

An aerial photograph of a city, likely Chicago, showing a dense grid of streets and buildings. A large river is visible on the left side. A dark teal rectangular overlay is positioned in the top left corner. The word "OPPORTUNITY" is written in white, bold, sans-serif capital letters within this teal area. The rest of the image is a grayscale aerial view of the city's urban landscape, including parks, industrial areas, and residential blocks.

OPPORTUNITY

**PRIORITY
CSO BASINS**

PRIORITY CSO BASINS

Basin Specific Analyses

Building on the analysis completed for the Rain Check 2.0 project, Buffalo Sewer has evaluated each of the priority CSO basins through the lenses of Equity, Environmental Systems, and Site Analysis. The opportunities identified in each CSO basin later in this chapter are an effort to balance these three priorities based on the specific conditions in the basin. For example, commercial properties and parking lots comprise much of the impervious area in the priority CSO basins. They are therefore some of the largest contributors of stormwater to the combined sewer system. Retrofitting these properties with green infrastructure will be critical to effectively managing the stormwater challenge. Institutions, such as schools and churches, may be smaller contributors of stormwater, but investments in green infrastructure on those properties may better support achieving equity goals, such as workforce development and neighborhood revitalization, than developments on private property alone. Improvements to corridors, including green streets and tree planting, address high levels of impervious surfaces and provide benefits such as reducing the urban heat island effect and increasing walkability of neighborhoods.

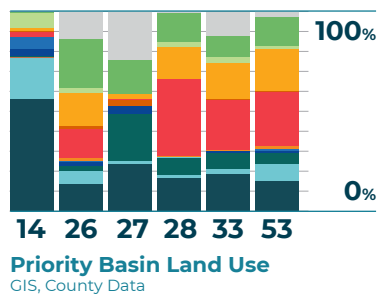
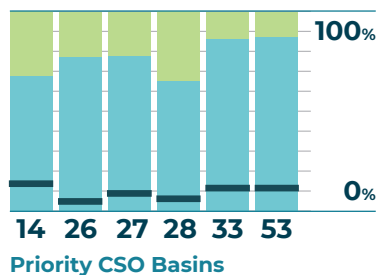
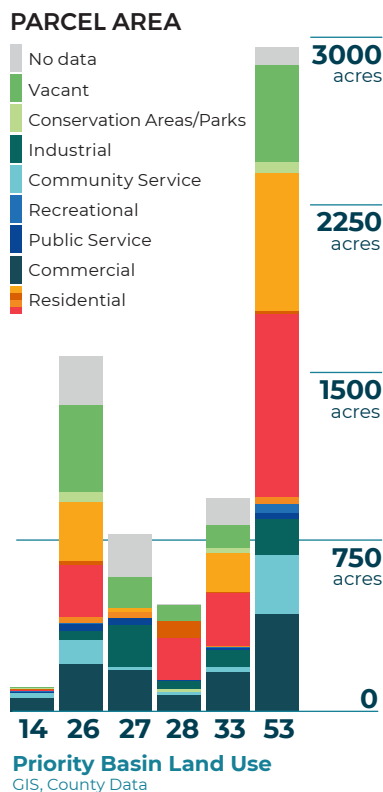
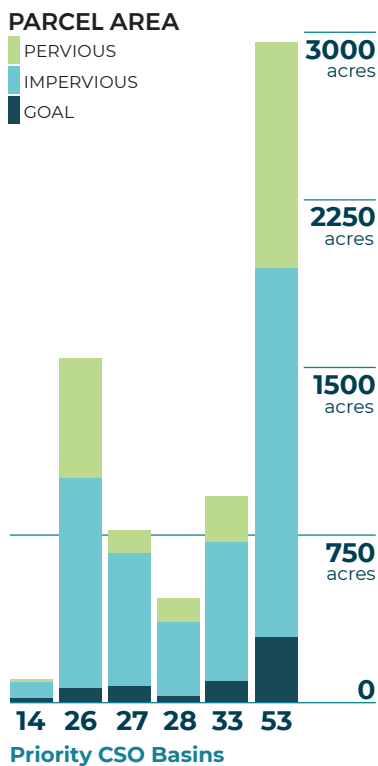
Based on this analysis, this opportunity report identifies types of green infrastructure opportunity sites. The opportunity sites are grouped by category - the key categories being corridors, commercial properties, parking lots, institutions, parks and vacant lots. These opportunity sites were identified in each CSO basin based on:

- **Equity considerations city-wide and within each CSO basin,**
- **Analysis of how green infrastructure would impact and improve environmental systems, and**
- **Site analysis to determine the best opportunities to retrofit green infrastructure based on the highest impervious area and the highest feasibility.**

The next sections discuss each of the priority CSO basins in detail, presenting the analysis for each CSO basin. Within each CSO basin, opportunity sites are identified and an illustrative opportunity, project, or groups of projects lays out a vision of how green infrastructure can be deployed on a specific site within the CSO basin. The intent of this analysis is to begin the conversation between Buffalo Sewer, the City, property owners, and the community.

