

Buffalo Sewer's core mission is protecting public health and the environment from water pollution. Established in 1935, Buffalo Sewer continues to deliver critical services to protect public health and support the vitality of the community, environment, and economy.

Green infrastructure manages runoff, improves local waterways, increases the region's climate change resiliency, and enhances overall quality of life. Buffalo has a stormwater challenge. When rain falls in Buffalo or when snow melts, it flows through storm drains and into the City's combined sewer system where it mixes with sanitary sewage. In dry weather, Buffalo's sewer system is able to treat all of this wastewater. However, when it rains or snow melts and more water enters the system, some of this wastewater can flow into Buffalo's rivers, streams, and the lake.

Buffalo Sewer is committed to protecting local water resources and public health through a combination of improvements to the existing gray infrastructure, such as the sewers and wastewater treatment plant, as well as innovative green strategies to reduce the amount of stormwater entering the combined sewer system.

Rain Check 2.0 builds upon the strong foundation of Rain Check 1.0, Buffalo Sewer's first generation of green infrastructure investments. This report identifies potential green infrastructure projects to reduce runoff from over 500 acres of impervious surface, fulfilling Buffalo Sewer's obligations under the Long Term Control Plan (LTCP).

## **Buffalo's Opportunity**

Buffalo Sewer has identified priority sewer basins for implementing green infrastructure to meet part of the LTCP goals and provide additional benefits to the community. This document summarizes the preliminary effort to identify opportunities for green infrastructure on sites within the priority combined sewer overflow (CSO) basins and includes recommendations for how green infrastructure can be deployed throughout the City.

This document describes the Buffalo Rain Check 2.0 Green Infrastructure efforts undertaken by Buffalo Sewer

Figure 0.1 Aerial View of the City. From "Erie County NYSDOP High Resolution Imagery 2017"

Our Great Lakes water is one of Buffalo's most important assets. Since 2006, my Administration, in partnership with Buffalo Sewer, has made a strong commitment to protect that water and dramatically reduce combined sewer overflows through the implementation of its Long Term Control Plan. We are proud that green infrastructure, with its demonstrated impact on economic and neighborhood revitalization, is a major component of our water protection strategy. —Mayor Byron W. Brown



## Rain Check 2.0 Goals:

**Expand** green infrastructure in Buffalo.

**Reduce** stormwater runoff and protect public health.

Conduct rigorous, site specific analyses of feasibility and need.

Incorporate **equity** considerations as critical elements of green infrastructure decisionmaking.

Maximize economic, social and environmental benefits in implementing green infrastructure.

Educate and engage stakeholders on green infrastructure benefits and implementation. and identifies the need to create communities of action for implementation. Rain Check 2.0 includes a tool kit of green infrastructure technologies that can be deployed in Buffalo and identifies various strategies for structuring green infrastructure to maximize stormwater, environmental, equity, and economic benefits.

Successful green infrastructure requires a supportive culture in Buffalo — one that advocates for the implementation and maintenance of green infrastructure. Rain Check 2.0 also includes a robust strategy of engagement and a balancing of priorities to ensure that stormwater goals are met and that the implementation of green infrastructure is informed by consideration of equity and the broader environmental context.

The work of Rain Check 2.0 confirmed that Buffalo Sewer can meet or exceed its stormwater goals in the priority CSO basins by employing green infrastructure. Meeting the goals requires investments in green infrastructure on both publicly-owned and privately-owned properties. Ongoing planning and outreach to identify partners, engage stakeholders, and build trust and shared values is critical to success. This Opportunity Report is a first step in that larger planning effort.

## How to the Use Rain Check 2.0 Opportunity Report

This document is a starting point to guide Buffalo Sewer through its next phases of planning and implementation. It is also intended to help facilitate the creation of a strong coalition of partners, including individual community members, whose collective actions can solve Buffalo's stormwater challenge. This document is organized into the following chapters:

**Chapter One | Opportunity** includes an overview of the stormwater challenge and Buffalo Sewer's approach. It provides the social, economic, and ecological context by examining equity, environmental systems, and the urban context for the City as a whole and in each priority CSO Basin. Each of the 6 priority CSO basins is examined in detail. This chapter provides valuable background for future decisions by Buffalo Sewer and its partners.

**Chapter Two | Places** details the Buffalo sewer system and identifies the green infrastructure technologies and network solutions that will work in Buffalo. It lays out the steps needed to plan and implement green infrastructure in Buffalo.

**Chapter Three | People** presents engagement tools and strategies that Buffalo Sewer can use to plan and implement green infrastructure in Buffalo.

**Chapter Four | Methods** describes the analyses conducted and the methodologies used in coming to the findings presented in Chapters One, Two and Three.

Finally a technical **Appendix** includes the technical reports and mapping completed as part of the Rain Check 2.0 process and that support the findings presented in this report.



Figure 0.2: Map of Rain Check 2.0's six priority CSO Basins.