



Town of Westford

Stormwater Management MASTER PLAN

PROJECT FACT SHEET

SUMMER 2015



*Clean water
begins with YOU.*

The Town of Westford is developing a Stormwater Management Master Plan (SWMMP) to manage runoff from rain storms and melting snow (known as "stormwater"). One

of the objectives of the master plan is to prevent pollutants from reaching our local waterbodies and drinking water supplies. Pollutants such as oil, fertilizers, pesticides, road salt and pet waste are carried by stormwater to drain pipes that discharge directly into local streams, lakes, ponds and wetlands without treatment. Pollutants are also absorbed into the ground and make their way into our wells.

This fact sheet outlines the activities Westford will undertake to draft and finalize the SWMMP. An Advisory Group consisting of regional planning experts, town officials, residents, business owners, and other stakeholders is providing guidance on the development of this important master planning effort. We need your help, too! Information about how to get involved can be found on page 4 in the Public Involvement and Outreach section. Next steps and the schedule are outlined on page 4. For more information about the SWMMP, reports and other documents, please visit the Engineering Department's Storm Water Management webpage at www.westfordma.gov/stormwater.

continued on page 2

About the Project:

Over the years, the Town of Westford has made environmental stewardship a priority. These efforts have included a proactive municipal stormwater program and ongoing improvements to the Town's drainage system to prevent flooding and protect our water quality. Developing a Stormwater Management Master Plan (SWMMP) will allow us to continue to invest wisely and strategically in both our infrastructure and natural resources. The Plan will evaluate our current stormwater management practices and identify future needs and options for funding a sustainable stormwater program. It will also help us keep pace with more stringent federal regulations that we expect to receive from the U.S. Environmental Protection Agency (EPA) within a year.

The SWMMP will provide the necessary guidance for Westford to:

- preserve water quality for recreation and habitat,
- provide sustainable, high quality drinking water sources for residents and businesses,
- protect and preserve public health and property,
- comply with federal and state environmental regulations, and
- identify a long-term funding strategy that is adequate and equitable.

The SWMMP will be organized in five volumes: (1) Stormwater Assessment; (2) Long-Term Capital Improvement Plan (CIP); (3) Town-Wide Operation and Maintenance Plan; (4) NPDES Stormwater Program Compliance Plan; and (5) Evaluation of Funding and Financing Alternatives.

The overall goal of the SWMMP is to prepare a well thought out strategy for the long term preservation of our quality of life and environmental resources. This goal can only be achieved with participation from the whole community.

Evaluating Existing and Future Conditions

The SWMMP began with a review of existing and anticipated future conditions. It's important to understand the nature and size of the stormwater challenge before developing solutions and recommendations for consideration by the Westford community. The SWMMP Volume 1: Stormwater Assessment also takes into account planning for anticipated changes in state and federal regulations that will affect Westford.

The Town evaluated a variety of factors that can impact water quality and quantity. These factors can influence the Town's ability to protect our interconnected water resources and meet regulatory requirements. The conditions and summary data are described in the following paragraphs.

Demographics and Land Use

Since 1960, the Town's population has grown steadily, increasing by 3,000 to 4,000 people every 10 years to its current population of 22,000. Prior to 1960, the population grew by only a few hundred each year. Originally, Westford was noted for its granite quarries, farms and woolen mills, but today is mostly a bedroom community for commuters with easy access to major routes into Metro-Boston. The Town has thriving businesses including retail, restaurants, and technology industries along Littleton Road (Route 110).

Westford's increasing population and economic development have resulted in a conversion of undeveloped land (forests and pastures) to suburban landscapes with increased impervious cover. Land development can have a big impact on water resources, infrastructure demands, and the environment. Impervious surfaces such as paved areas and buildings do not allow water to penetrate into the ground. This trend increases flooding risks and impacts water quality and quantity. It moves stormwater runoff quickly into nearby waterbodies rather than allowing it time to absorb into the ground to slow flow and take advantage of the natural filtering properties of soil. In recent years, Westford has focused on protecting open space and water resources by enforcing sustainable site design standards in local regulations for development and redevelopment, as well as enhanced requirements for activities in sensitive areas.

Surface and Groundwater Resources

Westford lies within the Merrimack River watershed to the north and the Sudbury-Assabet-Concord River

40% of known water pollution is caused by stormwater runoff*



Untreated runoff discharges to nearby waters.