PRIORITY CSO BASINS

Basin Specific Analyses

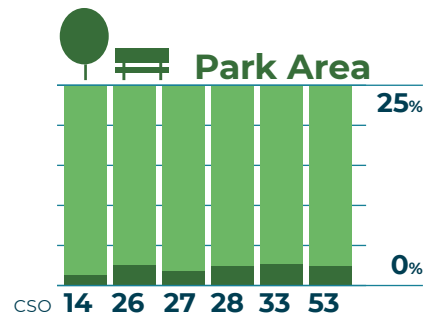
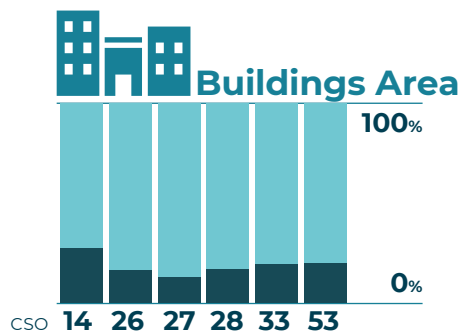
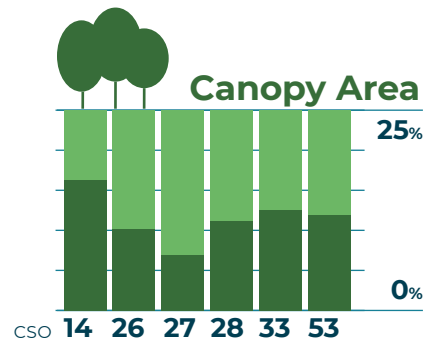
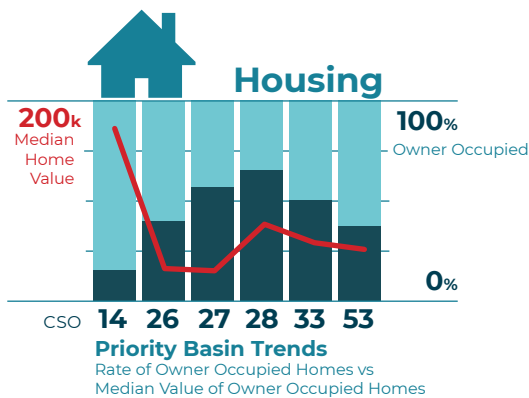
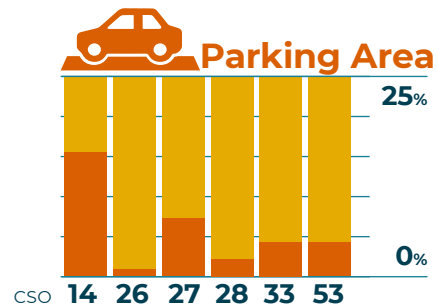
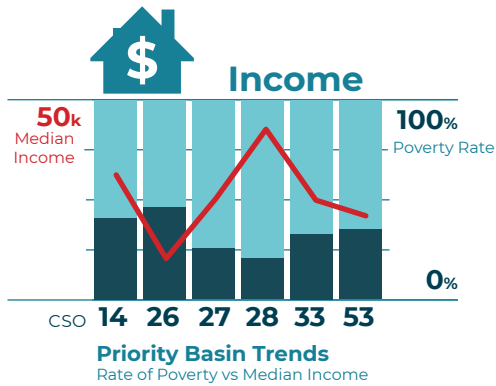
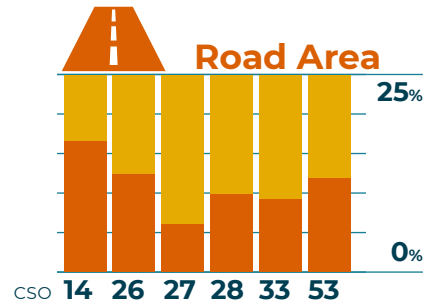
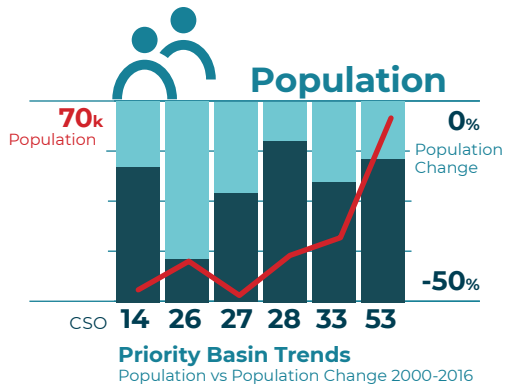


