

CSO26



When a drop of water lands at the intersection of Broadway and Fillmore Street, it is joined by water from the neighborhoods of Broadway-Fillmore, Emslie, Johnson, Emerson, Genesee Moselle, Babcock, and parts of the Old First Ward and Valley. During heavy wet weather, the rainwater combines with sewage and overflows into the Buffalo River at Combined Sewer Overflow 26 (CSO 26).

Community Benefits

- Walkability
- Active commuting (biking or walking to work)
- Improving the public realm
- Support neighborhood revitalization work
- Workforce development programs
- Green jobs
- Clean up and revitalization of vacant lots
- Increased tree canopy
- Enhanced property value
- Reduced urban heat island effect
- Traffic calming
- Access to green space



CSO Basin 26 at a glance...

Green Infrastructure Opportunities

The goal for CSO Basin 26 is to manage stormwater from 64 acres of impervious surface. Based on the site analysis, it will be difficult to meet the goal without incorporating public roadways and sidewalks.

Urban Character

CSO Basin 26 is characterized by low density residential neighborhoods, with high levels of vacancy, large commercial corridors with institutional and city-owned properties, and isolated industrial lots. Key corridors pass through this CSO basin and the streets are generally oversized. No single category can fulfill the required acres-managed goal and the managed acres will need to include commercial, institutional, and city property.

Environmental Systems

CSO Basin 26 discharges into the Buffalo River. Tree canopy is relatively low and should be augmented, particularly along major corridors. Focusing on complete streets and right of way improvements can help to grow the urban forest canopy and create habitat connectivity as well as the opportunity to network green infrastructures systems within the CSO basin.

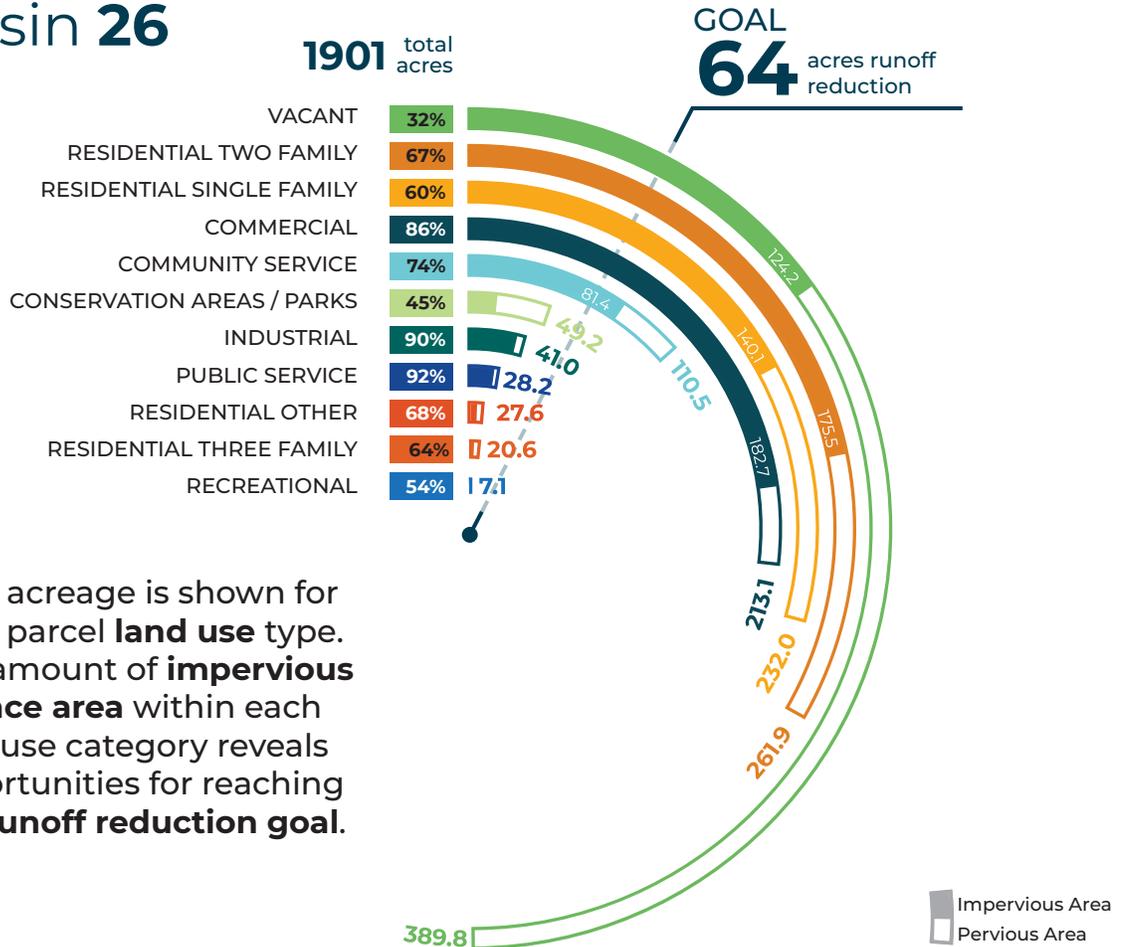
Equity Considerations

CSO Basin 26 has the greatest need for green infrastructure investments, in terms of the average green infrastructure equity index (see Appendix A). Green infrastructure supports neighborhood revitalization efforts. By leveraging public dollars to provide benefits to historically disinvested neighborhoods, green infrastructure can contribute to building complete communities. Green infrastructure along public rights of way, at crosswalks, and transit stops could support active commuting and improve surface road conditions for the large number of residents who rely on walking and transit to commute to work and other destinations. Green infrastructure planning could tie into and activate community-driven plans and efforts by local groups. Green infrastructure projects in this area can initiate and facilitate community visioning and stewardship processes with the many active residents and other stakeholders in and around the area.

BY THE NUMBERS...

