Pioneer Valley MCD Weekly Report (EPI Weeks 21-24)

Note: This report summarizes the adult mosquito surveillance period between 5/20/24 and 6/14/24. Arbovirus testing began EPI Week 24 (6/10/24), and the results from this can be found in the report below.

EPI Weeks 21-23 Adult Mosquito Surveillance Summary (Non-testing Period)

- EEE/WNV Bridge Vectors

Mosquito Species	Cumulative Totals	Percent of Total Collected
Ae. *canadensis*	914	16.3%
Ae. *japonicus*	159	2.8%
Ae. *vexans*	267	4.8%
An. *spp (*multiple species)	237	4.2%
Cq. *perturbans*	2845	50.8%
Cx. *salinarius*	30	<1%

- Primary Vectors

Mosquito Species	Cumulative Totals	Percent of Total Collected
Cs. *melanura* (EEE)	156	2.8%
Cx. pipiens/restuans (WNV)	176	3.1%

Total Mosquitoes Collected (including non-vector species): 5601

Positive Samples

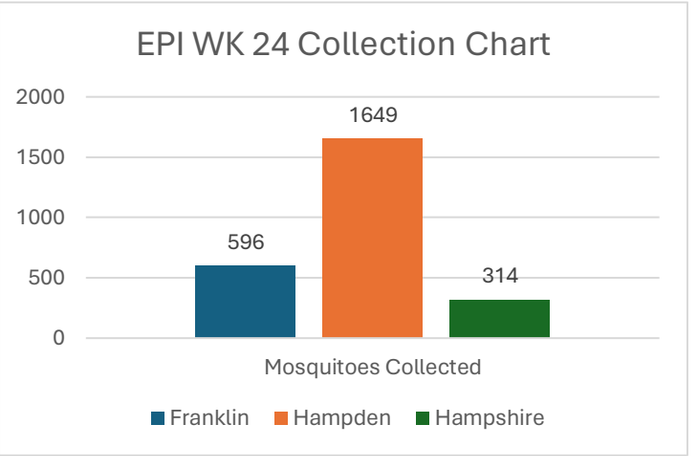
- Arbovirus testing did not occur during EPI weeks 21-23.

