

Mystic River Watershed Baseline Monitoring Program

Summary

- The Mystic River Watershed Association (MyRWA) works to protect and improve environmental conditions for the more than one half million residents within the 22-community Mystic River Watershed
- Water quality monitoring is a primary focus for MyRWA, which maintains three distinct monitoring programs
- MyRWA trains volunteers to collect water samples through a US EPA Quality Assurance Project Plan
- MyRWA has been formally collecting water quality data in the Mystic River Watershed since July 2000 through the Baseline Monitoring Program



Photo by David Mussina

Process

- Through the Baseline Monitoring Program, a dedicated corps of volunteers collects water samples each month from fifteen sites across the watershed and analyzes them for:
 - Bacteria:
 - *Enterococcus* or *E. coli*
 - Total suspended solids
 - Nutrients:
 - nitrate-nitrite
 - total phosphorus
 - Conductivity
 - Dissolved oxygen
 - Water temperature
 - Water color and odor

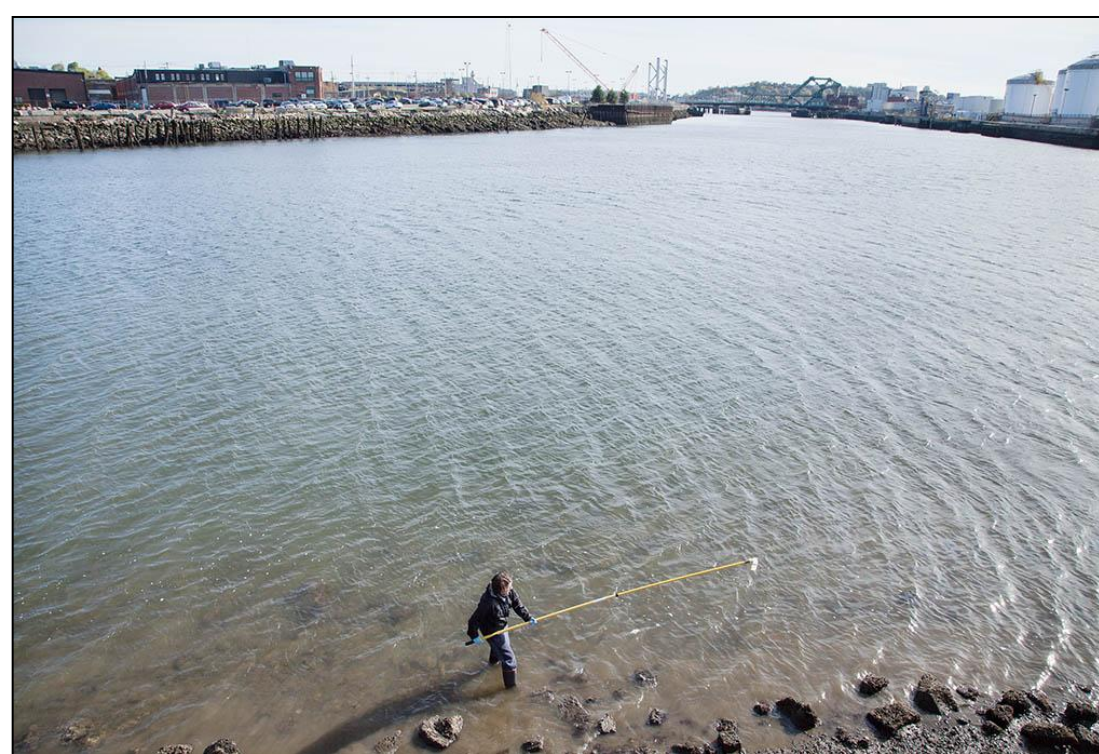
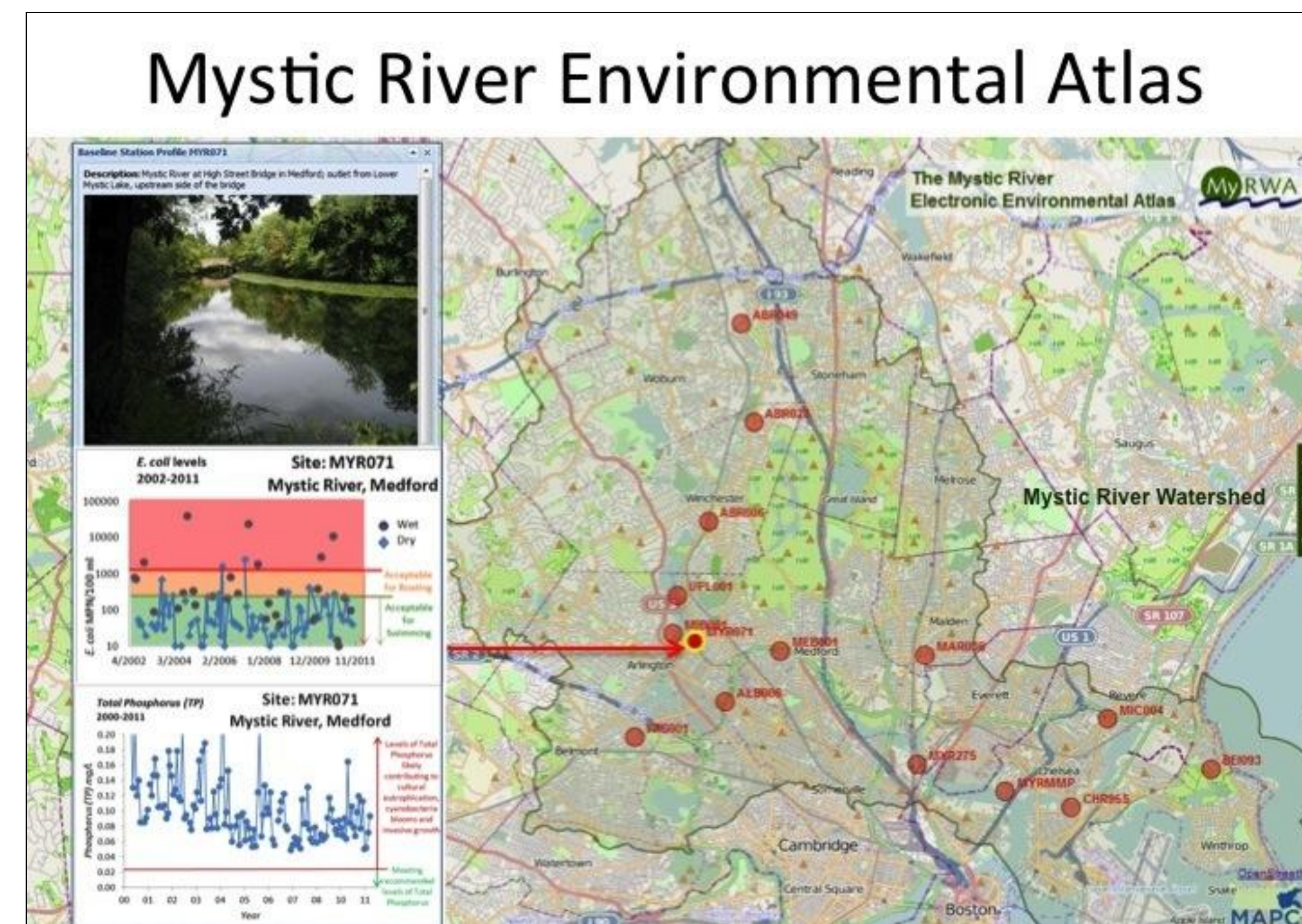