Land Use Opportunity and Impervious Surfaces by Area

Basin 26



Basin Overview



1901 acres
TOTAL BASIN AREA

14,349
RESIDENTS

\$18,192
MEDIAN HOUSEHOLD INCOME

197 acres
OF CANOPY AREA

48 acres
OF PARK AREA

299 acres
OF RIGHT OF WAY

244 acres
OF ROAD AREA

311 acres
OF BUILDING AREA

17 acres
OF PARKING LOTS

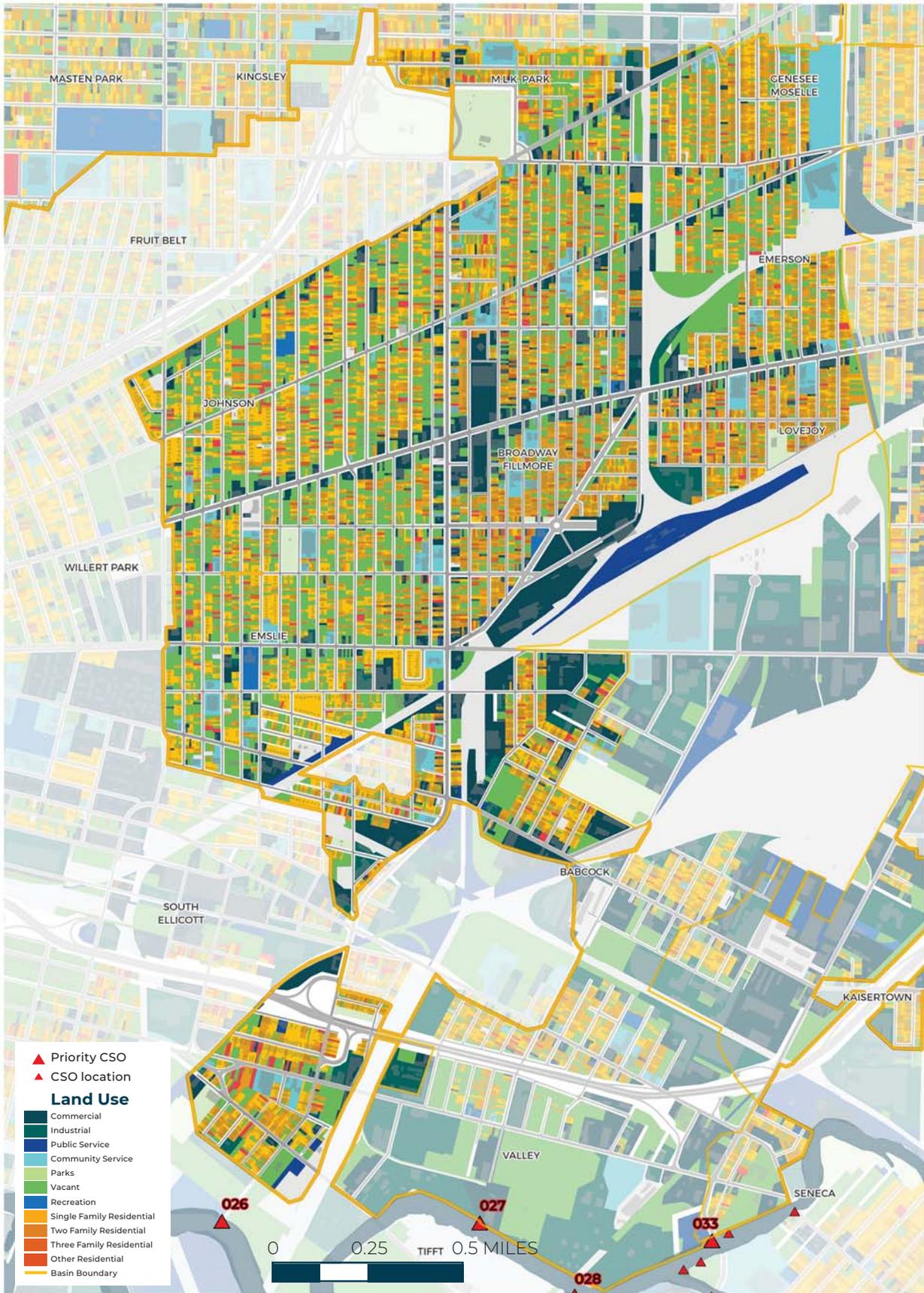
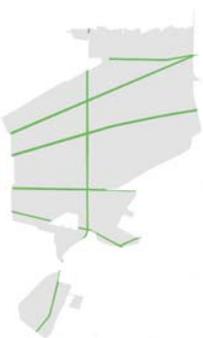


Figure 26.1: CSO Basin 26 Sites evaluated for impervious surface management through green infrastructure.

Opportunity Sites & Networks



Corridors

Corridors in CSO 26 create an armature for future networking of green infrastructure. Implementing green infrastructure would help to support revitalization of neighborhood centers. The same corridors also extend into CSO Basins 33 and 27 to the south and east. Corridor green infrastructure can support active commuting in a region where many residents rely on active commuting and public transit to get to work. The addition of green infrastructure would also help increase the tree canopy in the basin.



Sites

Many of the sites analyzed in this CSO were commercial properties. Based on the analysis conducted, these sites alone probably will not be sufficient to achieve the management goals for this basin and so including corridor green infrastructure will be critical. The high level of vacancy is both a challenge and an opportunity. There were fewer sites investigated in this CSO because of the high levels of vacancy. On the other hand vacant lots can be opportunity sites for green infrastructure, which can in turn help to revitalize these areas.



Clusters and Networks

Fewer natural clusters were identified in this basin than in others. This is in part due to the high levels of vacancy and the paucity of large institutions to anchor clusters or networks. The area at Broadway and Fillmore Avenue is such a cluster and could be a base for incubating green infrastructure in this basin. Work on a cluster of green infrastructure at this neighborhood center could be combined with workforce training programs in this and other basins to create green jobs.

Key Corridors

- Broadway
- Jefferson Avenue
- Fillmore Avenue
- William Street
- Genesee Street
- Scajaquada Parkway

Key Institutions

- 1 St. Luke's Mission
- 2 Buffalo & Erie County Workforce
- 3 Buffalo Central Terminal
- 4 Broadway Market
- 5 Buffalo Museum of Science

Key Parks

- 1 Sperry Park
- 2 Red Jacket River Front Park
- 3 Martin Luther King Jr. Park
- 4 Harvey Austin Elementary Playground
- 5 William Emslie Family YMCA

CORRIDORS are networked, physically connected systems around a road or right-of-way

OPPORTUNISTIC SITES are stand alone sites with a high opportunity for green infrastructure

CLUSTERS have an anchor institution or are groups of parcels that can implement similar strategies

NETWORKS are larger systems of capture and treatment incorporating many sites

- 14
- 26
- 27
- 28
- 33
- 53

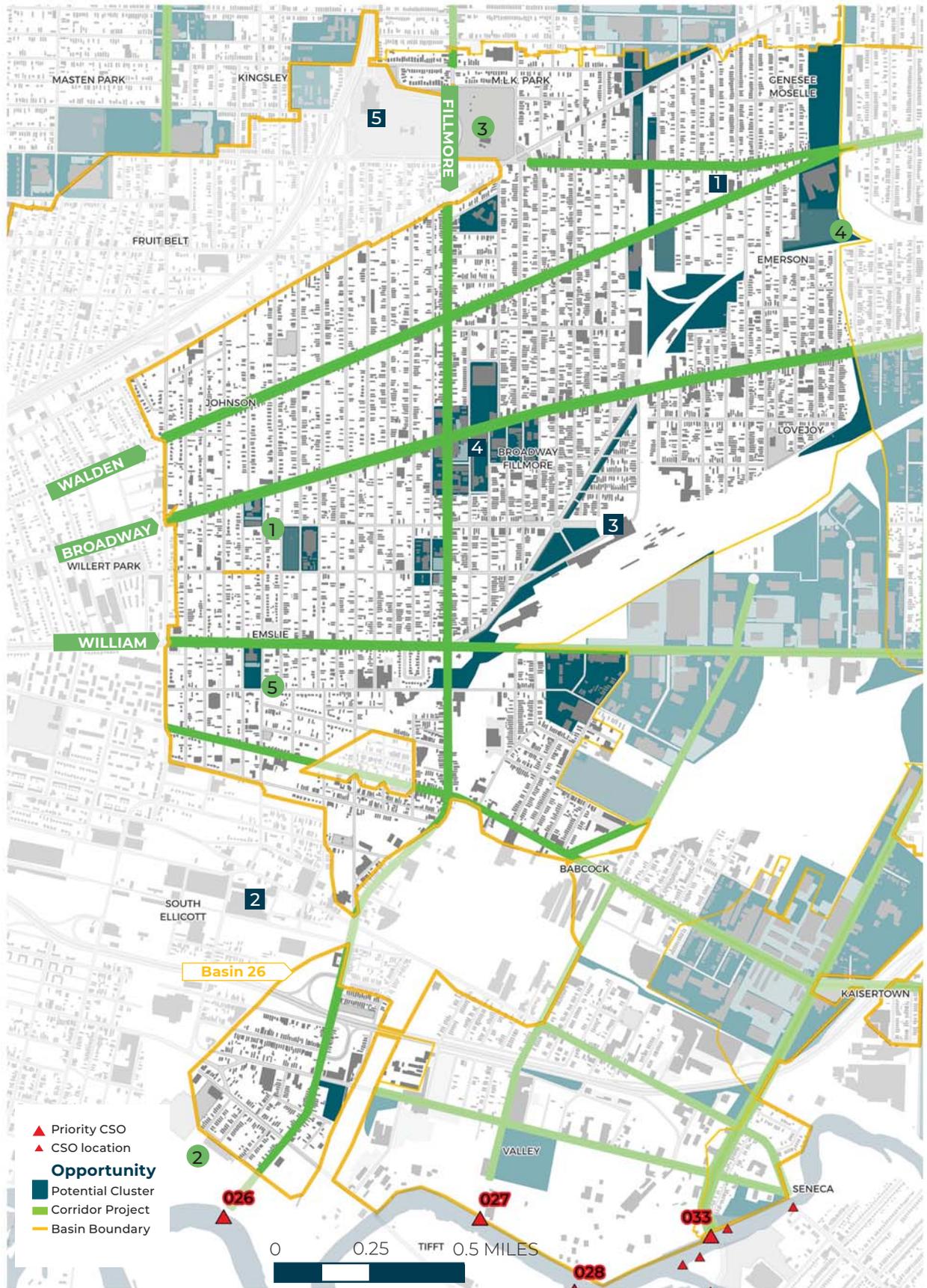


Figure 26.2: CSO Basin 26 Green Infrastructure Opportunity Sites

Green Infrastructure Opportunity

Broadway Fillmore Commercial Cluster

CSO Basin 26 is dominated by low density residential properties, with several significant cross-town commercial corridors like Broadway and Fillmore. Buffalo Sewer can cultivate green infrastructure clusters along the corridors by partnering with community-oriented or cultural institutions like the Broadway Market. These clusters can anchor economic redevelopment and promote commercial revitalization as well as beautify important streetscapes in the basin.