Basin Size

Rain Check 2.0 focused on 6 priority CSO Basins, each diverse in size, goal, and distribution of impervious surfaces. The charts above demonstrate total tax property parcel area, broken out by pervious and impervious area with the impervious reduction goal shown as a subset of impervious area.

Land Use

Rain Check 2.0 emphasizes a data-driven approach to identifying areas of opportunity by evaluating city-wide data for sites likely to be strong candidates for green infrastructure. Land use is a large part of understanding the potential for green infrastructure. The graph above breaks out each CSO basin's tax parcel land area by land use.



PRIORITY CSO BASINS

Site Analysis

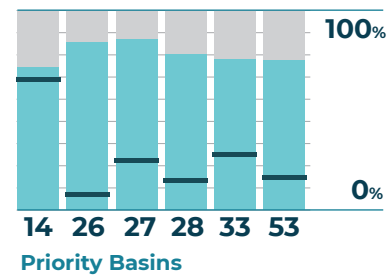
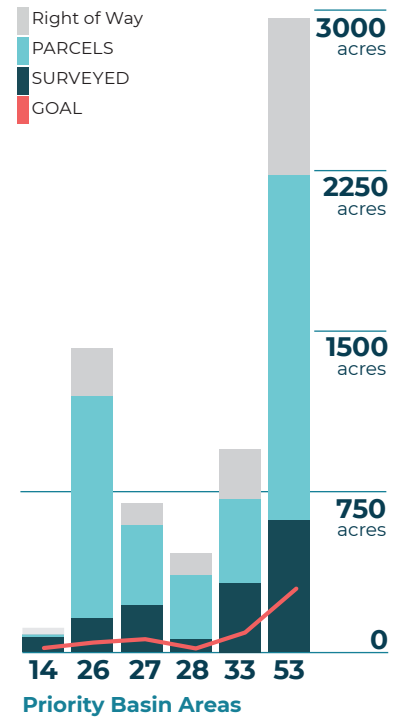
To understand the potential for managing large areas of impervious surface, detailed site analysis within the priority CSO basins were performed. This analysis involved two components: 1) a thorough desktop analysis utilizing advanced GIS and remote sensing techniques, and 2) detailed on-the-ground field surveys. A detailed discussion of the methodology can be found in Chapter Four.

The initial desk top analysis identified potential parcels, property owners, and land use. The initial analysis also considered key community partners and property owners, including Public Schools, Parks, Buffalo Urban Renewal Agency, Buffalo Urban Development Corporation, Buffalo Municipal Housing Authority, and religious centers. These community partners can act as catalysts for engagement and implementation. The analysis concluded that a significant portion of the impervious reduction targets could be achieved working with these partners.

Buffalo Sewer then conducted field surveys of properties identified through the desktop analysis. The purpose of the field surveys was to narrow the list of potential parcels to include only those where green infrastructure retrofits were feasible, to identify the impervious surface area that could be captured on each site (the drainage area), to delineate areas within each site appropriate for green infrastructure, to propose potential green infrastructure solutions appropriate to each site, and to identify implementation challenges at each site - such as parking and utility conflicts. For each priority CSO basin, this report includes a map showing all the parcels surveyed, the drainage areas, and possible green infrastructure location. A detailed description of different green infrastructure practices can be found in Chapter Two of this report.

Since many green infrastructure practices include plants, ensuring that possible green infrastructure sites have enough sun to grow plants is an important consideration. Therefore the field surveys included as assessment of how shaded each possible green infrastructure location identified was. These findings are summarized in each CSO section. An on-site evaluation was also made regarding how visible the potential green infrastructure practice would be from the public right-of-way. Visibility is important to the community and as a way for Buffalo Sewer to visually determine if there are any issues with a green infrastructure installation.