Most Abundant Species

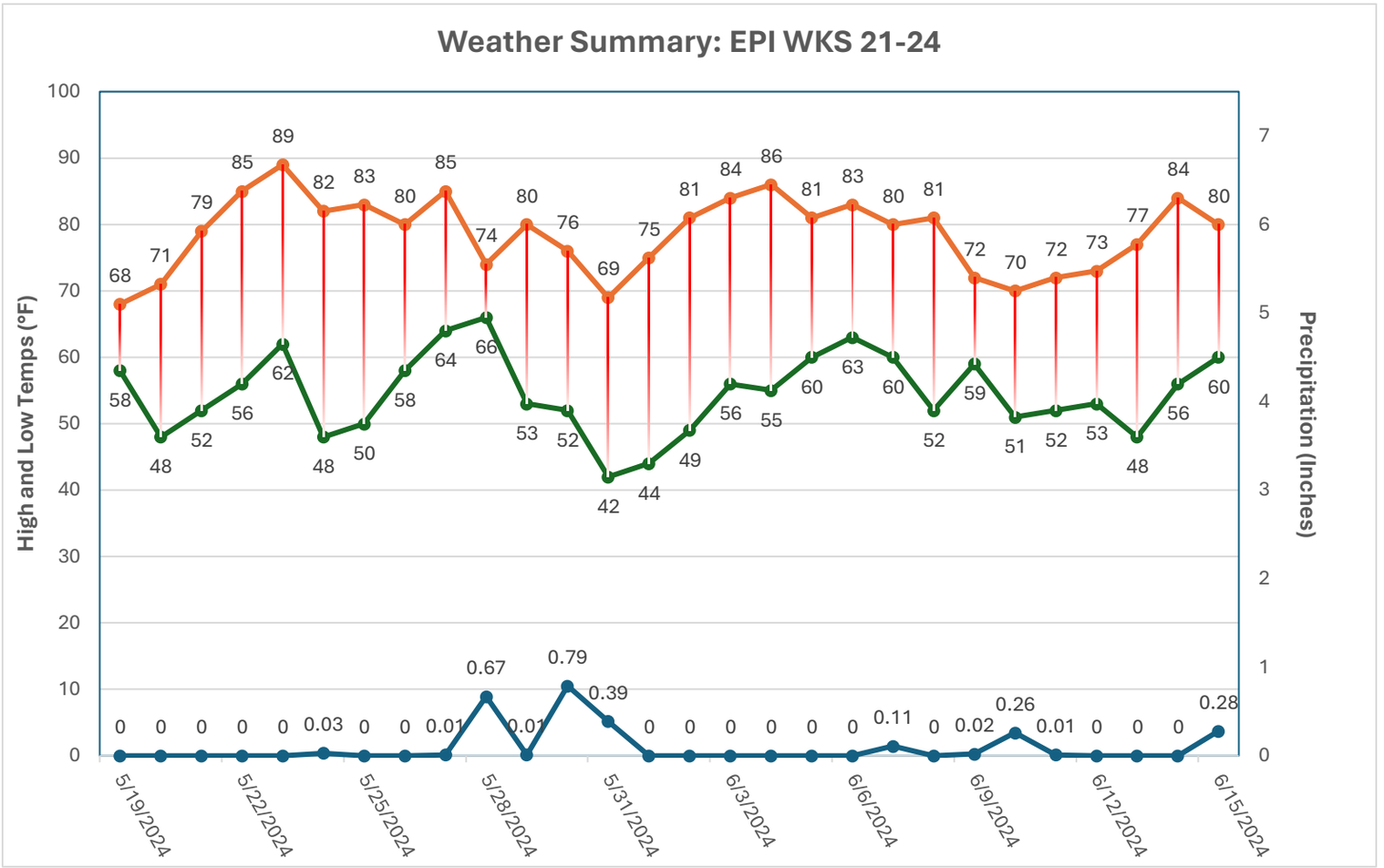
- Cq. *perturbans* were the most abundant vector species collected from EPI weeks 21-23, totaling 2845 specimens. This number is expected to increase each week and peak around early July. Cq. *perturbans* are a bridge vector for EEE and WNV and can be found in permanent swamps with emergent vegetation (e.g. cattails and hummocks/tussocks). Cq. *perturbans* are aggressive human biters and are primarily active during the night.

EPI WK 24 Summary by County

- Franklin County
  - EPI WK 24 Pools Tested: 21
  - Positive Samples: 0
  - Most Abundant Species: Cq. *perturbans* (372)
  - Total Mosquitoes Collected: 596
- Hampden County
  - EPI WK 24 Pools Tested: 14
  - Positive Samples: 0
  - Most Abundant Species: Cq. *perturbans* (1316)
  - Total Mosquitoes Collected: 1649
- Hampshire County
  - EPI WK 24 Pools Tested: 13
  - Positive Samples: 0
  - Most Abundant Species: Cq. *perturbans* (220)
  - Total Mosquitoes Collected: 314
- Total Mosquitoes Collected (All Counties): 2559



Weather Data



Weather Summary

- Weather conditions remained favorable for mosquitoes during EPI weeks 21-24. Collection sizes increased each week, with EPI week 24 having the highest weekly total of 2559. If weather conditions continue to remain favorable, it is expected that mosquito populations will increase.

Eastern Equine Encephalitis

- PVMCD staff have been prioritizing and targeting trap sites that produced Culiseta *melanura* (the primary vector for EEE) last season. At this time last year, none of our traps produced Culiseta *melanura* mosquitoes. We eventually saw their numbers begin to increase in July, with a total of 232 specimens for the entire season. So far this year, 156 Culiseta *melanura* have been collected in our traps. Suffice it to say, we are much further along than we were a year ago. There isn't much historical data to reference, but I would say these are likely healthy numbers for the area. Most other mosquito control districts throughout the state have also reported higher-than-average Culiseta *melanura* numbers.