Broadway Market, like other places in the basin, is an unusual building and beloved by the community. The building covers the entire property, so rainwater is difficult to infiltrate on site. However, there is potential to reuse the roof of the parking structure for water capture and green roofs, as it is likely to be adequately structured for green roof loads.

Since a large percentage of residents in this CSO basin use public transit for commuting and with most transit lines running along the commercial corridors, investment in these streetscapes can also benefit the daily experience of residents. The Broadway and Fillmore Corridors, like other corridors in the basin, have the potential to become transit hubs and the streetscape and green infrastructure can be a part of the community's identity. As such, community engagement in this process would be important.

CSO Basin 26 also has a large stock of vacant land. As the neighborhood redevelops, those lots may be candidates for infill projects that will meet the stormwater capture requirements. Urban agriculture is also a good solution, but consideration should be given to investing in short-term, inexpensive vacant lot strategies or longer-term, more costly but durable right-of-way investments.

Strategies

- Street trees
- Complete streets
- Curb bump outs
- Urban farming
- Green roofs
- Downspout disconnects

Potential Partners

- Broadway Market
- Wilson Street Urban Farm
- New York State DOT
- Chua Tu Hieu Buddhist Cultural Center
- Adam Mickiewicz Library
- Corpus Cristi Church
- Open Praise Full Gospel Baptist Church
- Lt. Col. Matt Urban Human Services Center WNY
- US Postal Service



Figure 26.3: Historic Image near the Broadway Market.



Figure 26.4: Historic Image of Broadway Ave. (BuffaloRising.com)



Placemaking Opportunity with Green Infrastructure

Green infrastructure in CSO Basin 26 can support neighborhood revitalization in addition to managing stormwater, by making neighborhoods more inviting and putting vacant land to productive use. Green infrastructure along roadways can contribute to traffic calming, greater walkability and reduced urban heat island effect.

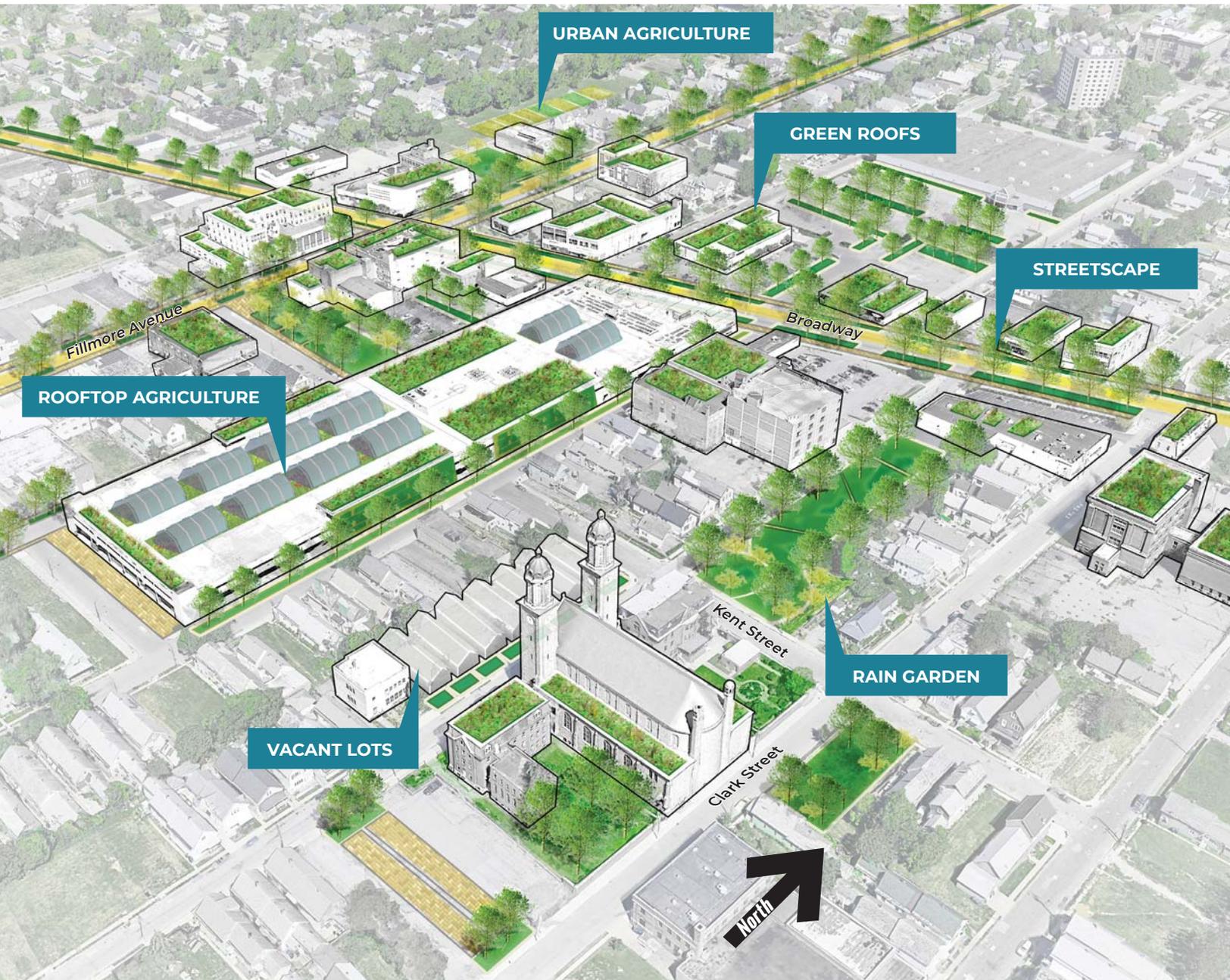


Figure 26.5 Rendering of Green Infrastructure at Fillmore and Broadway

ANALYSIS

Urban Character

CSO Basin 26 boundaries intersect several neighborhoods in East and South Buffalo centered around the Broadway-Fillmore neighborhood, including Emslie, Johnson, Emerson, Genesee, Moselle, Babcock, and parts of the Old First Ward and Valley. CSO Basin 26 has a population of over 14,000 people and is characterized by low density residential neighborhoods with many vacant lots, large commercial corridors, and isolated industrial sites.

Investment in green infrastructure in CSO Basin 26 will support a number of broader planning efforts, including the Local Waterfront Revitalization Program, which includes the Buffalo River, the Buffalo River Corridor Brownfield Opportunity Area, and the Buffalo Green Code. Important corridors such as Broadway, William Street, and Genesee Street are focuses of revitalization efforts through the Buffalo Green Code and are also opportunity sites for green infrastructure. Focusing green infrastructure along commercial corridors can also reinforce and revitalize neighborhood centers. Corridor green infrastructure can also support efforts to provide more complete streets, promote walkability, and encourage transportation choice.



Figure 26.6: The entire CSO basin has significant vacant land in the residential neighborhoods; above is an example from Peckham St. in the Emslie neighborhood.



Figure 26.7: Broadway and Fillmore commercial cluster and Broadway Market are culturally important and node for amenities.



Figure 26.8: Mixed residential and light industry along active rail corridors at Thomas Street



Figure 26.9: Openspace around rail corridors and declining light industry clusters between Broadway and Sycamore St.

