

# Mystic River Watershed Steering Committee

March 5, 2019 Meeting Summary **DRAFT**

*Winchester Town Hall, Winchester, MA*

Note: Presentation slides with additional detail can be found at <https://www.epa.gov/mysticriver>, under the “Mystic River Initiative.”

## Next steps

- EPA will reach out to the Science, Water, and Open Space Subcommittees regarding activities, including a possible Phase 4 of the eutrophication study

## Next Meeting

The next meeting will take place on Thursday, June 13, 10 AM – 12 PM, **location TBD**.

## Update on Nutrient Study

Suzanne Warner (EPA) provided an update on the Mystic River watershed eutrophication study.

- Phase 1, which included analyzing available data, selecting nutrient targets, and selecting appropriate models, is complete.
- Phase 2, which entailed modeling the River and the upper and lower Mystic Lakes to finalize watershed loading, using the Opti-Tool for analysis, is also complete. The report on watershed loading is currently under review, and is expected to be finalized in late April 2019.
- Phase 3, currently underway, is focused on community collaboration. EPA and a technical team are currently working with Arlington and Winchester to advance planning for successful stormwater management programs.
- A potential Phase 4 may include using the information from the study and the work with the two initial municipalities to guide work with more communities in the watershed and to identify other actions going forward.

EPA is working to address some questions about MS4 credit requirements for municipalities, including regarding structural and non-structural requirements, leaf litter management, and stream buffers.

## 2019 Mystic River Science Symposium: April 30

Patrick Herron (Mystic River Watershed Association [MyRWA]) and Caitlyn Whittle (EPA) previewed the agenda for the April 30 Science Symposium, which will be held at EPA Region 1 Headquarters. The symposium occurs bi-annually and its purpose is to put attention on developing science and focus resources in the watershed. More information is available at <https://www.epa.gov/mysticriver>.

Topics will include:

- Phosphorus study
- Green infrastructure in the watershed

- Climate resilience watershed modeling
- Malden River health risk assessment
- Herring Run project

### Resilient Mystic Collaborative Overview

Julie Wormser (MyRWA) provided an overview of the Resilient Mystic Collaborative and invited municipalities to become involved. The collaborative formed in response to communities' requests for help to work together on resilience issues, particularly water- and heat-related, which frequently span municipal boundaries. The collaborative is presently focused on stormwater management and strengthening critical infrastructure to protect communities during and after storm events.

Several municipal representatives emphasized the knowledge-sharing and resource-scaling benefits of regional collaboration. The Resilient Mystic Collaborative serves as a forum through which to pursue joint applications for larger funding and assistance opportunities from regional, state, and federal sources such as the Massachusetts Executive Office of Energy and Environmental Affairs Municipal Vulnerability Preparedness Program and the Department of Homeland Security. For example, the collaborative is currently exploring ways to test the concept of cross-municipal cooperation on strategies to prevent downstream flooding through less expensive upstream measures.

Patrick Herron (MyRWA) encouraged communities in the watershed to make use of the climate modeling and flooding maps MyRWA has made available at <https://mysticriver.org/climate> and to come to the April 30 Science Symposium to learn more about recent climate modeling in the watershed.

### Introduction to Per- and Polyfluoroalkyl Substances (PFAS)

Tony Rodolakis (Wood E&IS) provided a presentation on the implications of the presence of contaminants called PFAS (Per- and Polyfluoroalkyl Substances) in the Mystic River watershed. Research is underway to understand better this family of 3000-5000 chemical variants, which are coming to the forefront in the regulatory world.

### Chemical applications

Due to the fact that PFAS are heat- and strain-resistant; very chemically stable; very water soluble, and have useful surfactant properties, they have many consumer, industrial, firefighting, and safety applications and have been widely deployed across industries. However, these same properties make these chemicals very persistent, mobile, and prone to bioaccumulate. They are now ubiquitous in a wide range of environments across the world.

### Health risks

Preliminary research shows that high exposure to PFAS increases the risks of cancer and other adverse health effects in animals, but the mechanisms, effects on humans, and the thresholds of toxicity are not well understood at this point. Major manufacturers voluntarily agreed to

phase out many of these chemicals in the early 2000s, however the effects of chemical replacements since implemented are likewise not well understood. Drinking water and diet are thought to be the main human exposure pathways for populations not exposed to sites and facilities that could be direct sources (including firefighting, various industrial and chemical facilities, landfills and wastewater treatment plants, airports, and other sites.)<sup>1</sup> The Mystic River watershed has several potential sources through which contamination could migrate into water.