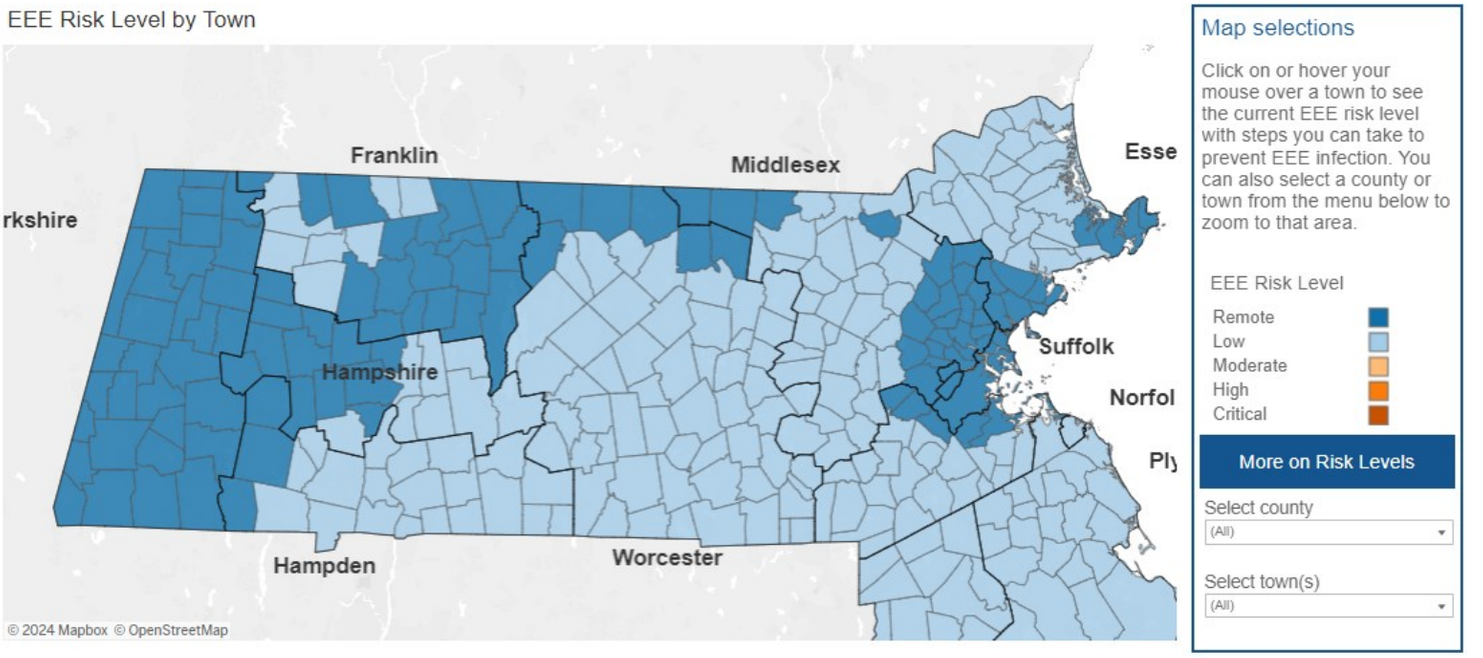
Conditions Impacting EEE

- Weather: The weather needs to remain favorable for both Cs. melanura and bridge vector species.
- Reservoirs: The EEE virus will need to be present in the bird population and become prevalent enough for spillover to occur into bridge vectors.

Impacted Areas

- Some municipalities are listed as “Low”, one step above “Remote”, on the MA Department of Public Health’s Arbovirus Risk Maps. This is due to a history of EEE activity being detected in the past 10 years.
- Preventing EEE Infection:
  - Check DPH’s Arbo Risk Maps on a regular basis
  - Repair window screens
  - Wear EPA-approved mosquito repellent between dusk and dawn
  - Wear long sleeves and long pants from dusk to dawn
  - Use mosquito netting on baby carriages and playpens

Current Risk Map from: https://www.mass.gov/info-details/massachusetts-arbovirus-update



Questions/Comments: Please email John Briggs, the District Director, at john.c.briggs@mass.gov.