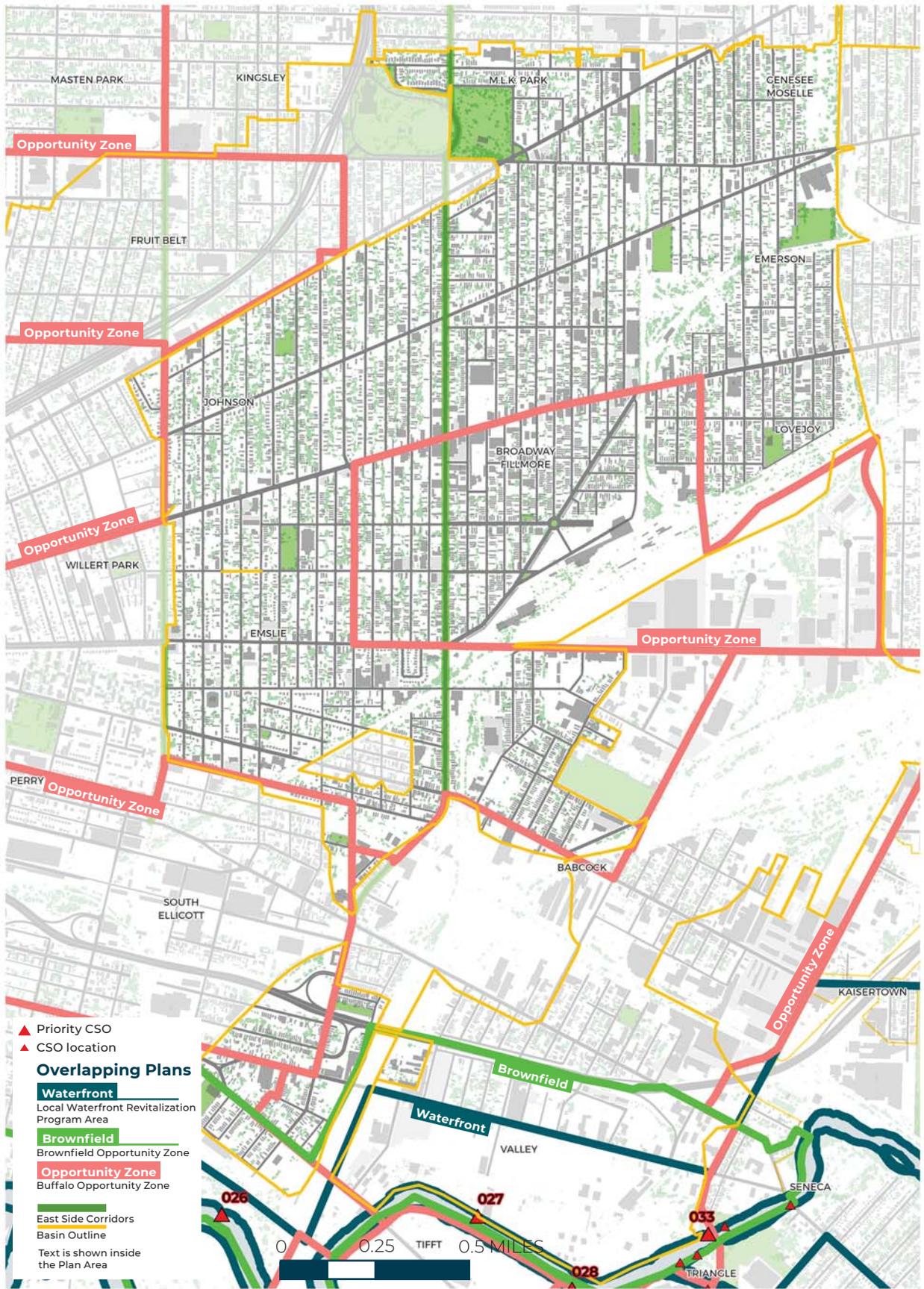


Figure 26.10: CSO Basin 26 Planning Map

ANALYSIS

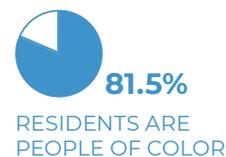
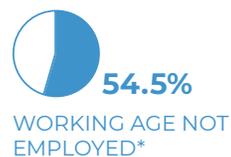
Equity Analysis

The basin is home to several regional assets, most notably the Broadway Market (Buffalo's public market), Buffalo Central Terminal, Martin Luther King, Jr. (MLK) Park and the Buffalo Museum of Science. Community assets and institutions offer opportunities for green infrastructure to support and contribute to existing efforts for neighborhood revitalization, especially on main streets, commercial corridors, and around anchor institutions.

The area is home to over 14,000 residents, over 80% are people of color and over 65% are Black. The racially diverse population offers a range of potential audiences for education and engagement. Residents perform significantly worse on measures of economic vitality and connectedness compared to other priority CSO basins and the City overall. The median household income of residents living in CSO Basin 26 neighborhoods is nearly half that of the City overall. The basin has the highest share of low income households (73% have incomes less than double the poverty line), and adults without a high school diploma (25%) of any targeted area. The unemployment rate is more than double that of the City as a whole, and just over half (54.5 percent) of people age 16 and over participate in the labor force (compared to 59% for Buffalo overall). Given these considerable challenges, the creation of green jobs associated with maintenance of green infrastructure in CSO Basin 26 might be very important.

Among all targeted basins, CSO Basin 26 has the greatest need for green infrastructure investments, in terms of the average green infrastructure equity index (see Appendix A). Along with socioeconomic disadvantages, Basin 26 is also marked by environmental concerns, such as limited tree canopy coverage and vacancy. With about 30% of its land area covered by vacant lots, Basin 26 has more than double the vacant land coverage of the City overall, indicating ample opportunities for green infrastructure investments. As most households are renters and are housing cost burdened, many households may not have the capacity to maintain green infrastructure on private property. More generally, an evaluation of the community capacity for a neighborhood or specific groups and institutions to accept, plan for, promote, and maintain green infrastructure practices is critical. Given the extensive network of community assets and institutions located in the area, as well as the many residents and workers that likely rely on public transit and walking to get around, green infrastructure practices along sidewalks, at crosswalks and transit stops, and in front of major destinations could be highly visible and beautify the public realm.

Neighborhood Profile Snapshot



The data presented is for census tracts located within or that intersect the CSO basin boundaries, as an approximation of neighborhoods (see Appendix A for more details and methods)
*Includes those that are unemployed or out of the labor force.

