we are now seeing in the Suburban Corridor *An. quadrimaculatus*. But, rather than being driven by one site, there are several sites that show this shift. The peak in the Suburban Corridor was generated mostly by one site near a wildlife area. But two other areas far from this site also have shown higher than historical numbers.
Top Ten Cumulative Mosquito Species/Region -

Note: In early season when fewer species are caught, graphs may show less than ten species listed.

Agricultural

Total # mosquitoes

Coastal

Total # mosquitoes
**Pinelands**

- Total # mosquitoes
  - Cs. melanura
  - Culex Mix
  - Coq. perturbans
  - Ae. canadensis
  - Ae. vexans
  - Ae. cantator
  - Cx. territans
  - An. bradleyi
  - An. punctipennis
  - An. quadrimaculatus

**Suburban Corridor**

- Total # mosquitoes
  - Culex Mix
  - Coq. perturbans
  - Ae. vexans
  - An. quadrimaculatus
  - An. punctipennis
  - Ae. japonicus
  - Ae. canadensis
  - Ur. sapphirina
  - Ae. grossbecki
  - Ps. columbae