#### Current and emerging regulation

Massachusetts has health advisories and standards to screen for contamination if the chemicals are known to be in sources of drinking water onsite, and is currently initiating promulgation of a maximum contaminant level for drinking water of 70 ppt for the sum of five common chemical variants of the PFAS family. Massachusetts is also expected to issue standards for soil and groundwater. Risk-based site closure under the Massachusetts Contingency Plan (MCP, also known as the 21E program) is possible with existing science.

EPA Region I has issued screening levels for human consumption of fish and shellfish and for human contact with water. Massachusetts and EPA have not yet issued aquatic life or sediment contamination criteria. Canadian agencies have issued criteria of 6 ppb for freshwater and 0.01 ppb for soil.

#### Emerging approaches to investigating and mitigating PFAS contamination

Due to uncertainty about the effects of PFAS, particularly on human health, an “outside-in approach” is being applied to PFAS investigation. Releases of most conventional contaminants begins with source contamination and then maps contaminant transport pathways to delineate the nature and extents of a release before designing and implementing a remedy. With the rapid “outside-in approach,” if a PFAS source is identified and contamination is detected, the source characterization is skipped, warnings are made, and safe drinking water is provided. Source and transport pathways are delineated later. Cross contamination is a significant concern for analysis, because of the ubiquity of PFAS contaminants in lab equipment as well as everyday items. Some options are available for groundwater treatment. Soil treatment options are more limited but are early and middle stages of development.

#### PFAS going forward

In February, EPA announced a PFAS action plan which it will work to implement, including making regulatory determinations by the end of 2019, requirements for municipalities to test for major PFAS constituents, adding PFAS to toxics release inventory reporting, providing groundwater cleanup recommendations, listing PFOS and PFOA as hazardous waste under CERCLA, among other planned actions.

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<sup>1</sup> Lise Marx (Massachusetts Water Resources Authority) noted that MWRA has not detected PFAS in tests of its water. See <http://www.mwra.com/01news/2019/091719-no-pfas.html> for a recent statement from MWRA on PFAS testing.

Regulations and enforceable standards are likely to emerge from state agencies and EPA. Changes to regulation can be tracked here: <https://pfas-1.itrcweb.org/fact-sheets/>.

## North American Wetlands Conservation Act (NAWCA) Funds from ExxonMobil's 2006 Oil Spill Settlement

Mitch Hartley (U.S. Fish and Wildlife Service, Atlantic Coast Joint Venture [USFWS, ACJV]) provided a presentation on the North American Wetland Conservation Act (NAWCA) grant program.

Roseann Bongiovanni (GreenRoots Chelsea) introduced the topic of the NAWCA funds and explained that she and others had been involved in advocacy over the past 13 years to keep the funding from the ExxonMobil spill 2006 settlement in the Mystic River Watershed for communities that had been impacted by the spill.

### NAWCA overview

NAWCA's funding comes from a combination of appropriations, fines, and interest from some federal funds. NAWCA gives standard \$1M grants during two windows per year, and gives small \$100,000 grants during one window per year.

NAWCA grants fund projects that provide direct benefits to wetland birds and their habitats. NAWCA was established as a matching grant program. The matches can be in the form of other conservation work such as the protection or restoration of wetlands, and can come from multiple partners on a project.

### Funding criteria

Grant applications are scored according to a complex rubric. Criteria for scoring includes the financial value match resources, the type and amount of land being preserved or restored, the species that will benefit from the project, the number and investment of partners, the duration of benefits of the project, and other factors.

\$1.3M of the settlement funds remain and may be disbursed beginning in summer of 2019. Mitch offered to consult with anyone interested in applying regarding the application and scoring process. Information to reach Mitch is available at <https://acjv.org>.

### Discussion

Participants reflected that it was a challenge to find high-scoring projects in urban environments. Mitch offered some examples of more urban environments, including a project in Yuma and some projects in San Francisco Bay.

Kathy Vandiver suggested that those looking to collaborate could consider MIT's Leventhal Cities \$100,000 prize to include as part of a match. Melissa Cryan (MA Executive Office of

Energy and Environmental Affairs, Division of Conservation Services) highlighted the opportunity to pursue grants offered by her office.

### Announcements, Updates, and Funding Opportunities

Melissa Cryan explained that a grant opportunity was recently posted from the Land and Water Conservation Fund, for the purposes of acquiring parkland, developing or renovating parks, and other uses.

Mel Cote (EPA) informed the group that Deb Szaro will continue as the Acting Regional Administrator (RA) for EPA Region 1 while a permanent RA is sought.

### Recognizing Ivey St. John

Caitlyn Whittle and Mel Cote (EPA) recognized Ivey St. John for her role as a founding member of the Steering Committee, her dedicated service, and her passionate support for restoring the Mystic River Watershed. They presented her with a citation signed by Acting RA Deb Szaro.

The meeting was adjourned at noon.