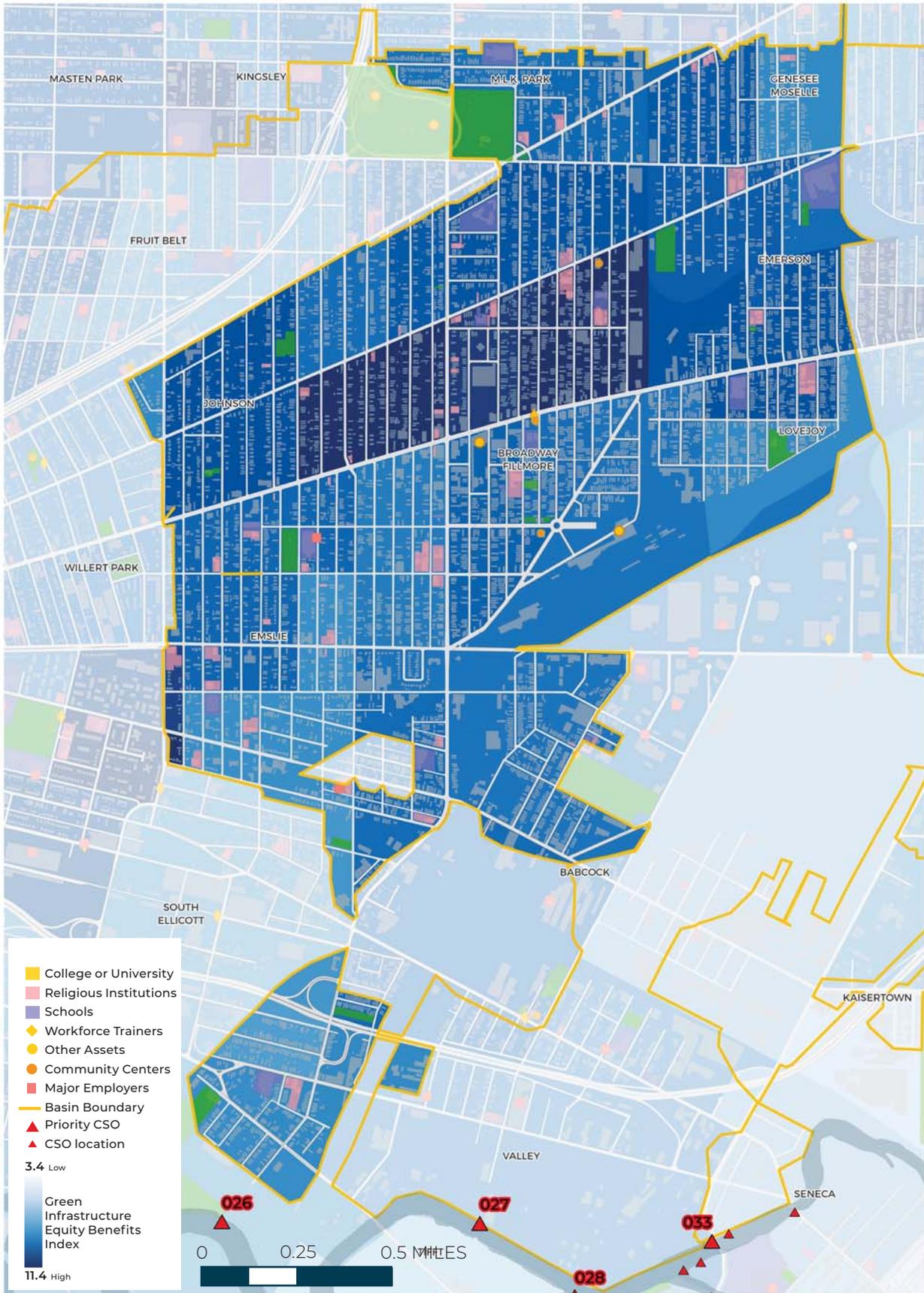


Figure 26.11: CSO Basin 26 and GI Equity Index

ANALYSIS Environmental Systems

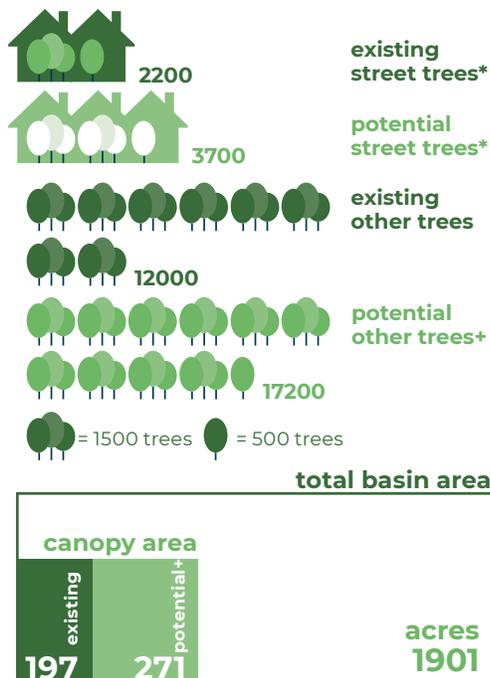
Waterways

CSO Basin 26 discharges into the Buffalo River along the lower, meandering, post-industrial section of the river. The Basin does not make direct contact with the Buffalo River, stopping at Red Jacket River Front Park. This termination in the park may provide an excellent opportunity to incorporate stormwater detention or infiltration near the bottom of this CSO basin's system.

Tree Canopy Cover

The tree canopy is on a par with the City average, with many vacant tree spaces. Much of the tree canopy in CSO basin 26 is comprised of backyard trees, rather than front yard trees or street trees, which do more to reduce the amount of stormwater reaching the combined sewer system. Particularly along major corridors, canopy cover is almost completely absent.

Tree Canopy Summary NUMBER OF TREES IN BASIN



Sources: *City of Buffalo MyTreeKeeper data, +U.S. Forest Service protocol with input from the Tree Technical Advisory Committee. For detailed description of methodology, see Appendix C

Habitat Connectivity

Major corridors with moderate canopy cover isolate patches of habitat in this basin. The dramatic vacancy rate in the basin provides a great potential to expand the urban tree canopy through strategic tree planting to create patches of urban. New street trees along corridors could link to larger regional habitat corridors along rail lines and the Buffalo River, making CSO Basin 26 a potential habitat hot-spot within the City.