*U.S. EPA Stormwater F.A.Q.s. (<http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-FAQs.cfm>)

(SuAsCo) watershed to the south. 75 percent of Westford lies within two sub-basins of these watersheds – Stony Brook and Nashoba Brook. The Town and numerous state agencies and regional and community organizations monitor the health of natural resource conditions, such as the seasonal water quality sampling by the Westford Stream Team and the Healthy Lakes & Ponds Collaborative. The federal Clean Water Act (CWA) requires that the state monitor and assess waterbodies to ensure they can support designated uses (drinking, swimming, fishing, etc.) and identify those that cannot (considered "impaired"). **Six waterbodies in Westford are considered impaired due to pollution caused by stormwater runoff: Beaver Brook, Stony Brook, Deep Brook, Tadmuck Brook, Heart Pond, and Nashoba Brook.**

About 75 percent of the Town's residents and the majority of its commercial and industrial areas are served by a public water supply and distribution system. By state permit, Westford is allowed to withdraw a maximum of 2.44 million gallons per day (mgd). New state regulations, called the Sustainable Water

Management Initiative, will require Westford to implement water conservation or recharge measures if we want to exceed our new, lower withdrawal limit to accommodate future growth and economic development. Despite demographic changes that could increase demand, Westford has been able to keep water use at approximately the same level as population growth. Drinking water quality in Westford is good, but continued monitoring and protection are necessary.

Stormwater Infrastructure Inventory and Mapping

The Town's stormwater infrastructure was inventoried for a baseline assessment, including a review of its most recent five-year Capital Improvement Plan (CIP) and known areas of flooding and frequent maintenance. The information will be used to identify potential remedies and calculate associated costs to include in the SWMMP. While the Town was an early-adopter of a Geographic Information System (GIS) for stormwater system mapping, there are significant mapping, data collection, and data management needs driven by EPA's stormwater permit that will be addressed in the SWMMP recommendations. Using a GIS-based map and mobile data collection applications will allow the Town to be more efficient and effective in managing drainage infrastructure and more.

