

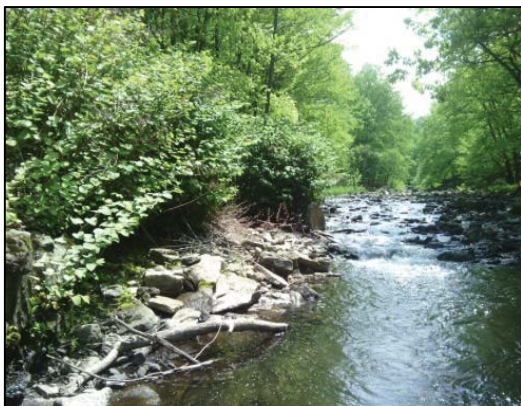
Scranton, PA

HIGHLIGHTS

Background

Scranton is a post-industrial city of approximately 75,000 people in the Lackawanna River valley in northeast Pennsylvania. The majority of the existing stormwater infrastructure within the City of Scranton and the Borough of Dunmore was constructed before 1950, meaning both sewage waste and stormwater runoff are combined into one Combined Sewer System (CSS) and transported to the wastewater treatment plant. An estimated 63 % of Scranton's sewers are combined. The other 37 % is a Municipal Separate Storm Sewer System (MS4).

Stormwater management in the City of Scranton is extremely complex. In addition to meeting the standards of its NPDES permits and TMDL allocations, the City faced the challenge of two separate stormwater systems: a City-operated Municipal Separate Storm Sewer System and a Combined Sewer System (CSS) owned and operated by the Scranton Sewer Authority (SSA). Both the City and the SSA played an integral role in local efforts to improve water quality in the Lackawanna River, and are under stringent federal and state requirements to do so. This unique complexity, amongst other reasons, has resulted in management inefficiencies over the years.



Roaring Brook in Scranton

These factors prompted the City of Scranton to request funding from the National Fish & Wildlife Foundation (NFWF) to receive technical assistance as part of the Chesapeake Bay Stewardship Fund to work with the Environmental Finance Center (EFC) at the University of Maryland, the Lackawanna River Corridor Association (LRCA), and McLane Associates, a Scranton-based landscape architecture firm with extensive experience in environmental consulting and green infrastructure practices.

These partners were asked to enhance the City's stormwater management program by analyzing fiscal practices and infrastructure management, as well as to identify opportunities for implementing green infrastructure practices that would help improve water quality and reduce the flow of stormwater into the already over-burdened system. With many partners committed to helping this process, it became evident that improving local water quality was just as important as managing the stormwater flowing across the City's landscape. Although the historically important yet environmentally damaging coal mining, iron smelting, and railroad industries of years past no longer exist, the nearby Lackawanna River remained negatively impacted from years of degradation and from an aging stormwater infrastructure. With the City already facing fiscal strain, building a comprehensive stormwater program and improving the water quality remained a daunting, yet necessary task.

Location: Pennsylvania

Jurisdiction Type: City

Population: 76,089 (2010)

MS4 Permit: Phase II (along with CSS)

Project Period: 2012-2013

Funders: National Fish and Wildlife Foundation,
Chesapeake Bay Program

Approach

The project partners took a close look at the local dynamics and capacity of each organization, which resulted in recommendations focused on improving the efficiency and cost-effectiveness of leveraging the expertise and staff across the two agencies. This year-long study included extensive partner meetings; data analysis of the fiscal components of the current stormwater program; research on the current implementation of the City's MS4 permit; an inventory assessment of the stormwater infrastructure and identification of green infrastructure opportunities; and the identification of education and outreach strategies.

EFC completed a management and financial analysis, LRCA completed a sub-watershed inventory and analysis, McLane Associates completed a green infrastructure inventory and analysis, and Hatala Associates focused on environmental education. Together, the individual analyses provided a framework for the City of Scranton to move forward in implementing a more cost-effective stormwater program into the future. However, once the EFC project team gathered the data and met with municipal staff and other stakeholders, it was clear that much of the data needed to develop specific financing recommendations was not available. Much of this was due to the City's limited capacity and resources to manage stormwater and the fragmented structure in which the stormwater program currently operates.



Channelized streams in Scranton: Clover Hill Creek (top), East Mountain Run (center), and Stafford Meadow Brook (bottom)

Key Findings and Recommendations

The EFC presented the following recommendations to the City of Scranton in the fall of 2013:

- **The City should complete an inventory of the entire stormwater conveyance and treatment system** so that repairs and replacements can be properly prioritized. To improve the stormwater infrastructure the City must fully understand the MS4 components, from the location and number of outfalls and inlets to the pipe characteristics. The SSA had an extensive mapping system for the CSS portion of the system but the MS4 remained unmapped. The LRCA began a sub watershed inventory and analysis as part of this study, with the hope of receiving additional

funding to support the full inventory of the City's MS4.

- **The City and SSA should work to develop a memorandum of understanding (MoU) in the near-term to begin to develop a comprehensive stormwater program.** While an MoU would be the beginning of a comprehensive stormwater program, it is not a long-term solution. EFC recommended that a more efficient and permanent solution would be to transfer the MS4 permit from the City to the SSA.
- **The City must supplement its current funding approach with a dedicated stormwater fee** to support a more strategic and comprehensive stormwater program, and incorporate cost-saving strategies including the green infrastructure and educational opportunities recommended by project partners to ensure the stormwater management program's viability.
- **The City should complete and adopt a strategic green infrastructure implementation plan** to help alleviate the overburdened stormwater system and improve local water quality. As a component of this study, McLane Associates identified a strategic approach to green infrastructure and highlighted multiple green infrastructure opportunities throughout the City.
- Since effective public outreach is one of the most important components of a successful stormwater program, **the City should continue working with its local partners to develop and implement a public education and participation strategy** that begins with broad outreach and transitions to a more targeted, strategic approach.



*An environmental education program
at the Scranton Iron Furnaces*

For more information, please visit the [MOST Knowledge Center](#).

This project led by:



**ENVIRONMENTAL
FINANCE CENTER**

This project funded by:



Chesapeake Bay Program
Science. Restoration. Partnership.