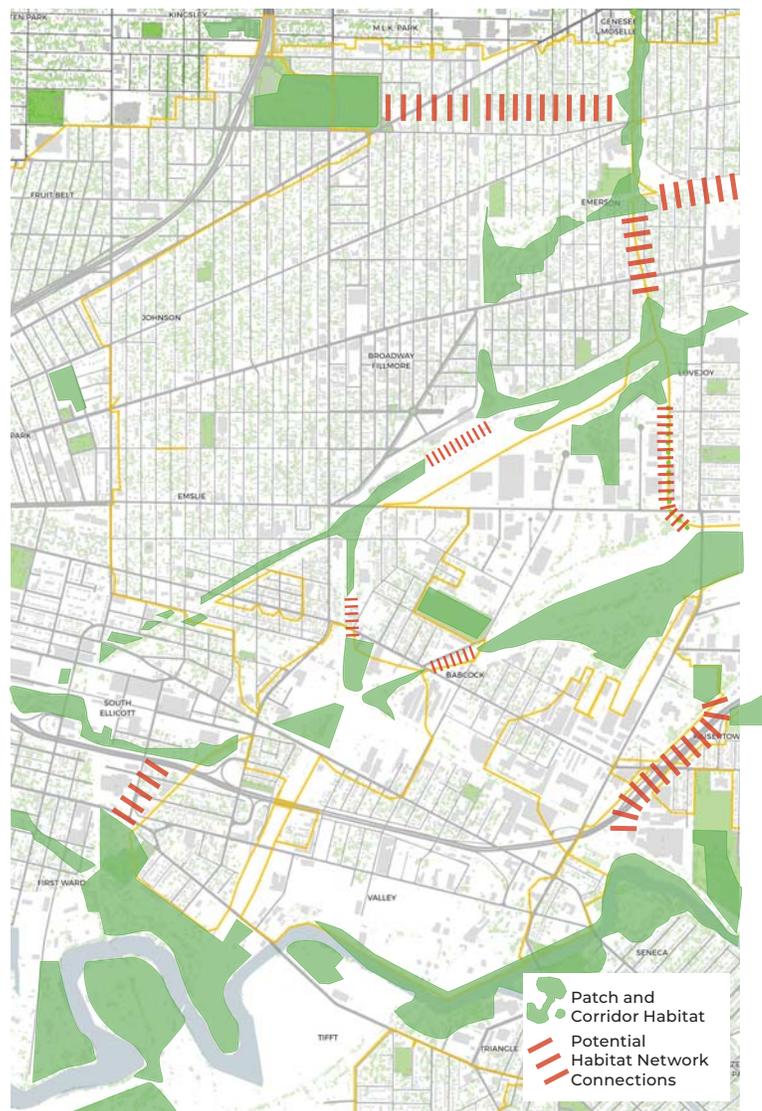


Figure 26.12: Potential for Habitat Connectivity in CSO Basin 26

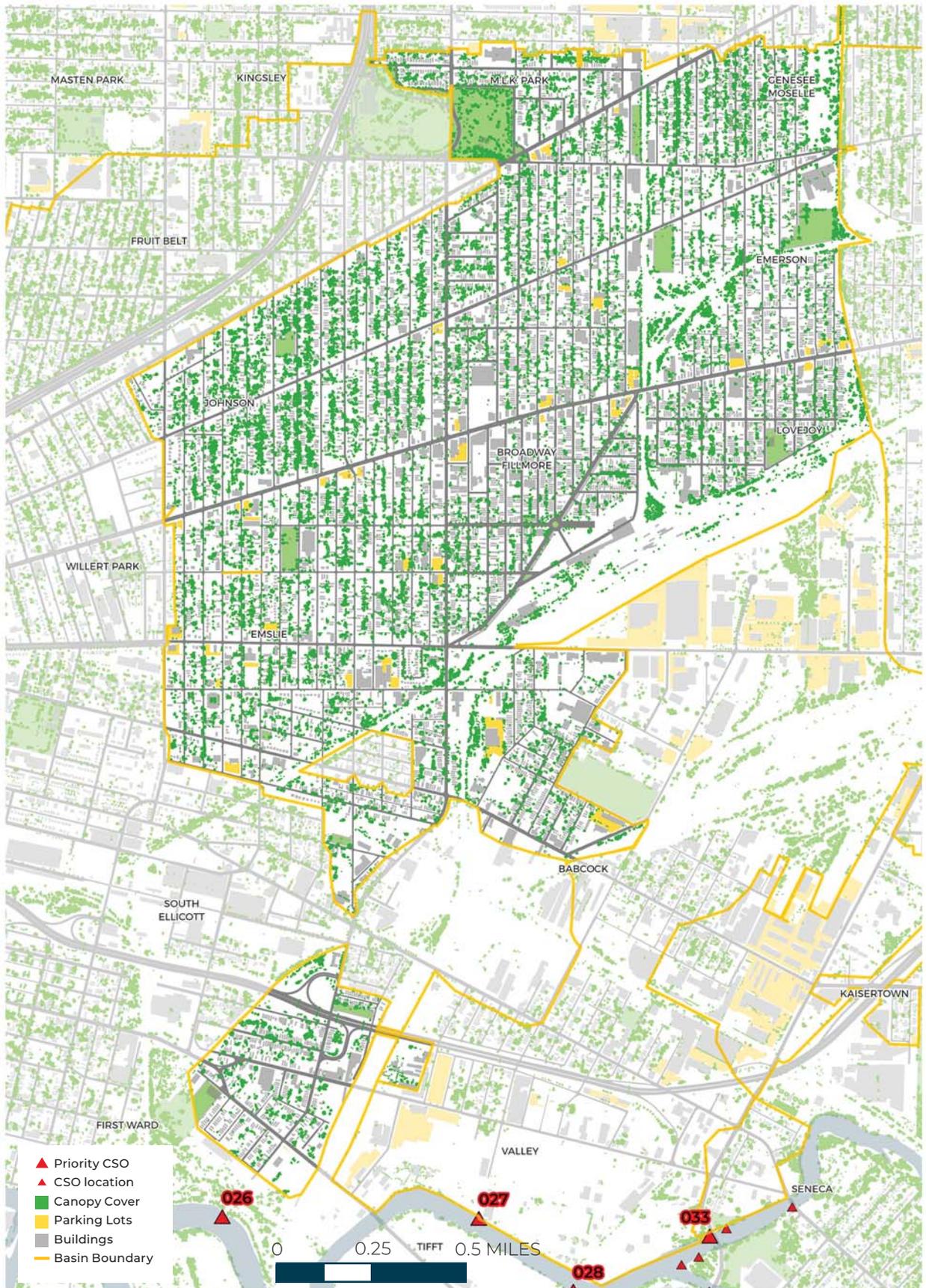


Figure 26.13: CSO Basin 26: Canopy Cover and Impervious Surfaces

ANALYSIS

Site Analysis

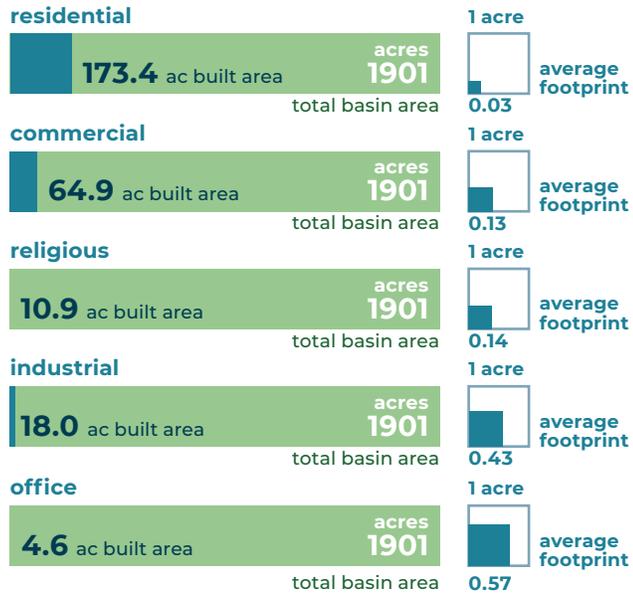
CSO Basin 26 is characterized by residential properties and commercial corridors with institutional and city-owned properties adding to the potential management area. No single category can fulfill the required acres-managed and the managed acres will need to include commercial, institutional, and city property.

The parcels that were analyzed are primarily commercial, but roads and public right of ways make up a significant portion of impervious land area. Broadway, Fillmore, and William Streets are highly visible connector roads lined with small houses and businesses. The sites inventoried are concentrated along these roads and have high green infrastructure potential, including reducing oversized parking lots, removing abandoned pavement, and improving streetscapes with new vegetation.

Apart from cooperation with neighbors and managing lot level run-off, there are opportunities for commercial partnerships and business owners to take advantage of the visual improvements through green infrastructure installations in this area. Green infrastructure could be incorporated into streetscape design, which, in cooperation with business improvement districts, could be a good way for the City to pool funding into green infrastructure along the commercial corridors in this area.

Built Area by Land Use

Full Basin Area, GIS sources: Erie County data, Buffalo Sewer Authority data



The site analysis reviewed **7% of the basin** and found **52.6 acres of potential drainage area.**