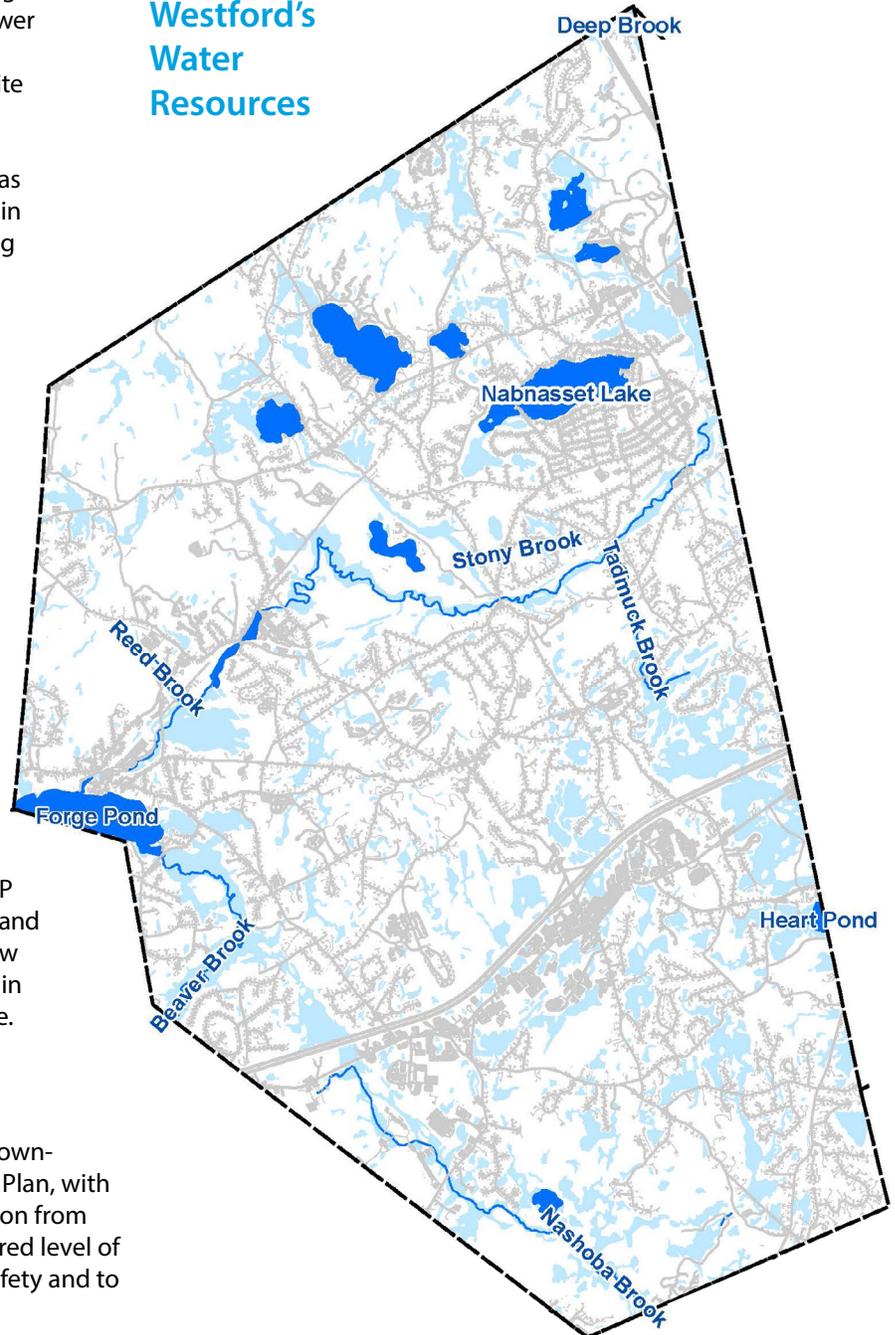
Municipal Operations and Facilities

An inventory of municipal operations and facilities will be the basis for an updated Town-wide Operations and Maintenance (O&M) Plan, with the goal of minimizing stormwater pollution from municipal activities and ensuring the desired level of service from drainage infrastructure for safety and to protect property.

Future Stormwater Management Needs

The Town has characterized future conditions expected within the next 20 years. As population growth and development continue, an influx in residents and businesses will lead to changes in land use and increases in impervious cover. These demands will require more capacity for stormwater management and planning to avoid flooding and negative impacts to water quality. Climate change is

Westford's Water Resources



expected to cause more extreme storm events, higher average temperatures, and more frequent drought conditions. All of these factors may impact water quality, for example, creating conditions favorable for algal blooms that can affect public health. The SWMMP will provide management strategies and recommendations to mitigate potential flooding, drinking water supply impacts, and water quality concerns based on all expected future conditions.

Cost Considerations

Stormwater management program costs include planned capital and O&M expenditures, staff time, and requirements to comply with the new federal stormwater permit described below. We have prepared preliminary estimates of current and future stormwater costs that are all-inclusive. These costs will be refined during the Stormwater Funding Evaluation.

U.S. EPA Permits

The U.S. Environmental Protection Agency (EPA) regulates stormwater discharges to waterbodies under the CWA. Westford operates under a National Pollutant Discharge Elimination System (NPDES) - Small Municipal Separate Storm Sewer Systems (MS4) Program General Permit. The NPDES program regulates sources of pollution discharged from a pipe into local waterways. Like other small communities, Westford has been complying successfully with its current permit, issued in 2003, with public education and involvement, detecting and removing illicit connections, enhanced stormwater requirements for construction and land development through local permitting, and pollution prevention practices for municipal operations.

EPA is expected to finalize an updated MS4 General Permit for Westford in early 2016. Once the permit is announced, the Town, with input from the public, will have one year to develop an updated written compliance plan. The SWMMP Volume 4: NPDES Stormwater Program Compliance Plan will meet the planning requirements of the new permit and serve as the basis for the Notice of Intent application to be submitted to EPA within 90 days of the permit effective date.

EPA's MS4 permit is a key driver in determining Westford's stormwater management needs. There are significant differences between the 2003 and 2014 permits, and the SWMMP will develop an approach for how to address the new permit requirements.

Next Steps & Schedule

The results of the initial SWMMP analyses will be presented at a public meeting in summer 2015. The report and meeting presentation will be posted on the Engineering Department's stormwater webpage. Over the coming months, the Town will investigate options for financing the necessary improvements to manage stormwater to protect our water resources and comply with regulations. The results of that analysis will be presented at a public meeting in fall 2015. The final draft SWMMP will be presented at a public meeting in winter 2015/2016.



Public Involvement & Outreach:

We treasure living, working and playing in the scenic landscape of Westford. Together we can protect the quality of our lakes and ponds and maintain clean drinking water. Learn about the issues and be part of the plan to address them. For more information on the SWMMP and Westford's approach to water resources management, please visit the Engineering Department's Storm Water Management webpage www.westfordma.gov/stormwater.

There are a number of ways to get involved in this critical planning process. Public meetings, which will be filmed by Westford CAT, will be scheduled at key milestones. Recommendations requiring Town Meeting action will be presented for the spring 2016 meeting. Contact us with questions and comments or request to be added to the contact list to receive email notices about upcoming public meetings by emailing pstarratt@westfordma.gov.

Comments or other correspondence can also be sent via US Mail to:

Paul M. Starratt, P.E.
Town Engineer
28 North Street
Westford, MA 01886

For questions, please call 978-399-2716.