



# Samoset Street Outfall Assessment and Conceptual Engineering Project

## Town of Plymouth, Massachusetts

Horsley Witten Group, Inc. (HW) worked with the Town of Plymouth to perform a comprehensive stormwater management investigation of the Samoset Street (Route 44) drainage outfall. The Samoset Street outfall discharges into Plymouth Harbor, which is listed as impaired for pathogens on the Massachusetts Clean Water Act 303(d) list. This stormwater outfall is of great concern to the Town, because Plymouth Harbor and Plymouth Bay are home to numerous acres of historic shellfish beds that have been closed for decades due to poor water quality. This project was funded by a Coastal Pollution Remediation grant awarded to the Town of Plymouth by the Massachusetts Office of Coastal Zone Management.

The goal of this project was to identify sources of pollution to the Samoset Street stormwater outfall system and develop a preliminary stormwater management master plan to improve the quality of the stormwater discharge. To meet this goal, HW utilized a variety of skills and capabilities to provide an integrated assessment and an innovative and effective design for the Town. Our scope of work included:

- Delineation of the drainage area to the stormwater outfall;
- Development of a detailed digital map of the stormwater drainage infrastructure in Geographic Information System (GIS) format;
- Compiling and analyzing additional relevant GIS information, such as wetlands areas, soils surveys, land use, and topography;
- Preparation of a water quality sampling program to identify pollutants and pollutant sources within the drainage area;
- Conducting detailed soil evaluations and wetland delineations;
- Identifying effective locations within the drainage area to site stormwater best management practices (BMPs);
- Identifying appropriate BMP systems for those locations;
- Assisting the Town of Plymouth in selecting the BMPs to be implemented; and
- Providing preliminary engineering designs for selected BMPs.

Six retrofit locations and preliminary designs were presented in the final report. Funding for implementation of the projects came from an EPA 319 Program grant and from MassHighway. The Town of Plymouth has recently contracted with HW to design five of the six retrofits. These designs include various BMPs, such as bioretention systems and a stormwater wetland/wet pond retrofit.

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