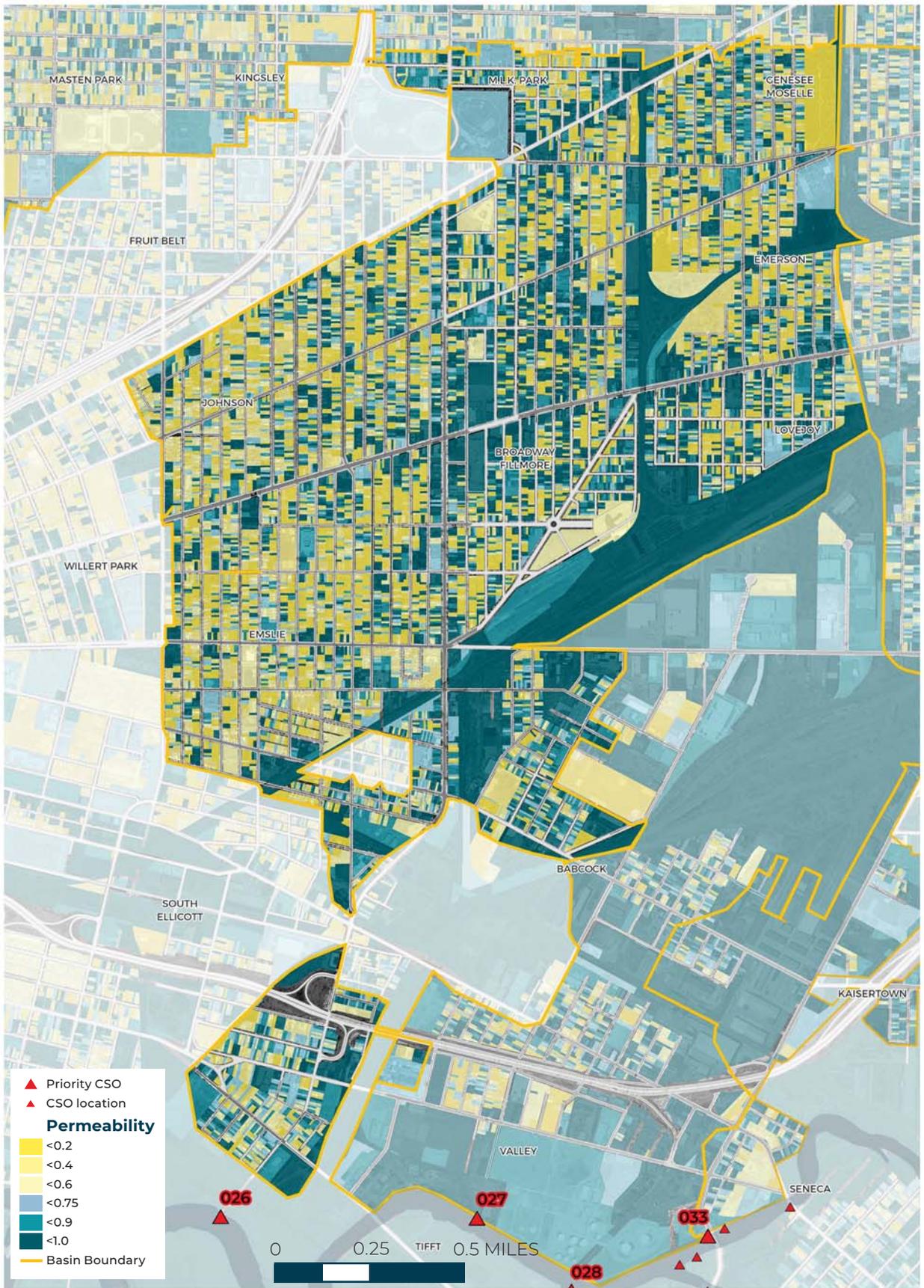


Figure 26.14: CSO Basin 26: Percent Impervious cover by Parcel

ANALYSIS

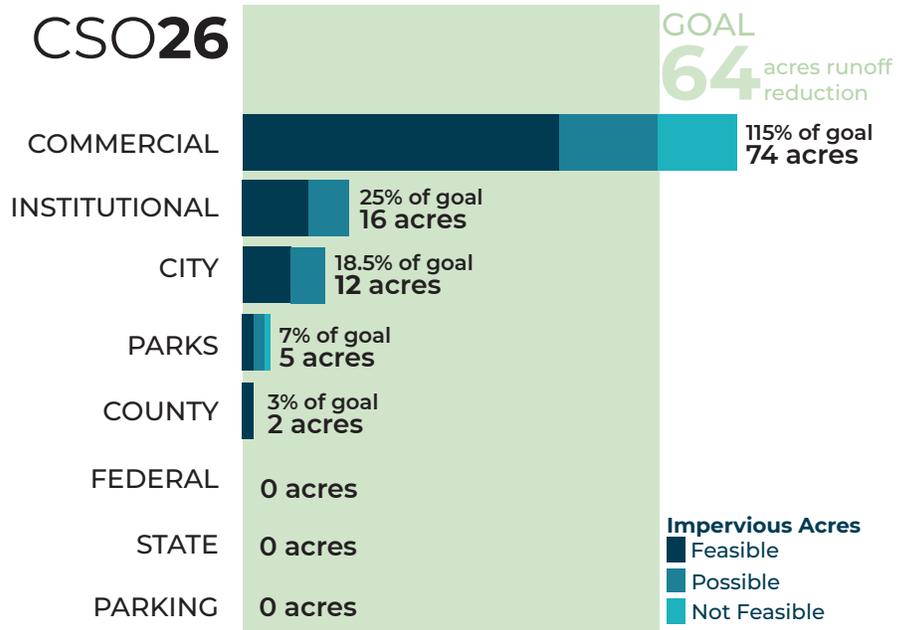
Site Analysis: Surveyed Properties

Surveyed Properties by Land Use and Ownership

GIS sources: Erie County data, Buffalo Sewer Authority data



Figure 26.15: Examples of sites surveyed.



LARGEST PROPERTY OWNERS BY LAND USE AND OWNERSHIP

COMMERCIAL

- For Sale Industrial
3.7 Imperv. acres
- Stetson Chemicals, Inc.
3.6 Imperv. acres
- Mr. Fox Tire Co
3.5 Imperv. acres
- For Sale Commercial
3.0 Imperv. acres
- Carzone Auto
2.3 Imperv. acres

INSTITUTIONAL

- First Cavalry Mission Baptist
1.3 Imperv. acres
- St Clare Parish
1.3 Imperv. acres
- St. Stanislaw RC
0.9 Imperv. acres
- Grace Tabernacle Church
0.8 Imperv. acres

Churches and other sites along key corridors were surveyed in CSO Basin 26.

From these investigations, the team was able to better understand if water can be infiltrated on site or as part of a networked green infrastructure system. These recommendations are discussed on the opportunity pages.



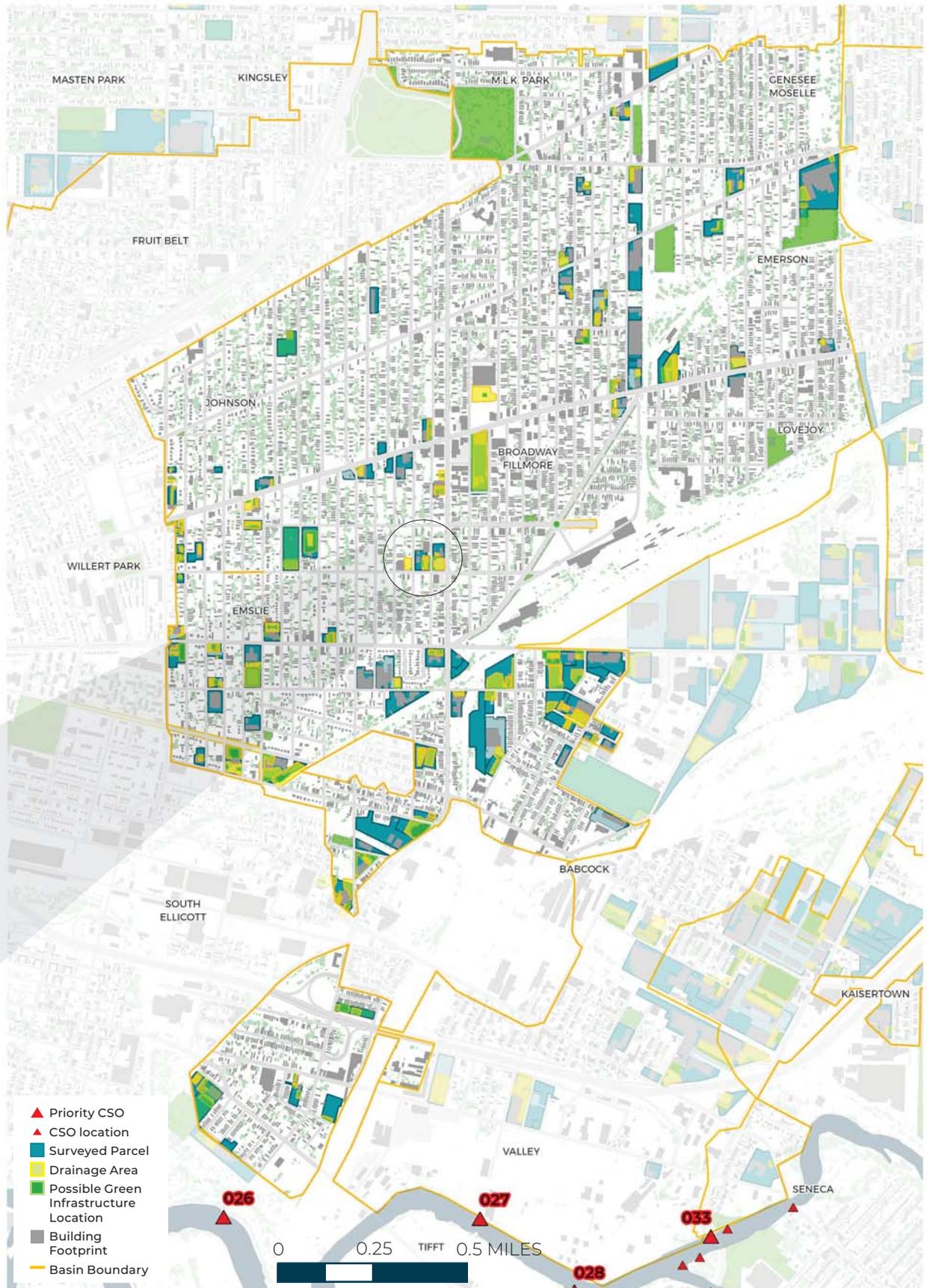


Figure 26.16: CSO Basin 26: Sites analyzed showing parcels, drainage areas and potential green infrastructure.