Photo by David Mussina

Explore site-specific data at www.MysticRiver.org/baseline

Results

- In 2007, MyRWA released the first Mystic River Baseline Index, a summary of water quality data from 2001-2007 that describes current conditions in the watershed based on the results of baseline monitoring
- The Mystic River Environmental Atlas (below) is an interactive map that allows one to access information about the Mystic River Watershed, including: Water Quality Data, Recreational Opportunities, Accessibility, and Physiography, at all baseline monitoring station locations



- Through MyRWA's monitoring and advocacy efforts, phosphorous levels have declined in the river
 - Phosphorous suggests the presence of stormwater runoff that includes pollutants such as fertilizers
 - *E. coli* indicates the presence of human sewage, which poses an increased risk of contracting illness
- However, bacteria levels (*E. coli/Enterococcus*) remain high during wet weather sampling. MyRWA continues to work with municipalities to address elevated bacteria levels

You can explore our data on the interactive Mystic River Electronic Environmental Atlas

Conclusions

- In addition to providing a record of water quality for the Mystic River Watershed, MyRWA's data has also:
 - Led to improvements in water quality in the Mystic River Watershed
 - Increased awareness, understanding and advocacy about water quality issues in the Mystic River Watershed
 - Increased community participation through the local citizen scientist program
 - Informed decision makers such as the US EPA, cities and towns, and Massachusetts Dept. of Environmental Protection

Acknowledgements and Contact Information

Thank you to MAPC for its work on the Mystic River Electronic Environmental Atlas.

Our sincere appreciation to the water quality monitors for diligently collecting this data!

Thanks to the Massachusetts Environmental Trust (MET) for their generous support of the Baseline Monitoring Program.



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Are you interested in becoming a water quality monitor? Email Katrina@MysticRiver.org for more information.