

Tracking and Accounting in the Blackstone and Ten-Mile River Watersheds

MassDEP and RIDEM along with EPA Region 1 have begun to define areas of coordination that can directly benefit the region and their shared waterbodies. Rhode Island and Massachusetts surface waters have both significantly suffered from development and urbanization. In both states, many water bodies are impaired and/or have Total Maximum Daily Load (TMDL) plans. For many TMDLs, water quality improvements are expected as communities and developers install stormwater retrofits and incorporate stormwater management systems into new developments and redevelopments as part of MS4 permitting. MS4 permits require communities to track the installation, operation, and maintenance of various types of stormwater retrofits and green infrastructure, collectively known as stormwater management strategies. Once installed, communities must account for the pollutant removal that is achieved through each stormwater management strategy using the crediting system developed through the permitting process. In unison, this concept is known as “tracking and accounting” and is an integral part to creating a link between stormwater management strategy operation and water quality improvements. However, an outstanding question remains on how to best track and account for retrofits and stormwater management strategies to ultimately determine whether this collective action among towns makes improvements towards water quality.

For this project, RIDEM, MassDEP, and EPA propose to carry out a pilot project that involves capacity building for implementation of stormwater management strategies as well as the tracking and accounting of pollutant reductions. The objective of the work is to 1) create a collaborative environment between a total of up to two municipalities from each state, that allow for capacity building around tracking and accounting of stormwater management strategies, 2) allow for information exchange on what metrics are required to build a consistent and reliable regional approach to tracking and accounting mechanisms, and 3) create a sharable tracking and accounting model that can be applied to additional watersheds and states in the region. By involving municipal partners and inviting representatives from the Departments of Transportation from Rhode Island and Massachusetts, RIDEM, MassDEP, and EPA hope to develop the following goals: 1) share a multi-permittee approved set of metrics that help in the implementation of a tracking and accounting model, 2) development of agency and peer-led workshopping and training materials that can be distributed to other communities and states for implementation in other watersheds, and 3) create a draft set of requirements that helps shape an associated tracking and accounting database that can be set up in the region.

The regions selected for this program are the Blackstone River watershed and the Ten-Mile River watershed. Both watersheds consist of MS4 municipalities. The MS4 permit is issued and administered by RIDEM in Rhode Island under the RIPDES program while in Massachusetts the 2016 MS4 permit is administered jointly by EPA Region 1 and MassDEP but will be issued separately going forward.

This work shall be comprised of the following tasks.

Task 1: Participant Selection. The project team will partner with representatives from up to 2 municipalities from each state in the interstate Watersheds of the Blackstone River and/or the Ten-Mile River and representatives from each state’s Department of Transportation for understanding the process, tracking data needs, accounting resources and how these methods

demonstrate compliance with existing and/or potential permitting requirements related to achieving pollutant reduction and reporting permit requirements.

Task 2: Kickoff Meeting. The Project team and its partners shall convene a kickoff meeting to discuss the scope and objectives of the project.

Task 3: Facilitated Meetings. The project team in coordination with its community partners shall convene a series of meetings (virtual, or in person if conditions allow). Meetings will review the resources, methods and processes involved in compliance tracking and accounting schemes for stormwater management strategies (structural and non-structural). Meetings will focus on facilitated review of the tracking and accounting resources and process for users to present the existing functional elements necessary to develop stormwater control measure performance credits that are incorporated in Appendix F of the 2016 MA MS4 permit for accounting of pollutant load reductions. These sizing and accounting strategies will be used to develop updated tracking and crediting strategies as described below:

- Build a consistent regional approach to tracking and accounting mechanisms and metrics that allow for understanding of water quality improvements and long-term trends toward water resource management.
- Develop a common set of requirements for gathering tracking and accounting metrics and frameworks for municipalities that can be integrated into future applications, including pollutant loading maps.
- Develop common frameworks and data needs for processing regional pollutant loading maps. These efforts would include identification of necessary data layers, the appropriate unit of analysis (geographically defined areas, parcels, watersheds, other available boundary conditions, etc.), crosswalks to condense land uses into classifications that have applicable Pollutant Load Export Rates and other necessary datum.
- Develop a process for updated acceptable changes in structural and non-structural BMPs
- Develop an understanding of what operations and maintenance requirements have to be met for stormwater control strategies to continue to be included in a municipal tracking and accounting database
- Develop draft conditions associated with inclusion of nonconforming BMPs (those that predate standardized tracking and accounting methodologies).
- Develop a list of new BMPs that should be modeled or have performance curves such as flow-rate designed systems, manufactured treatment devices and others.

Task 4: Develop Final Technical Memo (TM). Upon completion of the meetings and reaching a consensus with project partners a TM will be developed outlining the established approach, a summary of data needs and recommendations for future work.

DELIVERABLES REQUIRED AND SCHEDULE FOR COMPLETION OF TASKS

