

West Warwick Stormwater Utility Implementation & Hardig Brook Restoration



Frederick Presley - West Warwick
James Riordan - ESS Group, Inc.



This project was funded wholly or in part by the United States Environmental Protection Agency (EPA). This project may not necessarily reflect the views of EPA, and no official endorsement should be inferred, mention of trade names, commercial products or enterprises does not constitute endorsement or recommendation for use by the EPA

Objective

Improve water quality related to nutrients in Hardig Brook and Greenwich Bay by establishing sustainable funding for stormwater management with a focus on green infrastructure retrofits.

Significance

Greenwich Bay and Hardig Brook are listed as impaired for bacteria and both were the subject of a total maximum daily load study developed by the Department of Environmental Management (RIDEM) in 2005.

Nutrient impacts are also apparent in these waters as evidenced by fish kills (e.g., August 20, 2003), and recurrent low dissolved oxygen levels in summer months.

Approach

To address these issues the Town proposed development of a stormwater utility and implementation of a capital infrastructure improvement plan. The project also includes a significant public involvement process.

Acknowledgements

The project team would like to thank Tom Borden & Heather Radcliffe (NBEP / NEIWPC) and Elizabeth Scott (RIDEM).

Contact

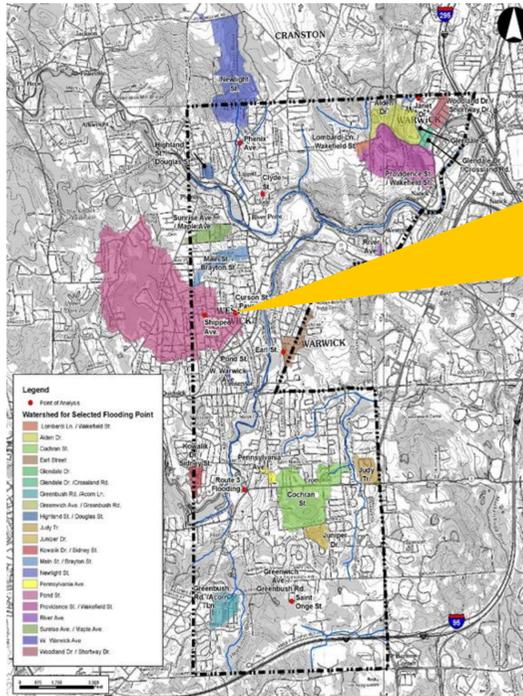
Frederick Presley, Town Manager
Town of West Warwick
(401) 822-9219 fpresley@westwarwickri.org

References

Phase II Feasibility Assessment for a Municipal Stormwater Management District
(ESS Group, 2015)

Feasibility Analysis of a Stormwater Utility District
(Fuss & O'Neill, 2013)

Project Site



Example of Chronic Flooding

Stormwater-Associated Impairment and Watershed Issues		
Waterbody Name	Stormwater-Associated Impairment of Concern*	Watershed and Waterbody Issues
Hardig Brook	Bacteria Lead	<ul style="list-style-type: none"> Largest freshwater tributary to Greenwich Bay Elevated nitrogen found by EPA High density of development and impervious surface
Pawtuxet River South Branch	Bacteria Lead	<ul style="list-style-type: none"> High density of development and impervious surface Significant modification of stream channel with flow diversion and impoundments
Pawtuxet River Main Stem	Bacteria Phosphorus Mercury Cadmium	<ul style="list-style-type: none"> High density of development and impervious surface Especially high density of development adjacent to the river Significant modification of stream channel with flow diversion and impoundments
Meshanticut Brook	Bacteria	<ul style="list-style-type: none"> High density of development and impervious surface

Areas of Chronic Flooding Considered in Study

The areas shown in the map above were identified by Town staff as areas of chronic and significant flooding.

Outcome

This project is ongoing and infrastructure construction is pending. The Town plans to propose a \$55/year/ERU fee, which will be used to fund \$4 million in capital projects and generate an operations budget \$570 thousand per year.



Funding for Stormwater Management is a small part of West Warwick's public works budget and, like most New England towns, is inadequate to meet the needs of competing demands. A stormwater utility creates a dedicated source and predictable level of funding.



Stormwater Utilities are More Fair to Taxpayers: Using general taxation to pay for stormwater unfairly burdens homeowners. A stormwater utility redistributes cost based on the amount of stormwater generated.