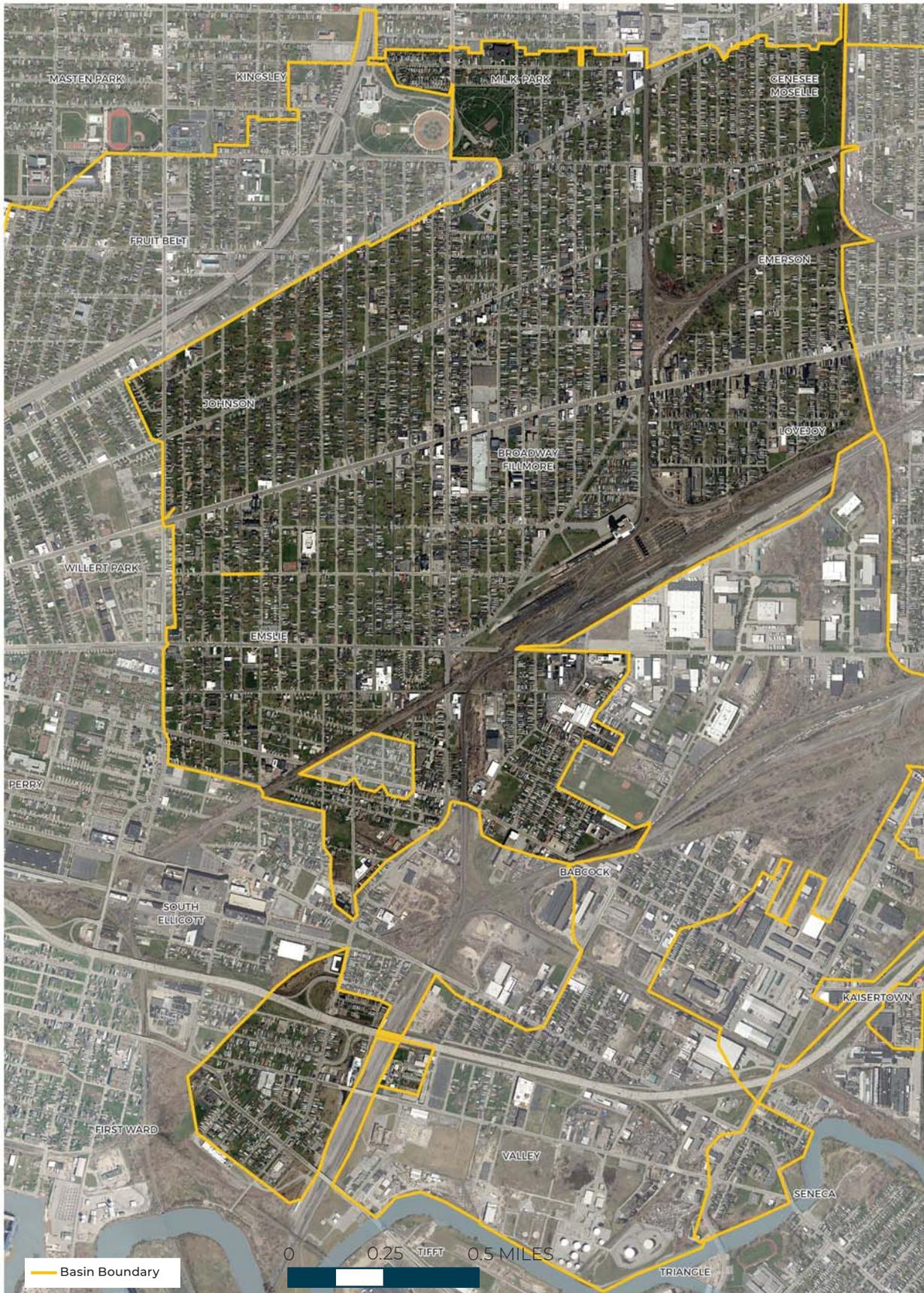


Figure 26.17: CSO Basin 26: Basin outline on Aerial.

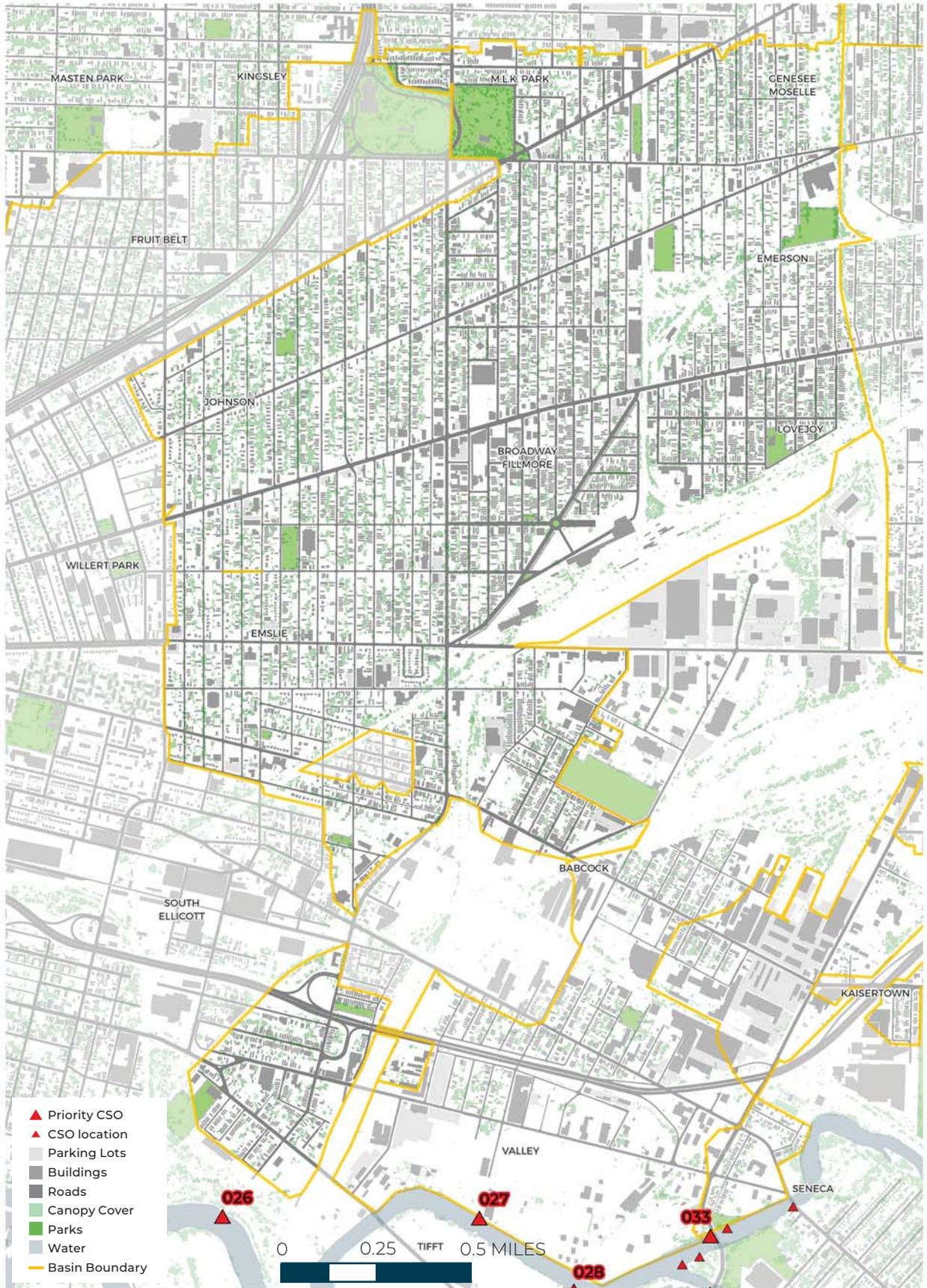


Figure 26.18: CSO Basin 26 Map of Built Environment and Tree Canopy