Finally, the analysis conducted as part of this report is a preliminary assessment. When any green infrastructure practice is ready to be designed and installed, a more detailed assessment will be required to determine the suitability of the site for green infrastructure, including an evaluation of soil percolation rates and the presence of contaminated soils.



Surveyed Sites Breakdown

To better understand on the ground conditions for highly impervious parcels, site surveys were conducted in each priority CSO Basin. The above graphs show surveyed area relative to overall basin size including both tax parcels and right-of-way.

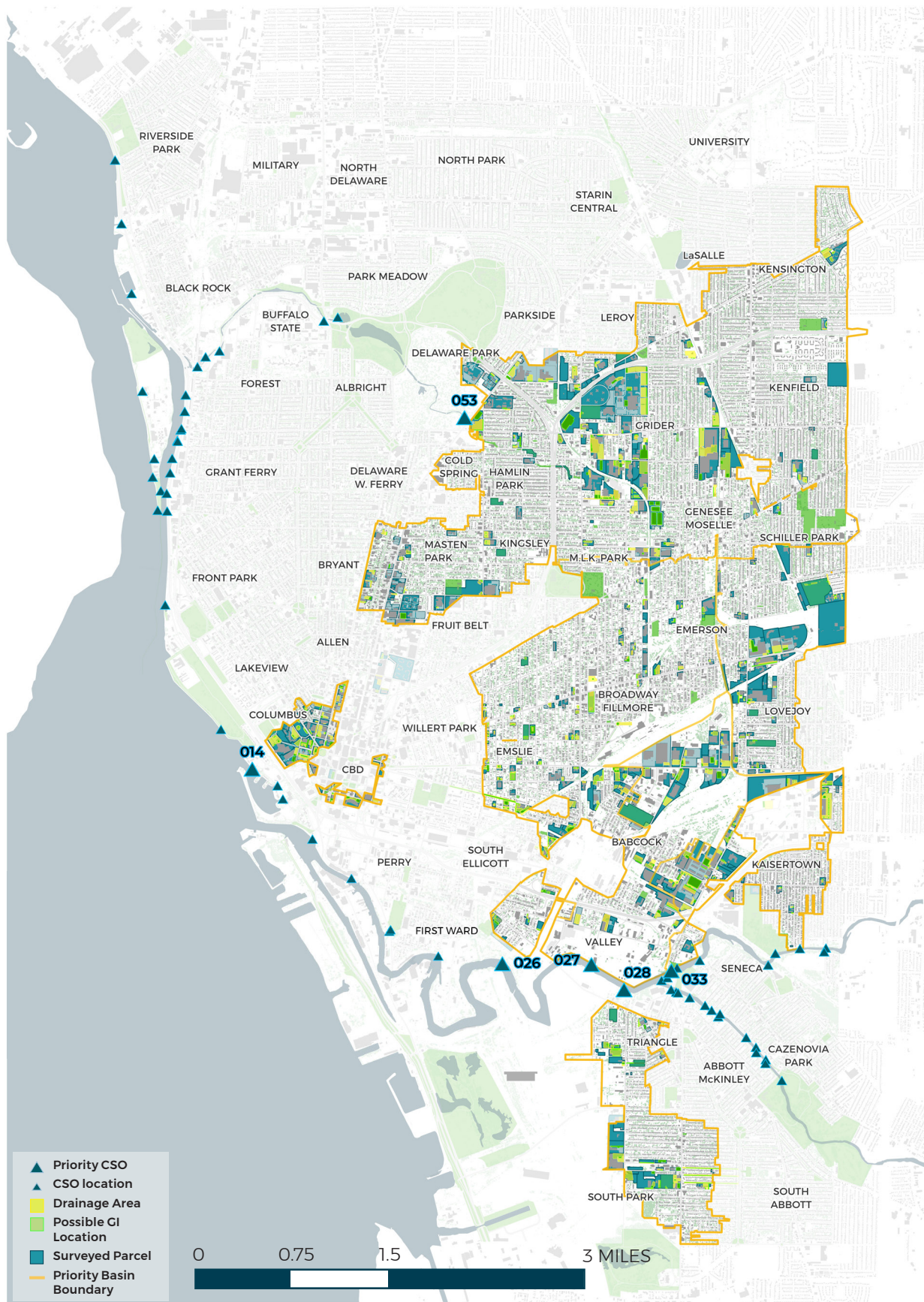


Figure 1.12: Map of Buffalo with Sites Surveyed and Priority CSO Basins.